```
 1: ********************************************************************************
 2:  Constructor Function and Procedure List of maXbox 3.9.9
 3: ********************************************************************************
 4:
 5: ////////////////////////////////////////////////////////////////////////////////
 6: ref Help Extraxt of EXE Functions of maxbox3.exe BigBitBox API HEX in BOX
 7: --------------------------------------------------------------------------------
 8:
 9: File Size of EXE: 22696960 V3.9.9.98 August 2014 To EKON/BASTA/JAX/IBZ/SWS/EU/DD
10: ****************Now the Funclist*****************************************
11: Funclist Function : 13173 //10766 //10165 (7648)
12: ****************Now the Proclist*****************************************
13: Proclist Procedure Size is: 8158  //6792 //6401 4752
14: ****************Now Constructors*****************************************
15: Constructlist Constructor Size is: 1320 //995 //
16: def head:max: maXbox7: 11.08.2014 19:11:55
17: file E:\maxbox\maxbox3\docs\maxbox_extract_funclist399.txt
18: doc file: maxbox_extract_funclist399_.txt (sort function list)
19: --------------------------------------------------------------------------------
20: Funclist total Size all is: 22678! Constructor, Function and Procedure
21: AExtraxt of EXE Functions of maxbox3.exe, locs of file = 22390
22: ASize of EXE: 22696960 (22041600) (16586240) (13511680)
23: SHA1 Hash of maXbox 3.9.9.98: 9332386628C609D8DAE419C5D76F010C89380BD7
24:
25: --------------------------------------------------------------------------------
26: --------------------------------------------------------------------------------
27: ////////////////////////////////////////////////////////////////////////////////
28:
29:
30: FUNCTION Metric of Script: 256_findfunctions2_of_EXE.txt
31: Function *************Now the Funclist*****************
32: function  GetResStringChecked(Ident: string; const Args: array of const): string
33: Function ( Index : Longint) : Integer
34: function (Command: Word; Data: Longint; var CallHelp: Boolean): Boolean
35: Function _CheckAutoResult( ResultCode : HResult) : HResult
36: function _T(Name: tbtString): Variant;
37: function ABNFToText(const AText : String) : String
38: Function Abs(e : Extended) : Extended;
39: Function Ackermann( const A, B : Integer) : Integer
40: Function AcquireLayoutLock : Boolean
41: Function ActionByName( const AName : string) : TWebActionItem
42: Function ACTIVEBUFFER : PCHAR
43: Function Add : TAggregate
44: function Add : TCollectionItem
45: Function Add : TColumn
46: Function Add : TComboExItem
47: Function Add : TCookie
48: Function Add : TCoolBand
49: Function Add : TFavoriteLinkItem
50: Function Add : TFileTypeItem
51: Function Add : THeaderSection
52: Function Add : THTMLTableColumn
53: Function Add : TIdEMailAddressItem
54: Function Add : TIdMessagePart
55: Function Add : TIdUserAccount
56: Function Add : TListColumn
57: Function Add : TListItem
58: Function Add : TStatusPanel
59: Function Add : TTaskDialogBaseButtonItem
60: Function Add : TWebActionItem
61: Function Add : TWorkArea
62: Function Add( AClass : TClass) : Integer
63: Function Add( AComponent : TComponent) : Integer
64: Function Add( AItem, AData : Integer) : Integer
65: Function Add( AItem, AData : Pointer) : Pointer
66: Function Add( AItem, AData : TObject) : TObject
67: Function Add( AObject : TObject) : Integer
68: Function Add( const Access, Count : Cardinal; const Offset : Int64) : Integer
69: Function Add( const S : WideString) : Integer
70: Function Add( Image, Mask : TBitmap) : Integer
71: Function Add( Index : LongInt; const Text : string) : LongInt
72: Function Add( Sibling : TTreeNode; const S : string) : TTreeNode
73: Function Add(const S: string): Integer
74: function Add(S: string): Integer;
75: Function AddAt( const Access, Count : Cardinal; const Offset : Int64; const Address: Pointer) : Integer
76: Function ADDCHILD : TFIELDDEF
77: Function AddChild( Index : LongInt; const Text : string) : LongInt
78: Function AddChild( Parent : TTreeNode; const S : string) : TTreeNode
79: Function AddChildFirst( Parent : TTreeNode; const S : string) : TTreeNode
80: Function AddChildObject( Index : LongInt; const Text : string; const Data : Pointer) : LongInt
81: Function AddChildObject( Parent : TTreeNode; const S : string; Ptr : Pointer) : TTreeNode
82: Function AddChildObjectFirst( Parent : TTreeNode; const S : string; Ptr : Pointer) : TTreeNode
83: Function ADDFIELDDEF : TFIELDDEF
84: Function AddFileExtIfNecessary( AFileName, AExt : string) : string
85: Function AddFirst( Sibling : TTreeNode; const S : string) : TTreeNode
86: Function AddIcon( Image : TIcon) : Integer
87: Function AddImage( Value : TCustomImageList; Index : Integer) : Integer
88: Function ADDINDEXDEF : TINDEXDEF
89: Function AddItem(const Caption:String;const ImageIdx,SelectImageIdx,OverlayImagIdx,
    Indent:Int;Data:Ptr):TComboExItem
```

```
 90: Function AddItem( Item : THeaderSection; Index : Integer) : THeaderSection
 91: Function AddItem( Item : TListItem; Index : Integer) : TListItem
 92: Function AddItem( Item : TStatusPanel; Index : Integer) : TStatusPanel
 93: Function AddMapping( const FieldName : string) : Boolean
 94: Function AddMasked( Image : TBitmap; MaskColor : TColor) : Integer
 95: Function AddModuleClass( AClass : TComponentClass) : TComponent
 96: Function AddModuleName( const AClass : string) : TComponent
 97: Function AddNode(Node,Relative: TTreeNode;const S: string;Ptr:Pointer;Method:TNodeAttachMode):TTreeNode
 98: Function AddObject( const S : WideString; AObject : TObject) : Integer
 99: Function AddObject( Index : LongInt; const Text : string; const Data : Pointer) : LongInt
100: Function AddObject( Sibling : TTreeNode; const S : string; Ptr : Pointer) : TTreeNode
101: function AddObject(S:String;AObject:TObject):integer
102: Function AddObjectFirst( Sibling : TTreeNode; const S : string; Ptr : Pointer) : TTreeNode
103: Function AddParameter : TParameter
104: Function AddParamSQLForDetail(Params:TParams;SQL:WideStr;Native:Bool;QuoteChar:WideString):WideString
105:  Function Addr64ToAddr32(const Value: TJclAddr64): TJclAddr32;
106: Function Addr32ToAddr64(const Value: TJclAddr32): TJclAddr64;
107: function AdjustLineBreaksS(const S: string): string)
108: TTextLineBreakStyle', '(tlbsLF, tlbsCRLF)
109: Function AdjustLineBreaks(const S: string; Style: TTextLineBreakStyle): string;
110: Function AllData : string
111: function AllocMemCount: integer;
112: function AllocMemSize: integer;
113: Function AllocPatternBitmap( BkColor, FgColor : TColor) : TBitmap
114: Function AllowRegKeyForEveryone( Key : HKEY; Path : string) : Boolean
115: Function AlphaComponent( const Color32 : TColor32) : Integer
116: Function AlphaSort : Boolean
117: Function AlphaSort( ARecurse : Boolean) : Boolean
118: Function AnsiCat( const x, y : AnsiString) : AnsiString
119: Function AnsiCompareFileName( S1, S2 : string) : Integer
120: function AnsiCompareFileName(const S1: string; const S2: string): Integer)
121: Function AnsiCompareStr( S1, S2 : string) : Integer
122: function AnsiCompareStr(const S1: string; const S2: string): Integer;)
123: Function AnsiCompareText( S1, S2 : string) : Integer
124: function AnsiCompareText(const S1: string; const S2: string): Integer;)
125: Function AnsiContainsStr( const AText, ASubText : string) : Boolean
126: Function AnsiContainsText( const AText, ASubText : string) : Boolean
127: Function AnsiCopy( const src : AnsiString; index, count : Integer) : AnsiString
128: Function AnsiDequotedStr( S : string; AQuote : Char) : string
129: Function AnsiEndsStr( const ASubText, AText : string) : Boolean
130: Function AnsiEndsText( const ASubText, AText : string) : Boolean
131: Function AnsiExtractQuotedStr( var Src : PChar; Quote : Char) : string
132: function AnsiExtractQuotedStr(var Src: PChar; Quote: Char): string)
133: Function AnsiIndexStr( const AText : string; const AValues : array of string) : Integer
134: Function AnsiIndexText( const AText : string; const AValues : array of string) : Integer
135: Function AnsiLastChar( S : string) : PChar
136: function AnsiLastChar(const S: string): PChar)
137: Function AnsiLeftStr( const AText : AnsiString; const ACount : Integer) : AnsiString
138: Function AnsiLowerCase( S : string) : string
139: Function AnsiLowercase(s : String) : String;
140: Function AnsiLowerCaseFileName( S : string) : string
141: Function AnsiMatchStr( const AText : string; const AValues : array of string) : Boolean
142: Function AnsiMatchText( const AText : string; const AValues : array of string) : Boolean
143: Function AnsiMidStr( const AText : AnsiString; const AStart, ACount : Integer) : AnsiString
144: Function AnsiPos( const src, sub : AnsiString) : Integer
145: Function AnsiPos( Substr, S : string) : Integer
146: function AnsiPos(const Substr: string; const S: string): Integer;)
147: Function AnsiQuotedStr( S : string; Quote : Char) : string
148: Function AnsiReplaceStr( const AText, AFromText, AToText : string) : string
149: Function AnsiReplaceText( const AText, AFromText, AToText : string) : string
150: Function AnsiResemblesText( const AText, AOther : string) : Boolean
151: Function AnsiReverseString( const AText : AnsiString) : AnsiString
152: Function AnsiRightStr( const AText : AnsiString; const ACount : Integer) : AnsiString
153: function AnsiSameCaption(const Text1: string; const Text2: string): Boolean)
154: Function AnsiSameStr( S1, S2 : string) : Boolean
155: function AnsiSameStr(const S1: string; const S2: string): Boolean)
156: Function AnsiSameText( const S1, S2 : string) : Boolean
157: Function AnsiSameText( S1, S2 : string) : Boolean
158: function AnsiSameText(const S1: string; const S2: string): Boolean)
159: Function AnsiStartsStr( const ASubText, AText : string) : Boolean
160: Function AnsiStartsText( const ASubText, AText : string) : Boolean
161: Function AnsiStrComp( S1, S2 : PChar) : Integer
162: function AnsiStrComp(S1: PChar; S2: PChar): Integer)
163: Function AnsiStrIComp( S1, S2 : PChar) : Integer
164: function AnsiStrIComp(S1: PChar; S2: PChar): Integer)
165: Function AnsiStrLastChar( P : PChar) : PChar
166: function AnsiStrLastChar(P: PChar): PChar)
167: Function AnsiStrLComp( S1, S2 : PChar; MaxLen : Cardinal) : Integer
168: Function AnsiStrLIComp( S1, S2 : PChar; MaxLen : Cardinal) : Integer
169: Function AnsiStrLower( Str : PChar) : PChar
170: Function AnsiStrPos( Str, SubStr : PChar) : PChar
171: function AnsiStrPos(Str: PChar; SubStr: PChar): PChar)
172: Function AnsiStrScan(Str: PChar; Chr: Char): PChar)
173: Function AnsiStrUpper( Str : PChar) : PChar
174: Function AnsiToUtf8( const S : string) : UTF8String
175: Function AnsiToUtf8Ex( const S : string; const cp : integer) : UTF8String
176: Function AnsiUpperCase( S : string) : string
177: Function AnsiUppercase(s : String) : String;
178: Function AnsiUpperCaseFileName( S : string) : string
```

```
179: Function ApplyUpdates(const Delta: OleVariant;MaxErrors:Integer; out ErrorCount: Integer): OleVariant
180: Function ApplyUpdates(const Delta:OleVariant;MaxErrors: Integer;out ErrorCount: Integer) : OleVariant;
181: Function ApplyUpdates( MaxErrors : Integer) : Integer
182: Function ApplyUpdates1(const Delta:OleVar;MaxErrs:Int;out ErrCount:Int;var OwnerData:OleVar):OleVariant;
183: Function ArcCos( const X : Extended) : Extended
184: Function ArcCosh( const X : Extended) : Extended
185: Function ArcCot( const X : Extended) : Extended
186: Function ArcCotH( const X : Extended) : Extended
187: Function ArcCsc( const X : Extended) : Extended
188: Function ArcCscH( const X : Extended) : Extended
189: Function ArcSec( const X : Extended) : Extended
190: Function ArcSecH( const X : Extended) : Extended
191: Function ArcSin( const X : Extended) : Extended
192: Function ArcSinh( const X : Extended) : Extended
193: Function ArcTan( const X : Extended) : Extended
194: Function ArcTan2( const Y, X : Extended) : Extended
195: Function ArithmeticMean( const X : TDynDoubleArray) : Float
196: function ArrayLength: integer;
197: Function AsHex( const AValue : T4x4LongWordRecord) : string
198: Function AsHex( const AValue : T5x4LongWordRecord) : string
199: Function ASNDecLen( var Start : Integer; const Buffer : string) : Integer
200: Function ASNDecOIDItem( var Start : Integer; const Buffer : string) : Integer
201: Function ASNEncInt( Value : Integer) : string
202: Function ASNEncLen( Len : Integer) : string
203: Function ASNEncOIDItem( Value : Integer) : string
204: Function ASNEncUInt( Value : Integer) : string
205: Function ASNItem( var Start : Integer; const Buffer : string; var ValueType : Integer) : string
206: Function ASNObject( const Data : string; ASNType : Integer) : string
207: Function Assigned(I: Longint): Boolean;
208: Function AspectRatio(aWidth, aHeight: Integer): String;
209: Function AsWideString( Field : TField) : WideString
210: Function AtLeast( ACount : Integer) : Boolean
211: Function AttemptToUseSharedMemoryManager : Boolean
212: Function Authenticate : Boolean
213: Function AuthenticateUser( const AUsername, APassword : String) : Boolean
214: Function Authentication : String
215: Function BatchMove( ASource : TBDEDataSet; AMode : TBatchMode) : Longint
216: Function BcdCompare( const bcd1, bcd2 : TBcd) : Integer
217: Function BcdFromBytes( const AValue : TBytes) : TBcd
218: Function BcdPrecision( const Bcd : TBcd) : Word
219: Function BcdScale( const Bcd : TBcd) : Word
220: Function BcdToBytes( const Value : TBcd) : TBytes
221: Function BCDToCurr( const BCD : TBcd; var Curr : Currency) : Boolean
222: Function BcdToDouble( const Bcd : TBcd) : Double
223: Function BcdToInteger( const Bcd : TBcd; Truncate : Boolean) : Integer
224: Function BcdToStr( const Bcd : TBcd) : string;
225: Function BcdToStrF(const Bcd : TBcd; Format: TFloatFormat; const Precision, Digits:Integer):string
226: function beep2(dwFreq, dwDuration: integer): boolean;
227: Function BeginPeriod( const Period : Cardinal) : Boolean
228: Function BeginTrans : Integer
229: Function BeginTransaction : TDBXTransaction;
230: Function BeginTransaction1( Isolation : TDBXIsolation) : TDBXTransaction;
231: function BigMulu(aone, atwo: string): string;
232: function BigNumber(aone, atwo: string): string;
233: function BigExp(aone, atwo: string): string;
234: function BigMul(aone, atwo: string): string;
235: function BigAdd(aone, atwo: string): string;
236: function BigSub(aone, atwo: string): string;
237: function BigFactorial(aone: string): string;
238: Function BinaryToDouble( ABinary : string; DefValue : Double) : Double
239: Function BinomialCoeff( N, R : Cardinal) : Float
240: function BinominalCoefficient(n, k: Integer): string;
241: Function BinStrToInt( const ABinary : String) : Integer
242: Function BinToByte(Binary: String): Byte;
243: function BinToHex2(Binary: String): string;
244: function BinToInt(Binary: String): Integer;
245: Function BinToChar(St: String): Char;
246: Function BinToStr(ans: string): string;
247: Function BitBlt(hdcDest:HDC;nXDest,nYDest,nWidth,nHeigh:Int;hdcSrc:HDC;nXSrc,nYSrc:Int;dwRop:DWORD):Bool;
248: Function BitmapsAreIdentical( ABitmap1, ABitmap2 : TBitmap) : Boolean
249: Function BitsHighest( X : Byte) : Integer;
250: Function BitsHighest1( X : ShortInt) : Integer;
251: Function BitsHighest2( X : SmallInt) : Integer;
252: Function BitsHighest3( X : Word) : Integer;
253: Function BitsHighest4( X : Integer) : Integer;
254: Function BitsHighest5( X : Cardinal) : Integer;
255: Function BitsHighest6( X : Int64) : Integer;
256: Function BitsLowest( X : Byte) : Integer;
257: Function BitsLowest1( X : Shortint) : Integer;
258: Function BitsLowest2( X : Smallint) : Integer;
259: Function BitsLowest3( X : Word) : Integer;
260: Function BitsLowest4( X : Cardinal) : Integer;
261: Function BitsLowest5( X : Integer) : Integer;
262: Function BitsLowest6( X : Int64) : Integer;
263: Function BitsNeeded( const X : Byte) : Integer;
264: Function BitsNeeded1( const X : Word) : Integer;
265: Function BitsNeeded2( const X : Integer) : Integer;
266: Function BitsNeeded3( const X : Int64) : Integer;
267: Function BlueComponent( const Color32 : TColor32) : Integer
```

```
268: Function BooleanToInteger( const Pb : Boolean) : Integer
269: Function BoolToStr(B: Boolean; UseBoolStrs: Boolean): string)
270: Function BoolToStr1(value : boolean) : string;
271: Function booltoint( aBool : Boolean) : LongInt
272: Function inttobool( aInt : LongInt) : Boolean
273: Function Bounds( ALeft, ATop, AWidth, AHeight : Integer) : TRect
274: function Bounds(ALeft, ATop, AWidth, AHeight: Integer): TRect)
275: Function BreakApart( BaseString, BreakString : string; StringList : TStrings) : TStrings
276: Function BrightColor( const Color : TColor; const Pct : Single) : TColor
277: Function BrightColorChannel( const Channel : Byte; const Pct : Single) : Byte
278: Function BufferRequest( Length : Integer) : TStream
279: Function BuildFileList( const Path : string; const Attr : Integer; const List : TStrings) : Boolean
280: Function Buttons : PTaskDialogButton
281: Function BytesPerScanline( PixelsPerScanline, BitsPerPixel, Alignment : Longint) : Longint
282: Function BytesToCardinal( const AValue : TIdBytes; const AIndex : Integer) : Cardinal
283: Function BytesToChar( const AValue : TIdBytes; const AIndex : Integer) : Char
284: Function BytesToInt64( const AValue : TIdBytes; const AIndex : Integer) : Int64
285: Function BytesToInteger( const AValue : TIdBytes; const AIndex : Integer) : Integer
286: Function BytesToIPv6( const AValue : TIdBytes; const AIndex : Integer) : TIdIPv6Address
287: Function BytesToShort( const AValue : TIdBytes; const AIndex : Integer) : Short
288: Function BytesToString(ABytes:TIdBytes; AStartIndex:Integer; AMaxCount:Integer): string;
289: Function BytesToStr(const Value: TBytes): String;
290: Function BytesToWord( const AValue : TIdBytes; const AIndex : Integer) : Word
291: Function ByteToBin(Int: Byte): String;
292: Function ByteToCharIndex( S : string; Index : Integer) : Integer
293: function ByteToCharIndex(const S: string; Index: Integer): Integer)
294: Function ByteToCharLen( S : string; MaxLen : Integer) : Integer
295: Function ByteToCharLen(const S: string; MaxLen: Integer): Integer)
296: Function ByteToHex( const AByte : Byte) : string
297: Function ByteToOctal( const AByte : Byte) : string
298: Function ByteType( S : string; Index : Integer) : TMbcsByteType
299: function ByteType(const S: string; Index: Integer): TMbcsByteType)
300: Function CalcTitleRect( Col : TColumn; ARow : Integer; var MasterCol : TColumn) : TRect
301: Function CalculateDFAFingerprint( oStates : TList) : integer
302: function CallTerminateProcs: Boolean)
303: function CANFOCUS:BOOLEAN
304: Function CanLoad( const Ext : string) : Boolean
305: Function CanParse( AWebRequest : TWebRequest) : Boolean
306: Function CanSave( const Ext : string) : Boolean
307: Function CanStart( cChar : char) : boolean
308: Function CaptureScreen : TBitmap;
309: Function CaptureScreen1( Rec : TRect) : TBitmap;
310: Function CardinalToFourChar( ACardinal : LongWord) : string
311: Function CastSoapToNative(Info:PTypeInfo;const SoapData:WideString;NatData:Pointer;IsNull:Boolean): Boolean
312: Function CastSoapToVariant1( SoapInfo : PTypeInfo; const SoapData : WideString) : Variant;
313: Function Ceil( const X : Extended) : Integer
314: Function Ceil16( X : Integer) : Integer
315: Function Ceil4( X : Integer) : Integer
316: Function Ceil8( X : Integer) : Integer
317: Function Ceiling( const X : Extended) : Integer
318: Function CellRect( ACol, ARow : Longint) : TRect
319: Function CelsiusToFahrenheit( const AValue : Double) : Double
320: Function CenterPoint( const Rect : TRect) : TPoint
321: function CenterPoint(const Rect: TRect): TPoint)
322: Function ChangeFileExt( FileName, Extension : string) : string
323: function ChangeFileExt(const FileName: string; const Extension: string): string)
324: Function CharInSet2( const Ch : Char; const SetOfChar : TSetOfChar) : Boolean
325: Function CharInSet( const Ch : Char; const testSet: TSysCharSet): Boolean
326: Function CharIsInEOF( const AString : string; ACharPos : Integer) : Boolean
327: Function CharIsInSet( const AString : string; const ACharPos : Integer; const ASet : String) : Boolean
328: Function CharLength( S : String; Index : Integer) : Integer
329: Function CharRange( const AMin, AMax : Char) : String
330: function CharsetToIdent(Charset: Longint; var Ident: string): Boolean)
331: Function CharToBin(vChr: Char): String;
332: Function CharNext(lpsz: PChar): PChar; stdcall;
333: Function CharToByteIndex( S : string; Index : Integer) : Integer
334: Function CharToByteIndex(const S: string; Index: Integer): Integer)
335: Function CharToByteLen( S : string; MaxLen : Integer) : Integer
336: function CharToByteLen(const S: string; MaxLen: Integer): Integer)
337: Function CharToHex(const APrefix : String; const cc : Char) : shortstring;
338: function CharToHexStr(Value: char): string);
339: function CharToOem(ins, outs: PChar):boolean;
340: function CharToUniCode(Value: Char): string;
341: Function CheckMenuDropdown : Boolean
342: Function CheckMessages : longint
343: Function CheckBox: string;
344: Function CheckOpen( Status : DBIResult) : Boolean
345: Function CheckPassword( const APassword : String) : Boolean
346: Function CheckResponse(const AResponse:SmallInt;const AAllowedResponses:array of SmallInt): SmallInt
347: Function CheckCrc32( var X : array of Byte; N : Integer; Crc : Cardinal) : Integer;
348: function CheckSynchronize(Timeout: Integer): Boolean
349: Function CheckWin32Version( AMajor : Integer; AMinor : Integer) : Boolean
350: function ChrA(const a: byte): char;
351: Function ClassIDToProgID(const ClassID: TGUID): string;
352: Function ClassNameIs(const Name: string): Boolean
353: Function ClearBit( const Value : Byte; const Bit : TBitRange) : Byte;
354: Function ClearBit1( const Value : Shortint; const Bit : TBitRange) : Shortint;
355: Function ClearBit2( const Value : Smallint; const Bit : TBitRange) : Smallint;
356: Function ClearBit3( const Value : Word; const Bit : TBitRange) : Word;
```

```
357: Function ClearBit4( const Value : Integer; const Bit : TBitRange) : Integer;
358: Function ClearBit5( const Value : Cardinal; const Bit : TBitRange) : Cardinal;
359: Function ClearBit6( const Value : Int64; const Bit : TBitRange) : Int64;
360: function CLIENTTOSCREEN(POINT:TPOINT):TPOINT
361: Function Clipboard : TClipboard
362: Function ClipCodes( const X, Y, MinX, MinY, MaxX, MaxY : Float) : TClipCodes;
363: Function ClipCodes1( const X, Y : Float; const ClipRect : TRect) : TClipCodes;
364: Function ClipLine( var X1, Y1, X2, Y2 : Integer; const ClipRect : TRect) : Boolean;
365: Function ClipLineToRect( var P1, P2 : TFloatPoint; const Rect : TFloatRect) : Boolean
366: Function Clone( out stm : IStream) : HResult
367: Function CloneConnection : TSQLConnection
368: Function CloneMemoryStream( Original : TMemoryStream) : TMemoryStream
369: function CLOSEQUERY:BOOLEAN
370: Function CloseVolume( var Volume : THandle) : Boolean
371: Function CloseHandle(Handle: Integer): Integer; stdcall;
372: Function CPlApplet( hwndCPl : THandle; uMsg : DWORD; lParam1, lParam2 : Longint) : Longint
373: Function CmdLine: PChar;
374: function CmdShow: Integer;
375: Function Color32( const R, G, B : Byte; const A : Byte) : TColor32;
376: Function Color32( WinColor : TColor) : TColor32;
377: Function Color321( const Index : Byte; const Palette : TPalette32) : TColor32;
378: Function ColorAdjustLuma( clrRGB : TColor; n : Integer; fScale :BOOLean) : TColor
379: Function ColorHLSToRGB( Hue, Luminance, Saturation : Word) : TColorRef
380: Function ColorToHTML( const Color : TColor) : String
381: function ColorToIdent(Color: Longint; var Ident: string): Boolean)
382: Function ColorToRGB(color: TColor): Longint
383: function ColorToString(Color: TColor): string)
384: Function ColorToWebColorName( Color : TColor) : string
385: Function ColorToWebColorStr( Color : TColor) : string
386: Function ColumnAtDepth( Col : TColumn; ADepth : Integer) : TColumn
387: Function Combination(npr, ncr: integer): extended;
388: Function CombinationInt(npr, ncr: integer): Int64;
389: Function CombineInfo( Bitmap : TCustomBitmap32) : TCombineInfo
390: Function CommaAdd( const AStr1, AStr2 : String) : string
391: Function CommercialRound( const X : Extended) : Int64
392: Function Commit( grfCommitFlags : Longint) : HResult
393: Function Compare( const NameExt : string) : Boolean
394: function CompareDate(const A, B: TDateTime): TValueRelationship;
395: Function CompareDateTime( const ADateTime1, ADateTime2 : TDateTime) : Integer
396: Function CompareFiles(const FN1,FN2 :string; Breathe:TNotifyEvent;BreathingSender:TObject): boolean
397: Function CompareMemoryStreams( S1, S2 : TMemoryStream) : boolean
398: Function CompareStr( S1, S2 : string) : Integer
399: function CompareStr(const S1: string; const S2: string): Integer)
400: function CompareString(const S1: string; const S2: string): Integer)
401: Function CompareText( S1, S2 : string) : Integer
402: function CompareText(const S1: string; const S2: string): Integer)
403: Function CompareTextLike(cWildStr,cStr:string;const cWildChar:char;lCaseSensitive:boolean): boolean
404: function CompareTime(const A, B: TDateTime): TValueRelationship;
405: Function CompatibleConversionType( const AType : TConvType; const AFamily : TConvFamily) : Boolean
406: Function CompatibleConversionTypes( const AFrom, ATo : TConvType) : Boolean
407: Function ComponentTypeToString( const ComponentType : DWORD) : string
408: Function ComposeDateTime(Date,Time : TDateTime) : TDateTime;');
409: Function CompToCurrency( Value : Comp) : Currency
410: Function CompToDouble( Value : Comp) : Double
411: Function ComputeFileCRC32(const FileName : String) : Integer;
412: function ComputeSHA256(astr: string; amode: char): string)  //mode F:File, S:String
413: function ComputeSHA512(astr: string; amode: char): string)  //mode F:File, S:String
414: Function Concat(s: string): string
415: Function ConnectAndGetAll : string
416: Function Connected : Boolean
417: function constrain(x, a, b: integer): integer;
418: Function ConstraintCallBack( Req : DsInfoReq; var ADataSources : DataSources) : DBIResult
419: Function ConstraintsDisabled : Boolean
420: function CONTAINSCONTROL(CONTROL:TCONTROL):BOOLEAN
421: Function ContainsState( oState : TniRegularExpressionState) : boolean
422: Function ContainsStr( const AText, ASubText : string) : Boolean
423: Function ContainsText( const AText, ASubText : string) : Boolean
424: Function ContainsTransition( oTransition : TniRegularExpressionTransition) : boolean
425: Function Content : string
426: Function ContentFromStream( Stream : TStream) : string
427: Function ContentFromString( const S : string) : string
428: Function CONTROLSDISABLED : BOOLEAN
429: Function Convert( const AValue : Double; const AFrom, ATo : TConvType) : Double;
430: Function Convert1( const AValue : Double; const AFrom1, AFrom2, ATo1, ATo2 : TConvType) : Double;
431: Function ConvertFrom( const AFrom : TConvType; const AValue : Double) : Double
432: Function ConvertReadStream( Stream : TStream; Buffer : PChar; BufSize : Integer) : Integer
433: Function ConvertTo( const AValue : Double; const ATo : TConvType) : Double
434: Function ConvertWriteStream( Stream : TStream; Buffer : PChar; BufSize : Integer) : Integer
435: Function ConvFamilyToDescription( const AFamily : TConvFamily) : string
436: Function ConvTypeToDescription( const AType : TConvType) : string
437: Function ConvTypeToFamily( const AFrom, ATo : TConvType) : TConvFamily;
438: Function ConvTypeToFamily( const AType : TConvType) : TConvFamily;
439: Function ConvAdd(const AVal:Dbl;const AType1:TConvType;const AVal2:Dbl;const AType2,
     AResultType:TConvType): Double
440: Function ConvCompareValue(const AValue1:Double;const AType1:TConvType;const AValue2:Double;const
     AType2:TConvType): TValueRelationship
441: Function ConvDec( const AValue : Double; const AType, AAmountType : TConvType) : Double;
442: Function ConvDec1(const AValue:Dbl;const AType:TConvType;const AAmount:Dble;const
     AAmountType:TConvType):Double;
```

```
443: Function ConvDiff(const AVal1:Dbl;const AType1:TConvType;const AVal2:Dble;const AType2,
     AResuType:TConvType):Double
444: Function ConvInc( const AValue : Double; const AType, AAmountType : TConvType) : Double;
445: Function ConvInc1(const AValue:Dbl;const AType:TConvType;const AAmount:Double;const
     AAmountType:TConvType):Double;
446: Function ConvSameValue(const AValue1:Dbl;const AType1:TConvType;const AValue2:Dbl;const
     AType2:TConvType):Bool
447: Function ConvToStr( const AValue : Double; const AType : TConvType) : string
448: Function ConvWithinNext( const AValue, ATest : Double; const AType : TConvType; const AAmount : Double;
     const AAmountType : TConvType) : Boolean
449: Function ConvWithinPrevious(const AValue,ATest:Double;const AType:TConvType; const AAmount:Double;const
     AAmountType: TConvType) : Boolean
450: function Copy(s: AnyString; iFrom, iCount: Longint): AnyString;
451: Function CopyFile( Source, Dest : string; CanOverwrite : Boolean) : Boolean
452: Function CopyFileEx( Source, Dest : string; Flags : FILEOP_FLAGS) : Boolean
453: Function CopyFileTo( const Source, Destination : string) : Boolean
454: function CopyFrom(Source:TStream;Count:Int64):LongInt
455: Function CopyPalette( Palette : HPALETTE) : HPALETTE
456: Function CopyTo( Length : Integer) : string
457: Function CopyTo(stm: IStream; cb: Largeint;out cbRead: Largeint;out cbWritten:Largeint): HResult
458: Function CopyToEOF : string
459: Function CopyToEOL : string
460: Function Cos(e : Extended) : Extended;
461: Function Cosecant( const X : Extended) : Extended
462: Function Cot( const X : Extended) : Extended
463: Function Cotan( const X : Extended) : Extended
464: Function CotH( const X : Extended) : Extended
465: Function Count : Integer
466: Function CountBitsCleared( X : Byte) : Integer;
467: Function CountBitsCleared1( X : Shortint) : Integer;
468: Function CountBitsCleared2( X : Smallint) : Integer;
469: Function CountBitsCleared3( X : Word) : Integer;
470: Function CountBitsCleared4( X : Integer) : Integer;
471: Function CountBitsCleared5( X : Cardinal) : Integer;
472: Function CountBitsCleared6( X : Int64) : Integer;
473: Function CountBitsSet( X : Byte) : Integer;
474: Function CountBitsSet1( X : Word) : Integer;
475: Function CountBitsSet2( X : Smallint) : Integer;
476: Function CountBitsSet3( X : ShortInt) : Integer;
477: Function CountBitsSet4( X : Integer) : Integer;
478: Function CountBitsSet5( X : Cardinal) : Integer;
479: Function CountBitsSet6( X : Int64) : Integer;
480: function countDirfiles(const apath: string): integer;
481: function CountGenerations(Ancestor,Descendent: TClass): Integer
482: Function Coversine( X : Float) : Float
483: function CRC32(const fileName: string): LongWord;
484: Function CREATEBLOBSTREAM( FIELD : TFIELD; MODE : TBLOBSTREAMMODE) : TSTREAM
485: Function CreateColumns : TDBGridColumns
486: Function CreateDataLink : TGridDataLink
487: Function CreateDir( Dir : string) : Boolean
488: function CreateDir(const Dir: string): Boolean)
489: Function CreateDOSProcessRedirected( const CommandLine, InputFile, OutputFile : string) : Boolean
490: Function CreateEnvironmentBlock(const Options:TEnvironmentOptions;const AdditionalVars:TStrings): PChar
491: Function CREATEFIELD(OWNER:TCOMPONENT;PARENTFIELD:TOBJECTFIELD;const
     FIELDNAME:String;CREATECHILDREN:BOOL):TFIELD
492: Function CreateGlobber( sFilespec : string) : TniRegularExpression
493: Function CreateGrayMappedBmp( Handle : HBITMAP) : HBITMAP
494: Function CreateGrayMappedRes( Instance : THandle; ResName : PChar) : HBITMAP
495: function CreateGUID(out Guid: TGUID): HResult)
496: Function CreateInstance( const unkOuter : IUnknown; const iid : TGUID; out obj) : HResult
497: Function CreateMappedBmp( Handle : HBITMAP; const OldColors, NewColors : array of TColor) : HBITMAP
498: Function CreateMappedRes(Instance:THandle;ResName:PChar;const OldColors,NewColors:array of TColor):HBITMAP
499: Function CreateMessageDialog(const Msg:string; DlgType:TMsgDlgType; Buttons: TMsgDlgButtons) : TForm;
500: Function CreateMessageDialog1(const
     Msg:string;DlgType:TMsgDlgType;Btns:TMsgDlgBtns;DefaultBtn:TMsgDlgBtn):TForm;
501: function CreateOleObject(const ClassName: String): IDispatch;
502: Function CREATEPARAM( FLDTYPE : TFIELDTYPE; const PARAMNAME : String; PARAMTYPE : TPARAMTYPE) : TPARAM
503: Function CreateParameter(const
     Name:WideString;DataType:TDataType;Direction:TParameterDirection;Size:Integer;Value: OleVariant):TParameter
504: Function CreateLocate( DataSet : TDataSet) : TJvLocateObject
505: Function CreateMappedBmp( Handle : HBITMAP; const OldColors, NewColors : array of TColor) : HBITMAP
506: Function CreateMappedRes(Instance:THandle;ResName:PChar;const OldColors,NewColors:array of TColor):HBITMAP
507: Function CreateRecordBuffer( Length : Integer) : TRecordBuffer
508: Function CreateValueBuffer( Length : Integer) : TValueBuffer
509: Function CreatePopupCalculator( AOwner : TComponent; ABiDiMode : TBiDiMode) : TWinControl
510: Function CreateRecordBuffer( Length : Integer) : TRecordBuffer
511: Function CreateRotatedFont( Font : TFont; Angle : Integer) : HFONT
512: Function CreateTwoColorsBrushPattern( Color1, Color2 : TColor) : TBitmap
513: Function CreateValueBuffer( Length : Integer) : TValueBuffer
514: Function CreateHexDump( AOwner : TWinControl) : THexDump
515: Function Csc( const X : Extended) : Extended
516: Function CscH( const X : Extended) : Extended
517: function currencyDecimals: Byte
518: function currencyFormat: Byte
519: function currencyString: String
520: Function CurrentProcessId : TIdPID
521: Function CurrentReadBuffer : string
522: Function CurrentThreadId : TIdPID
523: Function CurrentYear : Word
```

```
524: Function CurrToBCD(const Curr: Currency; var BCD: TBcd; Precision: Integer; Decimals: Integer): Boolean
525: Function CurrToStr( Value : Currency) : string;
526: Function CurrToStrF( Value : Currency; FormatSettings : TFormatSettings; Digits: Integer) : string;
527: Function CurrToStrFS(Value:Currency;Format:TFloatFormat;Digits:Int;const
     FormatSettings:TFormatSettings):string;
528: function CursorToIdent(cursor: Longint; var Ident: string): Boolean;
529: function CursorToString(cursor: TCursor): string;
530: Function CustomSort( SortProc : TLVCompare; lParam : Longint) : Boolean
531: Function CustomSort( SortProc : TTVCompare; Data : Longint; ARecurse : Boolean) : Boolean
532: Function CycleToDeg( const Cycles : Extended) : Extended
533: Function CycleToGrad( const Cycles : Extended) : Extended
534: Function CycleToRad( const Cycles : Extended) : Extended
535: Function D2H( N : Longint; A : Byte) : string
536: Function DarkColor( const Color : TColor; const Pct : Single) : TColor
537: Function DarkColorChannel( const Channel : Byte; const Pct : Single) : Byte
538: Function DataLinkDir : string
539: Function DataRequest( Data : OleVariant) : OleVariant
540: Function DataRequest( Input : OleVariant) : OleVariant
541: Function DataToRawColumn( ACol : Integer) : Integer
542: Function Date : TDateTime
543: function Date: TDateTime;
544: Function DateIsNull( const pdtValue : TDateTime; const pdtKind : TdtKind) : Boolean
545: Function DateOf( const AValue : TDateTime) : TDateTime
546: function DateSeparator: char;
547: Function DateTimeGMTToHttpStr( const GMTValue : TDateTime) : String
548: Function DateTimeToFileDate( DateTime : TDateTime) : Integer
549: function DateTimeToFileDate(DateTime: TDateTime): Integer;
550: Function DateTimeToGmtOffSetStr( ADateTime : TDateTime; SubGMT : Boolean) : string
551: Function DateTimeToInternetStr( const Value : TDateTime; const AIsGMT : Boolean) : String
552: Function DateTimeToJulianDate( const AValue : TDateTime) : Double
553: Function DateTimeToModifiedJulianDate( const AValue : TDateTime) : Double
554: Function DateTimeToStr( DateTime : TDateTime) : string;
555: Function DateTimeToStr2( DateTime : TDateTime; FormatSettings : TFormatSettings) : string;
556: function DateTimeToTimeStamp(DateTime: TDateTime): TTimeStamp
557: Function DateTimeToUnix( const AValue : TDateTime) : Int64
558: function DateTimeToUnix(D: TDateTime): Int64;
559: Function DateToStr( DateTime : TDateTime) : string;
560: function DateToStr(const DateTime: TDateTime): string;
561: function DateToStr(D: TDateTime): string;
562: Function DateToStr2( DateTime : TDateTime; FormatSettings : TFormatSettings) : string;
563: Function DayOf( const AValue : TDateTime) : Word
564: Function DayOfTheMonth( const AValue : TDateTime) : Word
565: function DayOfTheMonth(const AValue: TDateTime): Word;
566: Function DayOfTheWeek( const AValue : TDateTime) : Word
567: Function DayOfTheYear( const AValue : TDateTime) : Word
568: function DayOfTheYear(const AValue: TDateTime): Word;
569: Function DayOfWeek( DateTime : TDateTime) : Word
570: function DayOfWeek(const DateTime: TDateTime): Word;
571: Function DayOfWeekStr( DateTime : TDateTime) : string
572: Function DaysBetween( const ANow, AThen : TDateTime) : Integer
573: Function DaysInAMonth( const AYear, AMonth : Word) : Word
574: Function DaysInAYear( const AYear : Word) : Word
575: Function DaysInMonth( const AValue : TDateTime) : Word
576: Function DaysInYear( const AValue : TDateTime) : Word
577: Function DaySpan( const ANow, AThen : TDateTime) : Double
578: Function DBUseRightToLeftAlignment( AControl : TControl; AField : TField) : Boolean
579: function DecimalSeparator: char;
580: Function DecLimit( var B : Byte; const Limit : Byte; const Decr : Byte) : Byte;
581: Function DecLimit1( var B : Shortint; const Limit : Shortint; const Decr : Shortint) : Shortint;
582: Function DecLimit2( var B : Smallint; const Limit : Smallint; const Decr : Smallint) : Smallint;
583: Function DecLimit3( var B : Word; const Limit : Word; const Decr : Word) : Word;
584: Function DecLimit4( var B : Integer; const Limit : Integer; const Decr : Integer) : Integer;
585: Function DecLimit5( var B : Cardinal; const Limit : Cardinal; const Decr : Cardinal) : Cardinal;
586: Function DecLimit6( var B : Int64; const Limit : Int64; const Decr : Int64) : Int64;
587: Function DecLimitClamp( var B : Byte; const Limit : Byte; const Decr : Byte) : Byte;
588: Function DecLimitClamp1( var B : Shortint; const Limit : Shortint; const Decr : Shortint) : Shortint;
589: Function DecLimitClamp2( var B : Smallint; const Limit : Smallint; const Decr : Smallint) : Smallint;
590: Function DecLimitClamp3( var B : Word; const Limit : Word; const Decr : Word) : Word;
591: Function DecLimitClamp4( var B : Integer; const Limit : Integer; const Decr : Integer) : Integer;
592: Function DecLimitClamp5( var B : Cardinal; const Limit : Cardinal; const Decr : Cardinal) : Cardinal;
593: Function DecLimitClamp6( var B : Int64; const Limit : Int64; const Decr : Int64) : Int64;
594: Function DecodeDateFully( DateTime : TDateTime; var Year, Month, Day, DOW : Word) : Boolean
595: Function DecodeSoundexInt( AValue : Integer) : string
596: Function DecodeSoundexWord( AValue : Word) : string
597: Function DefaultAlignment : TAlignment
598: Function DefaultCaption : string
599: Function DefaultColor : TColor
600: Function DefaultFont : TFont
601: Function DefaultImeMode : TImeMode
602: Function DefaultImeName : TImeName
603: Function DefaultReadOnly : Boolean
604: Function DefaultWidth : Integer
605: Function DegMinSecToFloat( const Degs, Mins, Secs : Float) : Float
606: Function DegToCycle( const Degrees : Extended) : Extended
607: Function DegToGrad( const Degrees : Extended) : Extended
608: Function DegToGrad( const Value : Extended) : Extended;
609: Function DegToGrad1( const Value : Double) : Double;
610: Function DegToGrad2( const Value : Single) : Single;
611: Function DegToRad( const Degrees : Extended) : Extended
```

```
612: Function DegToRad( const Value : Extended) : Extended;
613: Function DegToRad1( const Value : Double) : Double;
614: Function DegToRad2( const Value : Single) : Single;
615: Function DelChar( const pStr : string; const pChar : Char) : string
616: Function DelEnvironmentVar( const Name : string) : Boolean
617: Function Delete( const MsgNum : Integer) : Boolean
618: Function DeleteDirectory( const DirectoryName : string; MoveToRecycleBin : Boolean) : Boolean
619: Function DeleteFile(const FileName: string): boolean)
620: Function DeleteFileEx( FileName : string; Flags : FILEOP_FLAGS) : Boolean
621: Function DelimiterPosn( const sString : string; const sDelimiters: string): integer;
622: Function DelimiterPosn1(const sString:string;const sDelimiters:string;out cDelimiter: char) : integer;
623: Function DelSpace( const pStr : string) : string
624: Function DelString( const pStr, pDelStr : string) : string
625: Function DelTree( const Path : string) : Boolean
626: Function Depth : Integer
627: Function Description : string
628: Function DescriptionsAvailable : Boolean
629: Function DescriptionToConvFamily( const ADescription : string; out AFamily : TConvFamily) : Boolean
630: Function DescriptionToConvType( const ADescription : string; out AType : TConvType) : Boolean;
631: Function DescriptionToConvType1(const AFamil:TConvFamily;const ADescr:string;out AType:TConvType):Boolean;
632: Function DetectUTF8Encoding( const s : UTF8String) : TEncodeType
633: Function DialogsToPixelsX( const Dialogs : Word) : Word
634: Function DialogsToPixelsY( const Dialogs : Word) : Word
635: Function Digits( const X : Cardinal) : Integer
636: Function DirectoryExists( const Name : string) : Boolean
637: Function DirectoryExists( Directory : string) : Boolean
638: Function DiskFree( Drive : Byte) : Int64
639: function DiskFree(Drive: Byte): Int64)
640: Function DiskInDrive( Drive : Char) : Boolean
641: Function DiskSize( Drive : Byte) : Int64
642: function DiskSize(Drive: Byte): Int64)
643: Function DISPATCHCOMMAND( ACOMMAND : WORD) : BOOLEAN
644: Function DispatchEnabled : Boolean
645: Function DispatchMask : TMask
646: Function DispatchMethodType : TMethodType
647: Function DISPATCHPOPUP( AHANDLE : HMENU) : BOOLEAN
648: Function DispatchRequest( Sender : TObject; Request : TWebRequest; Response : TWebResponse) : Boolean
649: Function DisplayCase( const S : String) : String
650: Function DisplayRect( Code : TDisplayCode) : TRect
651: Function DisplayRect( TextOnly : Boolean) : TRect
652: Function DisplayStream( Stream : TStream) : string
653: TBufferCoord', 'record Char : integer; Line : integer; end
654: TDisplayCoord', 'record Column : integer; Row : integer; end
655: Function DisplayCoord( AColumn, ARow : Integer) : TDisplayCoord
656: Function BufferCoord( AChar, ALine : Integer) : TBufferCoord
657: Function DomainName( const AHost : String) : String
658: Function DosPathToUnixPath( const Path : string) : string
659: Function DottedLineTo( const Canvas : TCanvas; const X, Y : Integer) : Boolean;
660: Function DoubleDecliningBalance( const Cost, Salvage : Extended; Life, Period : Integer) : Extended
661: Function DoubleToBcd( const AValue : Double) : TBcd;
662: Function DoubleToHex( const D : Double) : string
663: Function DoUpdates : Boolean
664: Function Dragging: Boolean;
665: Function DrawCaption( p1 : HWND; p2 : HDC; const p3 : TRect; p4 : UINT) : BOOL
666: Function DrawAnimatedRects( hwnd : HWND; idAni : Integer; const lprcFrom, lprcTo : TRect) : BOOL
667: Function DrawEdge( hdc : HDC; var qrc : TRect; edge : UINT; grfFlags : UINT) : BOOL
668: Function DrawFrameControl( DC : HDC; const Rect : TRect; uType, uState : UINT) : BOOL
669: {Works like InputQuery but displays 2edits. If PasswordChar <> #0, the second edit's PasswordChar is set}
670: Function DualInputQuery(const ACapt,Prpt1,Prpt2:string;var AVal1,AVal2:string;PasswrdChar:Char= #0):Bool;
671: Function DupeString( const AText : string; ACount : Integer) : string
672: Function Edit : Boolean
673: Function EditCaption : Boolean
674: Function EditText : Boolean
675: Function EditFolderList( Folders : TStrings) : Boolean
676: Function EditQueryParams( DataSet : TDataSet; List : TParams; AHelpContext : THelpContext) : Boolean
677: Function Elapsed( const Update : Boolean) : Cardinal
678: Function EnableProcessPrivilege( const Enable : Boolean; const Privilege : string) : Boolean
679: Function EnableThreadPrivilege( const Enable : Boolean; const Privilege : string) : Boolean
680: Function EncodeDate( Year, Month, Day : Word) : TDateTime
681: function EncodeDate(Year, Month, Day: Word): TDateTime;
682: Function EncodeDateDay( const AYear, ADayOfYear : Word) : TDateTime
683: Function EncodeDateMonthWeek( const AYear, AMonth, AWeekOfMonth, ADayOfWeek : Word) : TDateTime
684: Function EncodeDateTime(const AYear,AMonth,ADay,AHour,AMinute,ASecond,AMilliSecond: Word): TDateTime
685: Function EncodeDateWeek( const AYear, AWeekOfYear : Word; const ADayOfWeek : Word) : TDateTime
686: Function EncodeDayOfWeekInMonth( const AYear, AMonth, ANthDayOfWeek, ADayOfWeek : Word) : TDateTime
687: Function EncodeString( s : string) : string
688: Function DecodeString( s : string) : string
689: Function EncodeTime( Hour, Min, Sec, MSec : Word) : TDateTime
690: function EncodeTime(Hour, Min, Sec, MSec: Word): TDateTime;
691: Function EndIP : String
692: Function EndOfADay( const AYear, AMonth, ADay : Word) : TDateTime;
693: Function EndOfADay1( const AYear, ADayOfYear : Word) : TDateTime;
694: Function EndOfAMonth( const AYear, AMonth : Word) : TDateTime
695: Function EndOfAWeek( const AYear, AWeekOfYear : Word; const ADayOfWeek : Word) : TDateTime
696: Function EndOfAYear( const AYear : Word) : TDateTime
697: Function EndOfTheDay( const AValue : TDateTime) : TDateTime
698: Function EndOfTheMonth( const AValue : TDateTime) : TDateTime
699: Function EndOfTheWeek( const AValue : TDateTime) : TDateTime
700: Function EndOfTheYear( const AValue : TDateTime) : TDateTime
```

```
701: Function EndPeriod( const Period : Cardinal) : Boolean
702: Function EndsStr( const ASubText, AText : string) : Boolean
703: Function EndsText( const ASubText, AText : string) : Boolean
704: Function EnsureMsgIDBrackets( const AMsgID : String) : String
705: Function EnsureRange( const AValue, AMin, AMax : Integer) : Integer;
706: Function EnsureRange1( const AValue, AMin, AMax : Int64) : Int64;
707: Function EnsureRange2( const AValue, AMin, AMax : Double) : Double;
708: Function EOF: boolean
709: Function EOln: boolean
710: Function EqualRect( const R1, R2 : TRect) : Boolean
711: function EqualRect(const R1, R2: TRect): Boolean)
712: Function Equals( Strings : TWideStrings) : Boolean
713: function Equals(Strings: TStrings): Boolean;
714: Function EqualState( oState : TniRegularExpressionState) : boolean
715: Function ErrOutput: Text)
716: function ExceptionParam: String;
717: function ExceptionPos: Cardinal;
718: function ExceptionProc: Cardinal;
719: function ExceptionToString(er: TIFException; Param: String): String;
720: function ExceptionType: TIFException;
721: Function ExcludeTrailingBackslash( S : string) : string
722: function ExcludeTrailingBackslash(const S: string): string)
723: Function ExcludeTrailingPathDelimiter( const APath : string) : string
724: Function ExcludeTrailingPathDelimiter( S : string) : string
725: function ExcludeTrailingPathDelimiter(const S: string): string)
726: function ExecConsoleApp(const AppName, Parameters: String; AppOutput: TStrings): boolean;
727: Function ExecProc : Integer
728: Function ExecSQL : Integer
729: Function ExecSQL( ExecDirect : Boolean) : Integer
730: Function Execute : _Recordset;
731: Function Execute : Boolean
732: Function Execute : Boolean;
733: Function Execute( const SQL : string; Params : TParams; Cache : Boolean; cursor : phDBICur) : Integer
734: Function Execute( const SQL : WideString; Params : TParams; ResultSet : TPSResult) : Integer
735: Function Execute( ParentWnd : HWND) : Boolean
736: Function Execute1(constCommText:WideString;const CType:TCommType;const
     ExecuteOpts:TExecuteOpts):_Recordset;
737: Function Execute1( const Parameters : OleVariant) : _Recordset;
738: Function Execute1( ParentWnd : HWND) : Boolean;
739: Function Execute2( var RecordsAffected : Integer; const Parameters : OleVariant) : _Recordset;
740: Function ExecuteAction( Action : TBasicAction) : Boolean
741: Function ExecuteDirect( const SQL : WideString) : Integer
742: Function ExecuteFile(const FileName:string;const Params:string;const DefDir:string;ShowCmd:Int):THandle
743: Procedure ExecuteThread2(afunc:TThreadFunction2;thrOK:boolean);AddTypeS('TThreadFunction2','procedure
744: Function CreateThread2(ThreadFunc: TThreadFunction2) : THandle
745: function ExeFileIsRunning(ExeFile: string): boolean;
746: function ExePath: string;
747: function ExePathName: string;
748: Function Exists( AItem : Pointer) : Boolean
749: Function ExitWindows( ExitCode : Cardinal) : Boolean
750: function Exp(x: Extended): Extended;
751: Function ExpandEnvironmentVar( var Value : string) : Boolean
752: Function ExpandFileName( FileName : string) : string
753: function ExpandFileName(const FileName: string): string)
754: Function ExpandUNCFileName( FileName : string) : string
755: function ExpandUNCFileName(const FileName: string): string)
756: Function ExpJ( const X : Float) : Float;
757: Function Exsecans( X : Float) : Float
758: Function Extract( const AByteCount : Integer) : string
759: Function Extract( Item : TClass) : TClass
760: Function Extract( Item : TComponent) : TComponent
761: Function Extract( Item : TObject) : TObject
762: Function ExtractFileDir( FileName : string) : string
763: function ExtractFileDir(const FileName: string): string)
764: Function ExtractFileDrive( FileName : string) : string
765: function ExtractFileDrive(const FileName: string): string)
766: Function ExtractFileExt( FileName : string) : string
767: function ExtractFileExt(const FileName: string): string)
768: Function ExtractFileExtNoDot( const FileName : string) : string
769: Function ExtractFileExtNoDotUpper( const FileName : string) : string
770: Function ExtractFileName( FileName : string) : string
771: function ExtractFileName(const filename: string):string;
772: Function ExtractFilePath( FileName : string) : string
773: function ExtractFilePath(const filename: string):string;
774: Function ExtractRelativePath( BaseName, DestName : string) : string
775: function ExtractRelativePath(const BaseName: string; const DestName: string): string)
776: Function ExtractShortPathName( FileName : string) : string
777: function ExtractShortPathName(const FileName: string): string)
778: function ExtractStrings(Separators, WhiteSpace: TSysCharSet; Content: PChar;Strings: TStrings): Integer
779: function ExtractStrings(Separators:TSysCharSet;WhiteSpace:TSysCharSet;Content:PChar;Str:TStrings): Integer)
780: Function Fact(numb: integer): Extended;
781: Function FactInt(numb: integer): int64;
782: Function Factorial( const N : Integer) : Extended
783: Function FahrenheitToCelsius( const AValue : Double) : Double
784: function FalseBoolStrs: array of string
785: Function Fetch(var AInput:string;const ADelim:string;const ADelete:Bool;const ACaseSensitive:Bool):string
786: Function FetchCaseInsensitive(var AInput:string; const ADelim:string; const ADelete:Boolean): string
787: Function Fibo(numb: integer): Extended;
788: Function FiboInt(numb: integer): Int64;
```

```
789: Function Fibonacci( const N : Integer) : Integer
790: Function FIELDBYNAME( const FIELDNAME : STRING) : TFIELD
791: Function FIELDBYNAME( const FIELDNAME : WIDESTRING) : TFIELD
792: Function FIELDBYNAME( const NAME : String) : TFIELD
793: Function FIELDBYNAME( const NAME : String) : TFIELDDEF
794: Function FIELDBYNUMBER( FIELDNO : INTEGER) : TFIELD
795: Function FileAge( FileName : string) : Integer
796: Function FileAge(const FileName: string): integer)
797: Function FileCompareText( const A, B : String) : Integer
798: Function FileContains(const FileName:string;Text:string;CaseSensitive:Bool;ExceptionOnError:Bool): Boolean
799: Function FileCreate( FileName : string) : Integer;
800: Function FileCreate(const FileName: string): integer)
801: Function FileCreateTemp( var Prefix : string) : THandle
802: Function FileDateToDateTime( FileDate : Integer) : TDateTime
803: function FileDateToDateTime(FileDate: Integer): TDateTime;
804: Function FileExists( const FileName : string) : Boolean
805: Function FileExists( FileName : string) : Boolean
806: function fileExists(const FileName: string): Boolean;
807: Function FileGetAttr( FileName : string) : Integer
808: Function FileGetAttr(const FileName: string): integer)
809: Function FileGetDate( Handle : Integer) : Integer
810: Function FileGetDate(handle: integer): integer
811: Function FileGetDisplayName( const FileName : string) : string
812: Function FileGetSize( const FileName : string) : Integer
813: Function FileGetTempName( const Prefix : string) : string
814: Function FileGetTypeName( const FileName : string) : string
815: Function FileIsReadOnly( FileName : string) : Boolean
816: Function FileLoad( ResType : TResType; const Name : string; MaskColor : TColor) : Boolean
817: Function FileOpen( FileName : string; Mode : LongWord) : Integer
818: Function FileOpen(const FileName: string; mode:integer): integer)
819: Function FileRead(handle: integer; Buffer: PChar; count: LongWord): integer
820: Function FileSearch( Name, DirList : string) : string
821: Function FileSearch(const Name, dirList: string): string)
822: Function FileSeek( Handle : Integer; Offset : Int64; Origin : Integer) : Int64;
823: Function FileSeek( Handle, Offset, Origin : Integer) : Integer;
824: Function FileSeek(handle, offset, origin: integer): integer
825: Function FileSetAttr( FileName : string; Attr : Integer) : Integer
826: function FileSetAttr(const FileName: string; Attr: Integer): Integer)
827: Function FileSetDate(FileName : string; Age : Integer) : Integer;
828: Function FileSetDate(handle: integer; age: integer): integer
829: Function FileSetDate2(FileHandle : Integer; Age : Integer) : Integer;
830: Function FileSetDateH( Handle : Integer; Age : Integer) : Integer;
831: Function FileSetReadOnly( FileName : string; ReadOnly : Boolean) : Boolean
832: Function FileSize( const FileName : string) : int64
833: Function FileSizeByName( const AFilename : string) : Longint
834: function FileWrite(Handle: Integer; const Buffer: pChar; Count: LongWord): Integer)
835: Function FilterSpecArray : TComdlgFilterSpecArray
836: Function FIND( ACAPTION : String) : TMENUITEM
837: Function Find( AItem : Pointer; out AData : Pointer) : Boolean
838: Function FIND( const ANAME : String) : TNAMEDITEM
839: Function Find( const DisplayName : string) : TAggregate
840: Function Find( const Item : TBookmarkStr; var Index : Integer) : Boolean
841: Function FIND( const NAME : String) : TFIELD
842: Function FIND( const NAME : String) : TFIELDDEF
843: Function FIND( const NAME : String) : TINDEXDEF
844: Function Find( const S : WideString; var Index : Integer) : Boolean
845: function Find(S:String;var Index:Integer):Boolean
846: Function FindAuthClass( AuthName : String) : TIdAuthenticationClass
847: Function FindBand( AControl : TControl) : TCoolBand
848: Function FindBoundary( AContentType : string) : string
849: Function FindButton( AModalResult : TModalResult) : TTaskDialogBaseButtonItem
850: Function FindCaption(StartIndex: Integer;Value: string; Partial,Inclusive,Wrap: Boolean): TListItem
851: Function FindCdLineSwitch( Switch : string; IgnoreCase : Boolean) : Boolean;
852: Function FindCloseW(FindFile: Integer): LongBool; stdcall;
853: Function FindCmdLineSwitch( Switch : string; Chars : TSysCharSet; IgnoreCase : Boolean) : Boolean;
854: Function FindCmmdLineSwitch( Switch : string) : Boolean;
855: function FindComponent(AName: String): TComponent;
856: function FindComponent(vlabel: string): TComponent;
857: function FindComponent2(vlabel: string): TComponent;
858: function FindControl(Handle: HWnd): TWinControl;
859: Function FindData( StartIndex : Integer; Value : Pointer; Inclusive, Wrap : Boolean) : TListItem
860: Function FindDatabase( const DatabaseName : string) : TDatabase
861: function FindDragTarget(const Pos: TPoint; AllowDisabled: Boolean): TControl;
862: Function FINDFIELD( const FIELDNAME : STRING) : TFIELD
863: Function FINDFIELD( const FIELDNAME : WideString) : TFIELD
864: Function FindFirst2(const Path: string; Attr: Integer; var F: TSearchRec):Integer)
865: Function FindNext2(var F: TSearchRec): Integer)
866: procedure FindClose2(var F: TSearchRec)
867: Function FINDFIRST : BOOLEAN
868: TJvSpecialFolder = (sfRecycleBin, sfControlPanel, sfDesktop, sfDesktopDirectory,
869:   sfMyComputer, sfFonts, sfNetHood, sfNetwork, sfPersonal, sfPrinters, sfPrograms,sfRecent,sfSendTo,
     sfStartMenu, stStartUp, sfTemplates);
870:  FFolder: array [TJvSpecialFolder] of Integer =
871:     (CSIDL_BITBUCKET, CSIDL_CONTROLS, CSIDL_DESKTOP, CSIDL_DESKTOPDIRECTORY,
872:      CSIDL_DRIVES, CSIDL_FONTS, CSIDL_NETHOOD, CSIDL_NETWORK, CSIDL_PERSONAL,
873:      CSIDL_PRINTERS, CSIDL_PROGRAMS, CSIDL_RECENT, CSIDL_SENDTO, CSIDL_STARTMENU,
874:      CSIDL_STARTUP, CSIDL_TEMPLATES);
875: Function FindFilesDlg(StartIn: string; SpecialFolder: TJvSpecialFolder; UseFolder: Boolean): Boolean);
876: function Findfirst(const filepath: string; attr: integer): integer;
```

```
877: function FindFirst2(const Path: string; Attr: Integer; var F: TSearchRec): Integer)
878: Function FindFirstNotOf( AFind, AText : String) : Integer
879: Function FindFirstOf( AFind, AText : String) : Integer
880: Function FindImmediateTransitionOn( cChar : char) : TniRegularExpressionState
881: Function FINDINDEXFORFIELDS( const FIELDS : String) : TINDEXDEF
882: Function FindInstanceOf( AClass : TClass; AExact : Boolean; AStartAt : Integer) : Integer
883: Function FINDITEM( VALUE : INTEGER; KIND : TFINDITEMKIND) : TMENUITEM
884: Function FindItemId( Id : Integer) : TCollectionItem
885: Function FindKey( const KeyValues : array of const) : Boolean
886: Function FINDLAST : BOOLEAN
887: Function FindLineControl( ComponentType, ControlType : DWORD) : TJclMixerLineControl
888: Function FindModuleClass( AClass : TComponentClass) : TComponent
889: Function FindModuleName( const AClass : string) : TComponent
890: Function FINDNEXT : BOOLEAN
891: function FindNext: integer;
892: function FindNext2(var F: TSearchRec): Integer)
893: Function FindNextPage( CurPage : TTabSheet; GoForward, CheckTabVisible : Boolean) : TTabSheet
894: Function FindNextToSelect : TTreeNode
895: Function FINDPARAM( const VALUE : String) : TPARAM
896: Function FindParam( const Value : WideString) : TParameter
897: Function FINDPRIOR : BOOLEAN
898: Function FindResource( ModuleHandle : HMODULE; ResourceName, ResourceType : PChar) : TResourceHandle
899: Function FindSession( const SessionName : string) : TSession
900: function FindStringResource(Ident: Integer): string)
901: Function FindText( const SearchStr:string;StartPos,Length: Integer; Options: TSearchTypes):Integer
902: Function FindUnusedFileName( const FileName, FileExt, Suffix : AnsiString) : AnsiString
903: function FindVCLWindow(const Pos: TPoint): TWinControl;
904: function FindWindow(C1, C2: PChar): Longint;
905: Function FindInPaths(const fileName,paths: String): String;
906: Function Finger : String
907: Function First : TClass
908: Function First : TComponent
909: Function First : TObject
910: Function FirstDelimiter( const delimiters : string; const Str : String) : integer;
911: Function FirstDelimiter1( const delimiters : WideString; const Str : WideString) : integer;
912: Function FirstInstance( const ATitle : string) : Boolean
913: Function FloatPoint( const X, Y : Float) : TFloatPoint;
914: Function FloatPoint1( const P : TPoint) : TFloatPoint;
915: Function FloatPtInRect( const Rect : TFloatRect; const P : TFloatPoint) : Boolean
916: Function FloatRect( const ALeft, ATop, ARight, ABottom : Double) : TFloatRect;
917: Function FloatRect1( const Rect : TRect) : TFloatRect;
918: Function FloatsEqual( const X, Y : Float) : Boolean
919: Function FloatToBin(const D: Double): string;     //doubletohex -> hextobin! in buffer
920: Function FloatToCurr( Value : Extended) : Currency
921: Function FloatToDateTime( Value : Extended) : TDateTime
922: Function FloatToStr( Value : Extended) : string;
923: Function FloatToStr(e : Extended) : String;
924: Function FloatToStrF( Value : Extended; Format : TFloatFormat; Precision, Digits : Integer) : string;
925: function FloatToStrF(Value: Extended; Format: TFloatFormat;Precision:Integer; Digits: Integer): string)
926: Function FloatToStr2( Value : Extended; Format : TFloatFormat; Precision, Digits : Integer; FormatSettings
     : TFormatSettings) : string;
927: Function FloatToStrFS( Value : Extended; Format : TFloatFormat; Precision, Digits : Integer;
     FormatSettings : TFormatSettings) : string;
928: function FloatToText(BufferArg: PChar; const Value: Extended; ValueType: TFloatValue;Format: TFloatFormat;
     Precision,Digits: Integer): Integer)
929: Function Floor( const X : Extended) : Integer
930: Function FloorInt( Value : Integer; StepSize : Integer) : Integer
931: Function FloorJ( const X : Extended) : Integer
932: Function Flush( const Count : Cardinal) : Boolean
933: Function Flush(var t: Text): Integer
934: function FmtLoadStr(Ident: Integer; const Args: array of const): string)
935: function FOCUSED:BOOLEAN
936: Function ForceBackslash( const PathName : string) : string
937: Function ForceDirectories( const Dir : string) : Boolean
938: Function ForceDirectories( Dir : string) : Boolean
939: Function ForceDirectories( Name : string) : Boolean
940: Function ForceInBox( const Point : TPoint; const Box : TRect) : TPoint
941: Function ForceInRange( A, Min, Max : Integer) : Integer
942: Function ForceInRangeR( const A, Min, Max : Double) : Double
943: Function ForEach( AProc : TBucketProc; AInfo : Pointer) : Boolean;
944: Function ForEach1( AEvent : TBucketEvent) : Boolean;
945: Function ForegroundTask: Boolean
946: function Format(const Format: string; const Args: array of const): string;
947: Function FormatBcd( const Format : string; Bcd : TBcd) : string
948: FUNCTION FormatBigInt(s: string): STRING;
949: function FormatByteSize(const bytes: int64): string;
950: function FormatBuf(var Buffer:PChar;BufLen:Card;const Format:string;FmtLen:Card;const Args:array of
     const):Cardinal
951: Function FormatCount( iCount : integer; const sSingular : string; const sPlural : string) : string
952: Function FormatCurr( Format : string; Value : Currency) : string;
953: function FormatCurr(const Format: string; Value: Currency): string)
954: Function FormatDateTime( Format : string; DateTime : TDateTime) : string;
955: function FormatDateTime(const fmt: string; D: TDateTime): string;
956: Function FormatFloat( Format : string; Value : Extended) : string;
957: function FormatFloat(const Format: string; Value: Extended): string)
958: Function FormatFloat( Format : string; Value : Extended) : string;
959: Function FormatFloat2( Format : string; Value : Extended; FormatSettings : TFormatSettings) : string;
960: Function FormatCurr( Format : string; Value : Currency) : string;
961: Function FormatCurr2(Format: string; Value : Currency; FormatSettings : TFormatSettings) : string;
```

```
 962: Function Format2(const Format:string;const Args:array of const;const FSettings:TFormatSettings): string
 963: FUNCTION FormatInt(i: integer): STRING;
 964: FUNCTION FormatInt64(i: int64): STRING;
 965: Function FormatMaskText( const EditMask : string; const Value : string) : string
 966: Function FormatValue( AValue : Cardinal) : string
 967: Function FormatVersionString( const HiV, LoV : Word) : string;
 968: Function FormatVersionString1( const Major, Minor, Build, Revision : Word) : string;
 969: function Frac(X: Extended): Extended);
 970: Function FreeResource( ResData : HGLOBAL) : LongBool
 971: Function FromCommon( const AValue : Double) : Double
 972: function FromCommon(const AValue: Double): Double;
 973: Function FTPGMTDateTimeToMLS( const ATimeStamp : TDateTime; const AIncludeMSecs : Boolean) : String
 974: Function FTPLocalDateTimeToMLS( const ATimeStamp : TDateTime; const AIncludeMSecs : Boolean) : String
 975: Function FTPMLSToGMTDateTime( const ATimeStamp : String) : TDateTime
 976: Function FTPMLSToLocalDateTime( const ATimeStamp : String) : TDateTime
 977: Function FuncIn(AValue: Variant; ASet: Variant): Boolean;
 978: //Function Funclist Size is: 6444 of mX3.9.8.9
 979: Function FutureValue(const Rate:Extended;NPeriods:Integer;const Payment,PresentValue:Extended;PaymentTime:
      TPaymentTime):Extended
 980: Function FullTimeToStr(SUMTime: TDateTime): string;');
 981: Function Gauss( const x, Spread : Double) : Double
 982: function Gauss(const x,Spread: Double): Double;
 983: Function GCD(x, y : LongInt) : LongInt;
 984: Function GCDJ( X, Y : Cardinal) : Cardinal
 985: Function GDAL: LongWord
 986: Function GdiFlush : BOOL
 987: Function GdiSetBatchLimit( Limit : DWORD) : DWORD
 988: Function GdiGetBatchLimit : DWORD
 989: Function GenerateHeader : TIdHeaderList
 990: Function GeometricMean( const X : TDynFloatArray) : Float
 991: Function Get( AURL : string) : string;
 992: Function Get2( AURL : string) : string;
 993: Function Get8087CW : Word
 994: function GetActiveOleObject(const ClassName: String): IDispatch;
 995: Function GetAliasDriverName( const AliasName : string) : string
 996: Function GetAPMBatteryFlag : TAPMBatteryFlag
 997: Function GetAPMBatteryFullLifeTime : DWORD
 998: Function GetAPMBatteryLifePercent : Integer
 999: Function GetAPMBatteryLifeTime : DWORD
1000: Function GetAPMLineStatus : TAPMLineStatus
1001: Function GetAppdataFolder : string
1002: Function GetAppDispatcher : TComponent
1003: function GetArrayLength: integer;
1004: Function GetASCII: string;
1005: Function GetASCIILine: string;
1006: Function GetAsHandle( Format : Word) : THandle
1007: function GetAssociatedProgram(const Extension: string; var Filename, Description: string): boolean;
1008: Function GetBackupFileName( const FileName : string) : string
1009: Function GetBBitmap( Value : TBitmap) : TBitmap
1010: Function GetBIOSCopyright : string
1011: Function GetBIOSDate : TDateTime
1012: Function GetBIOSExtendedInfo : string
1013: Function GetBIOSName : string
1014: Function getBitmap(apath: string): TBitmap;
1015: Function GetBitmap( Index : Integer; Image : TBitmap) : Boolean  //object
1016: Function getBitMapObject(const bitmappath: string): TBitmap;
1017: Function GetButtonState( Button : TPageScrollerButton) : TPageScrollerButtonState
1018: Function GetCapsLockKeyState : Boolean
1019: function GetCaptureControl: TControl;
1020: Function GetCDAudioTrackList( var TrackList : TJclCdTrackInfoArray; Drive : Char) : TJclCdTrackInfo;
1021: Function GetCDAudioTrackList1( TrackList : TStrings; IncludeTrackType : Boolean; Drive : Char) : string;
1022: Function GetCdInfo( InfoType : TJclCdMediaInfo; Drive : Char) : string
1023: Function GetChangedText( const Text : string; SelStart, SelLength : Integer; Key : Char) : string
1024: Function GetClientThread( ClientSocket : TServerClientWinSocket) : TServerClientThread
1025: Function GetClockValue : Int64
1026: function getCmdLine: PChar;
1027: function getCmdShow: Integer;
1028: function GetCPUSpeed: Double;
1029: Function GetColField( DataCol : Integer) : TField
1030: Function GetColorBlue( const Color : TColor) : Byte
1031: Function GetColorFlag( const Color : TColor) : Byte
1032: Function GetColorGreen( const Color : TColor) : Byte
1033: Function GetColorRed( const Color : TColor) : Byte
1034: Function GetComCtlVersion : Integer
1035: Function GetComPorts: TStringlist;
1036: Function GetCommonAppdataFolder : string
1037: Function GetCommonDesktopdirectoryFolder : string
1038: Function GetCommonFavoritesFolder : string
1039: Function GetCommonFilesFolder : string
1040: Function GetCommonProgramsFolder : string
1041: Function GetCommonStartmenuFolder : string
1042: Function GetCommonStartupFolder : string
1043: Function GetComponent( Owner, Parent : TComponent) : TComponent
1044: Function GetConnectionRegistryFile( DesignMode : Boolean) : string
1045: Function GetCookiesFolder : string
1046: Function GetCPUSpeed( var CpuSpeed : TFreqInfo) : Boolean
1047: Function GetCurrent : TFavoriteLinkItem
1048: Function GetCurrent : TListItem
1049: Function GetCurrent : TTaskDialogBaseButtonItem
```

```
1050: Function GetCurrent : TToolButton
1051: Function GetCurrent : TTreeNode
1052: Function GetCurrent : WideString
1053: Function GetCurrentDir : string
1054: function GetCurrentDir: string)
1055: Function GetCurrentFolder : string
1056: Function GETCURRENTRECORD( BUFFER : PCHAR) : BOOLEAN
1057: Function GetCurrentProcessId : TIdPID
1058: Function GetCurrentThreadHandle : THandle
1059: Function GetCurrentThreadID: LongWord; stdcall;
1060: Function GetCustomHeader( const Name : string) : String
1061: Function GetDataItem( Value : Pointer) : Longint
1062: Function GetDataLinkFiles( FileNames : TWideStrings; Directory : string) : Integer;
1063: Function GetDataLinkFiles1( FileNames : TStrings; Directory : string) : Integer;
1064: Function GETDATASIZE : INTEGER
1065: Function GetDC(hdwnd: HWND): HDC;
1066: Function GetDefaultFileExt( const MIMEType : string) : string
1067: Function GetDefaults : Boolean
1068: Function GetDefaultSchemaName : WideString
1069: Function GetDefaultStreamLoader : IStreamLoader
1070: Function GetDesktopDirectoryFolder : string
1071: Function GetDesktopFolder : string
1072: Function GetDFAState( oStates : TList) : TniRegularExpressionState
1073: Function GetDirectorySize( const Path : string) : Int64
1074: Function GetDisplayWidth : Integer
1075: Function GetDLLVersion( const DLLName : string; var pdwMajor, pdwMinor : Integer) : Boolean
1076: Function GetDomainName : string
1077: Function GetDriverRegistryFile( DesignMode : Boolean) : string
1078: function GetDriveType(rootpath: pchar): cardinal;
1079: Function GetDriveTypeStr( const Drive : Char) : string
1080: Function GetEnumerator : TFavoriteLinkItemsEnumerator
1081: Function GetEnumerator : TListItemsEnumerator
1082: Function GetEnumerator : TTaskDialogButtonsEnumerator
1083: Function GetEnumerator : TToolBarEnumerator
1084: Function GetEnumerator : TTreeNodesEnumerator
1085: Function GetEnumerator : TWideStringsEnumerator
1086: Function GetEnvVar( const VarName : string) : string
1087: Function GetEnvironmentVar( const AVariableName : string) : string
1088: Function GetEnvironmentVariable( const VarName : string) : string
1089: Function GetEnvironmentVar( const Name : string; var Value : string; Expand : Boolean) : Boolean
1090: Function GetEnvironmentVars( const Vars : TStrings; Expand : Boolean) : Boolean
1091: Function getEnvironmentString: string;
1092: Function GetExceptionHandler : TObject
1093: Function GetFavoritesFolder : string
1094: Function GetFieldByName( const Name : string) : string
1095: Function GetFieldInfo( const Origin : Widestring; var FieldInfo : TFieldInfo) : Boolean
1096: Function GetFieldValue( ACol : Integer) : string
1097: Function GetFileAgeCoherence( const FileName : string) : Boolean
1098: Function GetFileCreation( const FileName : string) : TFileTime
1099: Function GetFileCreationTime( const Filename : string) : TDateTime
1100: Function GetFileInformation( const FileName : string) : TSearchRec
1101: Function GetFileLastAccess( const FileName : string) : TFileTime
1102: Function GetFileLastWrite( const FileName : string) : TFileTime
1103: Function GetFileList(FileList: TStringlist; apath: string): TStringlist;
1104: Function GetFileList1(apath: string): TStringlist;
1105: Function GetFileMIMEType( const AFileName : string) : string
1106: Function GetFileSize( const FileName : string) : Int64
1107: Function GetFileVersion( AFileName : string) : Cardinal
1108: Function GetFileVersion( const AFilename : string) : Cardinal
1109: Function GetFileSize2(Handle: Integer; x: Integer): Integer; stdcall;
1110: Function GetFileDate(aFile:string; aWithTime:Boolean):string;
1111: Function GetFilterData( Root : PExprNode) : TExprData
1112: Function getFirstChild : LongInt
1113: Function getFirstChild : TTreeNode
1114: Function GetFirstDelimitedToken( const cDelim : char; const cStr : string) : string
1115: Function GetFirstNode : TTreeNode
1116: Function GetFontsFolder : string
1117: Function GetFormulaValue( const Formula : string) : Extended
1118: Function GetFreePageFileMemory : Integer
1119: Function GetFreePhysicalMemory : Integer
1120: Function GetFreeSystemResources( const ResourceType : TFreeSysResKind) : Integer;
1121: Function GetFreeSystemResources1 : TFreeSystemResources;
1122: Function GetFreeVirtualMemory : Integer
1123: Function GetFromClipboard : Boolean
1124: Function GetFullURI( const AOptionalFileds : TIdURIOptionalFieldsSet) : String
1125: Function GetGBitmap( Value : TBitmap) : TBitmap
1126: Function GetGMTDateByName( const AFileName : TIdFileName) : TDateTime
1127: Function GetGroupState( Level : Integer) : TGroupPosInds
1128: Function GetHandle : HWND
1129: Function GETHELPCONTEXT( VALUE : INTEGER; BYCOMMAND : BOOLEAN) : THELPCONTEXT
1130: function GetHexArray(ahexdig: THexArray): THexArray;
1131: Function GetHighLightColor( const Color : TColor; Luminance : Integer) : TColor
1132: function GetHINSTANCE: longword;
1133: Function GetHistoryFolder : string
1134: Function GetHitTestInfoAt( X, Y : Integer) : THitTests
1135: function getHMODULE: longword;
1136: Function GetHostByName(const AComputerName: String): String;
1137: Function GetHostName : string
1138: Function getHostIP: string;
```

```
1139: Function GetHotSpot : TPoint
1140: Function GetHueBitmap( Value : TBitmap) : TBitmap
1141: Function GetImageBitmap : HBITMAP
1142: Function GETIMAGELIST : TCUSTOMIMAGELIST
1143: Function GetIncome( const aNetto : Currency) : Currency
1144: Function GetIncome( const aNetto : Extended) : Extended
1145: Function GetIncome( const aNetto : Extended): Extended
1146: Function GetIncome(const aNetto : Extended) : Extended
1147: function GetIncome(const aNetto: Currency): Currency
1148: Function GetIncome2( const aNetto : Currency) : Currency
1149: Function GetIncome2( const aNetto : Currency): Currency
1150: Function getIndex_Attrs( tag : string; var idx : Integer; var Attrs : string) : string
1151: Function GETINDEXFORFIELDS( const FIELDS : String; CASEINSENSITIVE : BOOLEAN) : TINDEXDEF
1152: Function GetIndexForOrderBy( const SQL : WideString; DataSet : TDataSet) : TIndexDef
1153: Function GetInstRes(Instance:THandle;ResType:TResType;const
      Name:string;Width:Integer;LoadFlags:TLoadResources;MaskColor:TColor):Boolean;
1154: Function
      GetInstRes1(Instance:THandle;ResType:TResType;ResID:DWORD;Width:Int;LoadFlags:TLoadResources;MaskColor:TColor):Bool;
1155: Function GetIntelCacheDescription( const D : Byte) : string
1156: Function GetInteractiveUserName : string
1157: Function GetInternetCacheFolder : string
1158: Function GetInternetFormattedFileTimeStamp( const AFilename : String) : String
1159: Function GetIPAddress( const HostName : string) : string
1160: Function GetIP( const HostName : string) : string
1161: Function GetIPHostByName(const AComputerName: String): String;
1162: Function GetIsAdmin: Boolean;
1163: Function GetItem( X, Y : Integer) : LongInt
1164: Function GetItemAt( X, Y : Integer) : TListItem
1165: Function GetItemHeight(Font: TFont): Integer;
1166: Function GetItemPath( Index : Integer) : string
1167: Function GetKeyFieldNames( List : TStrings) : Integer;
1168: Function GetKeyFieldNames1( List : TWideStrings) : Integer;
1169: Function GetKeyState( const VirtualKey : Cardinal) : Boolean
1170: Function GetLastChild : LongInt
1171: Function GetLastChild : TTreeNode
1172: Function GetLastDelimitedToken( const cDelim : char; const cStr : string) : string
1173: function GetLastError: Integer
1174: Function GetLAT_CONV_FACTOR: double;  //for WGS84 power(1 - 1 / 298.257223563, 2);
1175: Function GetLoader( Ext : string) : TBitmapLoader
1176: Function GetLoadFilter : string
1177: Function GetLocalComputerName : string
1178: Function GetLocaleChar( Locale, LocaleType : Integer; Default : Char) : Char
1179: Function GetLocaleStr( Locale, LocaleType : Integer; Default : string) : string
1180: Function GetLocalUserName : string
1181: Function GetLoginUsername : WideString
1182: function getLongDayNames: string)
1183: Function GetLongHint(const hint: string): string
1184: function getLongMonthNames: string)
1185: Function GetMacAddresses( const Machine : string; const Addresses : TStrings) : Integer
1186: Function GetMainAppWndFromPid( PID : DWORD) : HWND
1187: Function GetMaskBitmap : HBITMAP
1188: Function GetMaxAppAddress : Integer
1189: Function GetMciErrorMessage( const MciErrNo : MCIERROR) : string
1190: Function GetMemoryLoad : Byte
1191: Function GetMIMEDefaultFileExt( const MIMEType : string) : TIdFileName
1192: Function GetMIMETypeFromFile( const AFile : string) : string
1193: Function GetMIMETypeFromFile( const AFile : TIdFileName) : string
1194: Function GetMinAppAddress : Integer
1195: Function GetModule : TComponent
1196: Function GetModuleHandle( ModuleName : PChar) : HMODULE
1197: Function GetModuleName( Module : HMODULE) : string
1198: Function GetModulePath( const Module : HMODULE) : string
1199: Function GetModuleFileName(Module: Integer; Filename: PChar;Size: Integer): Integer; stdcall;
1200: Function GetCommandLine: PChar; stdcall;
1201: Function GetMonochromeBitmap( Value : TBitmap) : TBitmap
1202: Function GetMultiN(aval: integer): string;
1203: Function GetName : String
1204: Function GetNearestItem( Point : TPoint; Direction : TSearchDirection) : TListItem
1205: Function GetNethoodFolder : string
1206: Function GetNext : TTreeNode
1207: Function GetNextChild( Value : LongInt) : LongInt
1208: Function GetNextChild( Value : TTreeNode) : TTreeNode
1209: Function GetNextDelimitedToken( const cDelim : char; var cStr : String) : String
1210: Function GetNextItem( StartItem: TListItem;Direction:TSearchDirection;States:TItemStates) : TListItem
1211: Function GetNextPacket : Integer
1212: Function getNextSibling : TTreeNode
1213: Function GetNextVisible : TTreeNode
1214: Function GetNode( ItemId : HTreeItem) : TTreeNode
1215: Function GetNodeAt( X, Y : Integer) : TTreeNode
1216: Function GetNodeDisplayWidth( Node : TOutlineNode) : Integer
1217: function GetNumberOfProcessors: longint;
1218: Function GetNumLockKeyState : Boolean
1219: Function GetObjectProperty( Instance : TPersistent; const PropName : string) : TObject
1220: Function GetOnlyTransitionOn( cChar : char) : TniRegularExpressionState
1221: Function GetOptionalParam( const ParamName : string) : OleVariant
1222: Function GetOSName: string;
1223: Function GetOSVersion: string;
1224: Function GetOSNumber: string;
1225: Function GetOsVersionInfo: TOSVersionInfo;      //thx to wischnewski
```

```
1226: Function GetPackageModuleHandle( PackageName : PChar) : HMODULE
1227: function GetPageSize: Cardinal;
1228: Function GetParameterFileName : string
1229: Function GetParams( var OwnerData : OleVariant) : OleVariant
1230: Function GETPARENTCOMPONENT : TCOMPONENT
1231: Function GetParentForm(control: TControl): TForm
1232: Function GETPARENTMENU : TMENU
1233: Function GetPassword : Boolean
1234: Function GetPassword : string
1235: Function GetPersonalFolder : string
1236: Function GetPidFromProcessName( const ProcessName : string) : DWORD
1237: Function GetPosition : TPoint
1238: Function GetPrev : TTreeNode
1239: Function GetPrevChild( Value : LongInt) : LongInt
1240: Function GetPrevChild( Value : TTreeNode) : TTreeNode
1241: Function getPrevSibling : TTreeNode
1242: Function GetPrevVisible : TTreeNode
1243: Function GetPrinthoodFolder : string
1244: Function GetPrivilegeDisplayName( const PrivilegeName : string) : string
1245: Function getProcessList: TStrings;
1246: Function GetProcessId : TIdPID
1247: Function GetProcessNameFromPid( PID : DWORD) : string
1248: Function GetProcessNameFromWnd( Wnd : HWND) : string
1249: Function GetProcessMemoryInfo(Process: THandle;ppsmemCounters: TProcessMemoryCounters;cb: DWORD):BOOL
1250: Function getProcessAllMemory(ProcessID : DWORD): TProcessMemoryCounters;
1251: Function getProcessMemoryInfo2(ProcessID : DWORD): TProcessMemoryCounters;
1252: Function GetProgramFilesFolder : string
1253: Function GetProgramsFolder : string
1254: Function GetProxy : string
1255: Function GetQuoteChar : WideString
1256: Function GetQrCode4(Width,Height:Word; Correct_Level:string;const
      Data:string;aformat:string):TLinearBitmap;
1257: Function GetQrCodetoFile(Width,Height:Word;Correct_Level:string;const
      Data:string;aformat:string):TLinearBitmap;
1258: Function GetRate : Double
1259: Function getPerfTime: string;
1260: Function getRuntime: string;
1261: Function GetRBitmap( Value : TBitmap) : TBitmap
1262: Function GetReadableName( const AName : string) : string
1263: Function GetRecentDocs : TStringList
1264: Function GetRecentFolder : string
1265: Function GetRecords( Count : Integer; out RecsOut : Integer; Options : Integer) : OleVariant;
1266: Function GetRecords1(Count:Integer; out RecsOut:Integer;Options:Integer;const CommandText:WideString;var
      Params, OwnerData : OleVariant) : OleVariant;
1267: Function GetRecordset( const CommandText : WideString; ConnectionString : WideString) : _Recordset
1268: Function GetRegisteredCompany : string
1269: Function GetRegisteredOwner : string
1270: Function GetResource(ResType:TResType;const
      Name:string;Width:Int;LoadFlags:TLoadResources;MaskColor:TColor:Bool
1271: Function GetResourceName( ObjStream : TStream; var AName : string) : Boolean
1272: Function GetResponse( const AAllowedResponses : array of SmallInt) : SmallInt;
1273: Function GetResponse1( const AAllowedResponse : SmallInt) : SmallInt;
1274: Function GetRValue( rgb : DWORD) : Byte
1275: Function GetGValue( rgb : DWORD) : Byte
1276: Function GetBValue( rgb : DWORD) : Byte
1277: Function GetCValue( cmyk : COLORREF) : Byte
1278: Function GetMValue( cmyk : COLORREF) : Byte
1279: Function GetYValue( cmyk : COLORREF) : Byte
1280: Function GetKValue( cmyk : COLORREF) : Byte
1281: Function CMYK( c, m, y, k : Byte) : COLORREF
1282: Function GetOSName: string;
1283: Function GetProcAddress( hModule : HMODULE; lpProcName : LPCSTR) : FARPROC
1284: Function GetProcAddress(Module : HMODULE; Proc : PChar): Dword
1285: Function GetSafeCallExceptionMsg : String
1286: Function GetSaturationBitmap( Value : TBitmap) : TBitmap
1287: Function GetSaveFilter : string
1288: Function GetSaver( Ext : string) : TBitmapLoader
1289: Function GetScrollLockKeyState : Boolean
1290: Function GetSearchString : string
1291: Function GetSelections( AList : TList) : TTreeNode
1292: function GETSELTEXTBUF(BUFFER:PCHAR;BUFSIZE:INTEGER):INTEGER
1293: Function GetSendToFolder : string
1294: Function GetServer : IAppServer
1295: Function GetServerList : OleVariant
1296: Function GetShadowColor( const Color : TColor; Luminance : Integer) : TColor
1297: Function GetShellProcessHandle : THandle
1298: Function GetShellProcessName : string
1299: Function GetShellVersion : Cardinal
1300: function getShortDayNames: string)
1301: Function GetShortHint(const hint: string): string
1302: function getShortMonthNames: string)
1303: Function GetSizeOfFile( const FileName : string) : Int64;
1304: Function GetSizeOfFile1( Handle : THandle) : Int64;
1305: Function GetStdHandle(nStdHandle: Integer): Integer; stdcall;
1306: Function GetStartmenuFolder : string
1307: Function GetStartupFolder : string
1308: Function GetStringProperty( Instance : TPersistent; const PropName : string) : WideString
1309: Function GetSuccessor( cChar : char) : TniRegularExpressionState
1310: Function GetSwapFileSize : Integer
```

```
1311: Function GetSwapFileUsage : Integer
1312: Function GetSystemLocale : TIdCharSet
1313: Function GetSystemMetrics( nIndex : Integer) : Integer
1314: Function GetSystemPathSH(Folder: Integer): TFilename ;
1315: Function GetTableNameFromQuery( const SQL : Widestring) : Widestring
1316: Function GetTableNameFromSQL( const SQL : WideString) : WideString
1317: Function GetTableNameFromSQLEx( const SQL : WideString; IdOption : IDENTIFIEROption) : WideString
1318: Function GetTasksList( const List : TStrings) : Boolean
1319: Function getTeamViewerID: string;
1320: Function GetTemplatesFolder : string
1321: Function GetText : PwideChar
1322: function GetText:PChar
1323: Function GetTextBuf( Buffer : PChar; BufSize : Integer) : Integer
1324: function GETTEXTBUF(BUFFER:PCHAR;BUFSIZE:INTEGER):INTEGER
1325: Function GetTextItem( const Value : string) : Longint
1326: function GETTEXTLEN:INTEGER
1327: Function GetThreadLocale: Longint; stdcall
1328: Function GetCurrentThreadID: LongWord; stdcall;
1329: Function GetTickCount : Cardinal
1330: Function GetTickDiff( const AOldTickCount, ANewTickCount : Cardinal) : Cardinal
1331: Function GetTicketNr : longint
1332: Function GetTime : Cardinal
1333: Function GetTime : TDateTime
1334: Function GetTimeout : Integer
1335: Function GetTimeStr: String
1336: Function GetTimeString: String
1337: Function GetTodayFiles(startdir, amask: string): TStringlist;
1338: Function getTokenCounts : integer
1339: Function GetTotalPageFileMemory : Integer
1340: Function GetTotalPhysicalMemory : Integer
1341: Function GetTotalVirtualMemory : Integer
1342: Function GetUniqueFileName( const APath, APrefix, AExt : String) : String
1343: Function GetUseNowForDate : Boolean
1344: Function GetUserDomainName( const CurUser : string) : string
1345: Function GetUserName : string
1346: Function GetUserName: string;
1347: Function GetUserObjectName( hUserObject : THandle) : string
1348: Function GetValueBitmap( Value : TBitmap) : TBitmap
1349: Function GetValueMSec : Cardinal
1350: Function GetValueStr : String
1351: Function GetVersion: int;
1352: Function GetVersionString(FileName: string): string;
1353: Function getVideoDrivers: string;
1354: Function GetVisibleNode( Index : LongInt) : TOutlineNode
1355: Function GetVolumeFileSystem( const Drive : string) : string
1356: Function GetVolumeName( const Drive : string) : string
1357: Function GetVolumeSerialNumber( const Drive : string) : string
1358: Function GetWebAppServices : IWebAppServices
1359: Function GetWebRequestHandler : IWebRequestHandler
1360: Function GetWindowCaption( Wnd : HWND) : string
1361: Function GetWindowDC(hdwnd: HWND): HDC;
1362: Function GetWindowIcon( Wnd : HWND; LargeIcon : Boolean) : HICON
1363: Function GetWindowRect(hwnd: HWND; arect: TRect): Boolean
1364: Function GetWindowsComputerID : string
1365: function GetWindowsDirectory(lpBuffer: PChar; uSize: longword): longword;
1366: Function GetWindowsFolder : string
1367: Function GetWindowsServicePackVersion : Integer
1368: Function GetWindowsServicePackVersionString : string
1369: Function GetWindowsSystemFolder : string
1370: Function GetWindowsTempFolder : string
1371: Function GetWindowsUserID : string
1372: Function GetWindowsVersion : TWindowsVersion
1373: Function GetWindowsVersionString : string
1374: Function GmtOffsetStrToDateTime( S : string) : TDateTime
1375: Function GMTToLocalDateTime( S : string) : TDateTime
1376: Function GotoKey : Boolean
1377: Function GradToCycle( const Grads : Extended) : Extended
1378: Function GradToDeg( const Grads : Extended) : Extended
1379: Function GradToDeg( const Value : Extended) : Extended;
1380: Function GradToDeg1( const Value : Double) : Double;
1381: Function GradToDeg2( const Value : Single) : Single;
1382: Function GradToRad( const Grads : Extended) : Extended
1383: Function GradToRad( const Value : Extended) : Extended;
1384: Function GradToRad1( const Value : Double) : Double;
1385: Function GradToRad2( const Value : Single) : Single;
1386: Function Gray32( const Intensity : Byte; const Alpha : Byte) : TColor32
1387: Function GreenComponent( const Color32 : TColor32) : Integer
1388: function GUIDToString(const GUID: TGUID): string)
1389: Function HandleAllocated : Boolean
1390: function HandleAllocated: Boolean;
1391: Function HandleRequest : Boolean
1392: Function HandleRequest( Request : TWebRequest; Response : TWebResponse) : Boolean
1393: Function HarmonicMean( const X : TDynFloatArray) : Float
1394: Function HasAsParent( Value : TTreeNode) : Boolean
1395: Function HASCHILDDEFS : BOOLEAN
1396: Function HasCurValues : Boolean
1397: Function HasExtendCharacter( const s : UTF8String) : Boolean
1398: Function HasFormat( Format : Word) : Boolean
1399: Function HashValue( AStream : TStream) : T5x4LongWordRecord;
```

```
1400: Function HashValue(AStream : TStream) : T4x4LongWordRecord
1401: Function HashValue(AStream: TStream): LongWord
1402: Function HashValue(AStream: TStream): Word
1403: Function HashValue1( AStream : TStream; const ABeginPos, AEndPos : Int64) : T5x4LongWordRecord;
1404: Function HashValue1(AStream : TStream): T4x4LongWordRecord
1405: Function HashValue128(const ASrc: string): T4x4LongWordRecord;
1406: Function HashValue128Stream(AStream: TStream): T4x4LongWordRecord;
1407: Function HashValue16( const ASrc : string) : Word;
1408: Function HashValue16stream( AStream : TStream) : Word;
1409: Function HashValue32( const ASrc : string) : LongWord;
1410: Function HashValue32Stream( AStream : TStream) : LongWord;
1411: Function HasMergeConflicts : Boolean
1412: Function hasMoreTokens : boolean
1413: Function HASPARENT : BOOLEAN
1414: function HasParent: Boolean
1415: Function HasTransaction( Transaction : TDBXTransaction) : Boolean
1416: Function HasUTF8BOM( S : TStream) : boolean;
1417: Function HasUTF8BOM1( S : AnsiString) : boolean;
1418: Function Haversine( X : Float) : Float
1419: Function Head( s : string; const subs : string; var tail : string) : string
1420: function HELPCOMMAND(COMMAND:INTEGER;DATA:LONGINT):BOOLEAN
1421: function HELPCONTEXT(CONTEXT:THELPCONTEXT):BOOLEAN
1422: function HELPJUMP(JUMPID:STRING):BOOLEAN
1423: Function HeronianMean( const a, b : Float) : Float
1424: function HexStrToStr(Value: string): string;
1425: function HexToBin(Text,Buffer:PChar; BufSize:Integer):Integer;
1426: function HexToBin2(HexNum: string): string;
1427: Function HexToDouble( const Hex : string) : Double
1428: function HexToInt(hexnum: string): LongInt;
1429: function HexToStr(Value: string): string;
1430: Function HexifyBlock( var Buffer, BufferSize : Integer) : string
1431: function Hi(vdat: word): byte;
1432: function HiByte(W: Word): Byte)
1433: function High: Int64;
1434: Function HighlightCell(DataCol,DataRow: Integer; const Value:string; AState:TGridDrawState): Boolean
1435: function HINSTANCE: longword;
1436: function HiWord(l: DWORD): Word)
1437: function HMODULE: longword;
1438: Function HourOf( const AValue : TDateTime) : Word
1439: Function HourOfTheDay( const AValue : TDateTime) : Word
1440: Function HourOfTheMonth( const AValue : TDateTime) : Word
1441: Function HourOfTheWeek( const AValue : TDateTime) : Word
1442: Function HourOfTheYear( const AValue : TDateTime) : Word
1443: Function HoursBetween( const ANow, AThen : TDateTime) : Int64
1444: Function HourSpan( const ANow, AThen : TDateTime) : Double
1445: Function HSLToRGB1( const H, S, L : Single) : TColor32;
1446: Function HTMLDecode( const AStr : String) : String
1447: Function HTMLEncode( const AStr : String) : String
1448: Function HTMLEscape( const Str : string) : string
1449: Function HtmlTable( DataSet : TDataSet; DataSetHandler : TDSTableProducer; MaxRows : Integer) : string
1450: Function HTTPDecode( const AStr : String) : string
1451: Function HTTPEncode( const AStr : String) : string
1452: Function Hypot( const X, Y : Extended) : Extended
1453: Function IBMax( n1, n2 : Integer) : Integer
1454: Function IBMin( n1, n2 : Integer) : Integer
1455: Function IBRandomString( iLength : Integer) : String
1456: Function IBRandomInteger( iLow, iHigh : Integer) : Integer
1457: Function IBStripString( st : String; CharsToStrip : String) : String
1458: Function IBFormatIdentifier( Dialect : Integer; Value : String) : String
1459: Function IBFormatIdentifierValue( Dialect : Integer; Value : String) : String
1460: Function IBExtractIdentifier( Dialect : Integer; Value : String) : String
1461: Function IBQuoteIdentifier( Dialect : Integer; Value : String) : String
1462: Function IBAddIBParamSQLForDetail(Params:TParams;SQL:string;Native:Boolean;Dialect:Integer):string
1463: Procedure IBDecomposeDatabaseName(DatabaseName:String;var ServerName,Protocol,DatabasePath:String)
1464:  Function RandomString( iLength : Integer) : String');
1465:  Function RandomInteger( iLow, iHigh : Integer) : Integer');
1466:  Function StripString( st : String; CharsToStrip : String) : String');
1467:  Function FormatIdentifier( Dialect : Integer; Value : String) : String');
1468:  Function FormatIdentifierValue( Dialect : Integer; Value : String) : String');
1469:  Function ExtractIdentifier( Dialect : Integer; Value : String) : String');
1470:  Function QuoteIdentifier( Dialect : Integer; Value : String) : String');
1471:  Function AddIBParamSQLForDetail(Params:TParams;SQL:string;Native:Boolean;Dialect:Integer):string;
1472:  Procedure DecomposeDatabaseName(DatabaseName:String;var ServerName,Protocol,DatabasePath:String;
1473:  function NextSQLToken(var p: PChar; var Token: String; CurSection: TSQLToken): TSQLToken;
1474: Function IconToBitmap( Ico : HICON) : TBitmap
1475: Function IconToBitmap2( Ico : HICON; Size : Integer; TransparentColor : TColor) : TBitmap
1476: Function IconToBitmap3( Ico : HICON; Size : Integer; TransparentColor : TColor) : TBitmap
1477: function IdentToCharset(const Ident: string; var Charset: Longint): Boolean)
1478: function IdentToColor(const Ident: string; var Color: Longint): Boolean)
1479: function IdentToCursor(const Ident: string; var cursor: Longint): Boolean;
1480: Function IdGetDefaultCharSet : TIdCharSet
1481: function IDispatchInvoke(Self:IDispatch;ProperSet:Boolean;const Name:String;Par:array of variant):variant
1482: Function IdPorts2 : TStringList
1483: Function IdToMib( const Id : string) : string
1484: Function IdSHA1Hash(apath: string): string;
1485: Function IdHashSHA1(apath: string): string;
1486: Function IfStr( const bCondition : boolean; const sTrue : string; const sFalse : string) : string
1487: Function IfThen( AValue : Boolean; const ATrue : string; AFalse : string) : string;
1488: Function IfThenInt( AValue : Boolean; const ATrue : integer; AFalse : integer): integer;');
```

```
1489: Function IfThenDouble( AValue : Boolean; const ATrue : double; AFalse : double): double;');
1490: Function IfThenBool( AValue : Boolean; const ATrue : boolean; AFalse : boolean): boolean;');
1491: Function iif1( ATest : Boolean; const ATrue : Integer; const AFalse : Integer) : Integer;
1492: Function iif2( ATest : Boolean; const ATrue : string; const AFalse : string) : string;
1493: Function iif3( ATest : Boolean; const ATrue : Boolean; const AFalse : Boolean) : Boolean;
1494: function ImportTest(S1: string;s2:longint; s3:Byte; s4:word; var s5:string): string;
1495: Function IncDay( const AValue : TDateTime; const ANumberOfDays : Integer) : TDateTime
1496: Function IncHour( const AValue : TDateTime; const ANumberOfHours : Int64) : TDateTime
1497: Function IncLimit( var B : Byte; const Limit : Byte; const Incr : Byte) : Byte;
1498: Function IncLimit1( var B : Shortint; const Limit : Shortint; const Incr : Shortint) : Shortint;
1499: Function IncLimit2( var B : Smallint; const Limit : Smallint; const Incr : Smallint) : Smallint;
1500: Function IncLimit3( var B : Word; const Limit : Word; const Incr : Word) : Word;
1501: Function IncLimit4( var B : Integer; const Limit : Integer; const Incr : Integer) : Integer;
1502: Function IncLimit5( var B : Cardinal; const Limit : Cardinal; const Incr : Cardinal) : Cardinal;
1503: Function IncLimit6( var B : Int64; const Limit : Int64; const Incr : Int64) : Int64;
1504: Function IncLimitClamp( var B : Byte; const Limit : Byte; const Incr : Byte) : Byte;
1505: Function IncLimitClamp1( var B : Shortint; const Limit : Shortint; const Incr : Shortint) : Shortint;
1506: Function IncLimitClamp2( var B : Smallint; const Limit : Smallint; const Incr : Smallint) : Smallint;
1507: Function IncLimitClamp3( var B : Word; const Limit : Word; const Incr : Word) : Word;
1508: Function IncLimitClamp4( var B : Integer; const Limit : Integer; const Incr : Integer) : Integer;
1509: Function IncLimitClamp5( var B : Cardinal; const Limit : Cardinal; const Incr : Cardinal) : Cardinal;
1510: Function IncLimitClamp6( var B : Int64; const Limit : Int64; const Incr : Int64) : Int64;
1511: Function IncludeTrailingBackslash( S : string) : string
1512: function IncludeTrailingBackslash(const S: string): string)
1513: Function IncludeTrailingPathDelimiter( const APath : string) : string
1514: Function IncludeTrailingPathDelimiter( S : string) : string
1515: function IncludeTrailingPathDelimiter(const S: string): string)
1516: Function IncludeTrailingSlash( const APath : string) : string
1517: Function IncMilliSecond( const AValue : TDateTime; const ANumberOfMilliSeconds : Int64) : TDateTime
1518: Function IncMinute( const AValue : TDateTime; const ANumberOfMinutes : Int64) : TDateTime
1519: Function IncMonth( DateTime : TDateTime; NumberOfMonths : Integer) : TDateTime
1520: function IncMonth(const DateTime: TDateTime; NumberOfMonths: Integer): TDateTime)
1521: Function IncSecond( const AValue : TDateTime; const ANumberOfSeconds : Int64) : TDateTime
1522: Function IncWeek( const AValue : TDateTime; const ANumberOfWeeks : Integer) : TDateTime
1523: Function IncYear( const AValue : TDateTime; const ANumberOfYears : Integer) : TDateTime
1524: Function IndexOf( AClass : TClass) : Integer
1525: Function IndexOf( AComponent : TComponent) : Integer
1526: Function IndexOf( AObject : TObject) : Integer
1527: Function INDEXOF( const ANAME : String) : INTEGER
1528: Function IndexOf( const DisplayName : string) : Integer
1529: Function IndexOf( const Item : TBookmarkStr) : Integer
1530: Function IndexOf( const S : WideString) : Integer
1531: Function IndexOf( const View : TJclFileMappingView) : Integer
1532: Function INDEXOF( FIELD : TFIELD) : INTEGER
1533: Function IndexOf( ID : LCID) : Integer
1534: Function INDEXOF( ITEM : TMENUITEM) : INTEGER
1535: Function IndexOf( Value : TListItem) : Integer
1536: Function IndexOf( Value : TTreeNode) : Integer
1537: function IndexOf(const S: string): Integer;
1538: Function IndexOfName( const Name : WideString) : Integer
1539: function IndexOfName(Name: string): Integer;
1540: Function IndexOfObject( AObject : TObject) : Integer
1541: function IndexofObject(AObject:tObject):Integer
1542: Function IndexOfTabAt( X, Y : Integer) : Integer
1543: Function IndexStr( const AText : string; const AValues : array of string) : Integer
1544: Function IndexText( const AText : string; const AValues : array of string) : Integer
1545: Function IndexOfInteger( AList : TStringList; Value : Variant) : Integer
1546: Function IndexOfFloat( AList : TStringList; Value : Variant) : Integer
1547: Function IndexOfDate( AList : TStringList; Value : Variant) : Integer
1548: Function IndexOfString( AList : TStringList; Value : Variant) : Integer
1549: Function IndyCompareStr( const A1 : string; const A2 : string) : Integer
1550: Function IndyGetHostName : string
1551: Function IndyInterlockedDecrement( var I : Integer) : Integer
1552: Function IndyInterlockedExchange( var A : Integer; B : Integer) : Integer
1553: Function IndyInterlockedExchangeAdd( var A : Integer; B : Integer) : Integer
1554: Function IndyInterlockedIncrement( var I : Integer) : Integer
1555: Function IndyLowerCase( const A1 : string) : string
1556: Function IndyStrToBool( const AString : String) : Boolean
1557: Function IndyUpperCase( const A1 : string) : string
1558: Function InitCommonControl( CC : Integer) : Boolean
1559: Function InitTempPath : string
1560: Function InMainThread : boolean
1561: Function inOpArray( W : WideChar; sets : array of WideChar) : boolean
1562: Function Input: Text)
1563: Function InputBox( const ACaption, APrompt, ADefault : string) : string
1564: function InputBox(const ACaption: string; const APrompt: string; const ADefault: string): string)
1565: Function InputLn(const AMask: string; AEcho:Boolean;ATabWidth:Integer;AMaxLineLength:Integer): string
1566: Function InputQuery( const ACaption, APrompt : string; var Value : string) : Boolean
1567: function InputQuery(const ACaption: string; const APrompt: string; var Value: string): Boolean)
1568: Function InquireSignal( RtlSigNum : Integer) : TSignalState
1569: Function InRangeR( const A, Min, Max : Double) : Boolean
1570: function Insert( Index : Integer) : TCollectionItem
1571: Function Insert( Index : Integer) : TComboExItem
1572: Function Insert( Index : Integer) : THeaderSection
1573: Function Insert( Index : Integer) : TListItem
1574: Function Insert( Index : Integer) : TStatusPanel
1575: Function Insert( Index : Integer) : TWorkArea
1576: Function Insert( Index : LongInt; const Text : string) : LongInt
1577: Function Insert( Sibling : TTreeNode; const S : string) : TTreeNode
```

```
1578: Function INSERTNEWLINEAFTER( AITEM : TMENUITEM) : INTEGER
1579: Function INSERTNEWLINEBEFORE( AITEM : TMENUITEM) : INTEGER
1580: Function InsertNode( Node, Sibling : TTreeNode; const S : string; Ptr : Pointer) : TTreeNode
1581: Function InsertObject( Index : LongInt; const Text : string; const Data : Pointer) : LongInt
1582: Function InsertObject( Sibling : TTreeNode; const S : string; Ptr : Pointer) : TTreeNode
1583: Function Instance : Longint
1584: function InstanceSize: Longint
1585: Function Int(e : Extended) : Extended;
1586: function Int64ToStr(i: Int64): String;
1587: Function IntegerToBcd( const AValue : Integer) : TBcd
1588: Function Intensity( const Color32 : TColor32) : Integer;
1589: Function Intensity( const R, G, B : Single) : Single;
1590: Function InterestPayment(const Rate:Extended;Period,NPeriods:Integer;const PresentValue,
      FutureValue:Extended; PaymentTime : TPaymentTime) : Extended
1591: Function InterestRate(NPeriods:Integer;const Payment,PresVal,
      FutureVal:Extended;PaymentTime:TPaymentTime):Extended
1592: Function InternalDecodeDate( DateTime : TDateTime; var Year, Month, Day, DOW : Word) : Boolean
1593: Function InternalRateOfReturn( const Guess : Extended; const CashFlows : array of Double) : Extended
1594: Function InternalUpdateRecord( Tree : TUpdateTree) : Boolean
1595: Function IntersectRect( out Rect : TRect; const R1, R2 : TRect) : Boolean
1596: function IntersectRect(out Rect: TRect; const R1, R2: TRect): Boolean)
1597: Function IntMibToStr( const Value : string) : string
1598: Function IntPower( const Base : Extended; const Exponent : Integer) : Extended
1599: Function IntToBin( Value : cardinal) : string
1600: Function IntToHex( Value : Integer; Digits : Integer) : string;
1601: function IntToHex(a: integer; b: integer): string;
1602: Function IntToHex64( Value : Int64; Digits : Integer) : string;
1603: Function IntToHex64(Value: Int64; Digits: Integer): string)
1604: Function IntTo3Str( Value : Longint; separator: string) : string
1605: Function inttobool( aInt : LongInt) : Boolean
1606: function IntToStr(i: Int64): String;
1607: Function IntToStr64(Value: Int64): string)
1608: function IOResult: Integer
1609: Function IPv6AddressToStr(const AValue: TIdIPv6Address): string
1610: Function IsAccel(VK: Word; const Str: string): Boolean
1611: Function IsAddressInNetwork( Address : String) : Boolean
1612: Function IsAdministrator : Boolean
1613: Function IsAlias( const Name : string) : Boolean
1614: Function IsApplicationRunning( const AClassName, ApplName : string) : Boolean
1615: Function IsASCII( const AByte : Byte) : Boolean;
1616: Function IsASCIILDH( const AByte : Byte) : Boolean;
1617: Function IsAssembly(const FileName: string): Boolean;
1618: Function IsBcdNegative( const Bcd : TBcd) : Boolean
1619: Function IsBinary(const AChar : Char) : Boolean
1620: function IsConsole: Boolean)
1621: Function IsDelimiter( Delimiters, S : string; Index : Integer) : Boolean
1622: Function IsDelimiter(const Delimiters: string; const S: string; Index: Integer): Boolean)
1623: Function IsDelphiDesignMode : boolean
1624: Function IsDelphiRunning : boolean
1625: Function IsDFAState : boolean
1626: Function IsDirectory( const FileName : string) : Boolean
1627: Function IsDomain( const S : String) : Boolean
1628: function IsDragObject(Sender: TObject): Boolean;
1629: Function IsEditing : Boolean
1630: Function ISEMPTY : BOOLEAN
1631: Function IsEqual( Value : TParameters) : Boolean
1632: Function ISEQUAL( VALUE : TPARAMS) : BOOLEAN
1633: function IsEqualGUID(const guid1, guid2: TGUID): Boolean)
1634: Function IsFirstNode : Boolean
1635: Function IsFloatZero( const X : Float) : Boolean
1636: Function IsFormatRegistered( Extension, AppID : string) : Boolean
1637: Function IsFormOpen(const FormName: string): Boolean;
1638: Function IsFQDN( const S : String) : Boolean
1639: Function IsGrayScale : Boolean
1640: Function IsHex( AChar : Char) : Boolean;
1641: Function IsHexString(const AString: string): Boolean;
1642: Function IsHostname( const S : String) : Boolean
1643: Function IsInfinite( const AValue : Double) : Boolean
1644: Function IsInLeapYear( const AValue : TDateTime) : Boolean
1645: Function IsInternet: boolean;
1646: Function IsLeadChar( ACh : Char) : Boolean
1647: Function IsLeapYear( Year : Word) : Boolean
1648: function IsLeapYear(Year: Word): Boolean)
1649: function IsLibrary: Boolean)
1650: Function ISLINE : BOOLEAN
1651: Function IsLinkedTo( DataSet : TDataSet) : Boolean
1652: Function ISLINKEDTO( DATASOURCE : TDATASOURCE) : BOOLEAN
1653: Function IsLiteralChar( const EditMask : string; Offset : Integer) : Boolean
1654: Function IsMatch( const Pattern, Text : string) : Boolean  //Grep like RegEx
1655: Function IsMainAppWindow( Wnd : HWND) : Boolean
1656: Function IsMediaPresentInDrive( Drive : Char) : Boolean
1657: function IsMemoryManagerSet: Boolean)
1658: Function IsMultiTableQuery( const SQL : WideString) : Boolean
1659: function IsMultiThread: Boolean)
1660: Function IsNumeric( AChar : Char) : Boolean;
1661: Function IsNumeric2( const AString : string) : Boolean;
1662: Function IsNTFS: Boolean;
1663: Function IsOctal( AChar : Char) : Boolean;
1664: Function IsOctalString(const AString: string) : Boolean;
```

```
1665: Function IsPathDelimiter( S : string; Index : Integer) : Boolean
1666: function IsPathDelimiter(const S: string; Index: Integer): Boolean)
1667: Function IsPM( const AValue : TDateTime) : Boolean
1668: Function IsPositiveFloatArray( const X : TDynFloatArray) : Boolean
1669: Function IsPortAvailable( ComNum : Cardinal) : Boolean');
1670: Function IsCOMPortReal( ComNum : Cardinal) : Boolean');
1671: Function IsCOM( ComNum : Cardinal) : Boolean');
1672: Function IsCOMPort: Boolean');
1673: Function IsPrimeFactor( const F, N : Cardinal) : Boolean
1674: Function IsPrimeRM( N : Cardinal) : Boolean  //rabin miller
1675: Function IsPrimeTD( N : Cardinal) : Boolean  //trial division
1676: Function IsPrivilegeEnabled( const Privilege : string) : Boolean
1677: Function ISqrt( const I : Smallint) : Smallint
1678: Function IsReadOnly(const Filename: string): boolean;
1679: Function IsRectEmpty( const Rect : TRect) : Boolean
1680: function IsRectEmpty(const Rect: TRect): Boolean)
1681: Function IsRelativePrime( const X, Y : Cardinal) : Boolean
1682: Function ISRIGHTTOLEFT : BOOLEAN
1683: function IsRightToLeft: Boolean
1684: Function IsSameDay( const AValue, ABasis : TDateTime) : Boolean
1685: Function ISSEQUENCED : BOOLEAN
1686: Function IsSystemModule( const Module : HMODULE) : Boolean
1687: Function IsSystemResourcesMeterPresent : Boolean
1688: Function IsTCPPortOpen(dwPort : Word; ipAddressStr: String): boolean;
1689: Function IsToday( const AValue : TDateTime) : Boolean
1690: function IsToday(const AValue: TDateTime): Boolean;
1691: Function IsTopDomain( const AStr : string) : Boolean
1692: Function IsUTF8LeadByte( Lead : Char) : Boolean
1693: Function IsUTF8String( const s : UTF8String) : Boolean
1694: Function IsUTF8TrailByte( Lead : Char) : Boolean
1695: Function ISVALIDCHAR( INPUTCHAR : CHAR) : BOOLEAN
1696: Function IsValidDate( const AYear, AMonth, ADay : Word) : Boolean
1697: Function IsValidDateDay( const AYear, ADayOfYear : Word) : Boolean
1698: Function IsValidDateMonthWeek( const AYear, AMonth, AWeekOfMonth, ADayOfWeek : Word) : Boolean
1699: Function IsValidDateTime(const AYear,AMonth, ADay,AHour,AMinute, ASecond, AMilliSecond: Word): Boolean
1700: Function IsValidDateWeek( const AYear, AWeekOfYear, ADayOfWeek : Word) : Boolean
1701: Function IsValidIdent( Ident : string) : Boolean
1702: function IsValidIdent(const Ident: string; AllowDots: Boolean): Boolean)
1703: Function IsValidIP( const S : String) : Boolean
1704: Function IsValidTime( const AHour, AMinute, ASecond, AMilliSecond : Word) : Boolean
1705: Function IsValidISBN( const ISBN : AnsiString) : Boolean
1706: Function IsVariantManagerSet: Boolean; //deprecated;
1707: Function IsVirtualPcGuest : Boolean;
1708: Function IsVmWareGuest : Boolean;
1709: Function IsVCLControl(Handle: HWnd): Boolean;
1710: Function IsWhiteString( const AStr : String) : Boolean
1711: Function IsWindowResponding( Wnd : HWND; Timeout : Integer) : Boolean
1712: Function IsWoW64: boolean;
1713: Function IsWin64: boolean;
1714: Function IsWow64String(var s: string): Boolean;
1715: Function IsWin64String(var s: string): Boolean;
1716: Function IsWindowsVista: boolean;
1717: Function isPowerof2(num: int64): boolean;
1718: Function powerOf2(exponent: integer): int64;
1719: function IsZero(const A: Extended; Epsilon: Extended): Boolean //overload;
1720: function IsZero1(const A: Double; Epsilon: Double): Boolean //overload;
1721: function IsZero2(const A: Single; Epsilon: Single): Boolean //overload;
1722: Function ItemAtPos( Pos : TPoint; IgnoreTabHeight : Boolean) : Integer
1723: function ITEMATPOS(POS:TPOINT;EXISTING:BOOLEAN):INTEGER
1724: Function ItemRect( Index : Integer) : TRect
1725: function ITEMRECT(INDEX:INTEGER):TRECT
1726: Function ItemWidth( Index : Integer) : Integer
1727: Function JavahashCode(val: string): Integer;
1728: Function JosephusG(n,k: integer; var graphout: string): integer;
1729: Function JulianDateToDateTime( const AValue : Double) : TDateTime
1730: Function JustName(PathName : string) : string;  //in path and ext
1731: Function JvMessageBox( const Text, Caption : string; Flags : DWORD) : Integer;
1732: Function JvMessageBox1( const Text : string; Flags : DWORD) : Integer;
1733: Function KeepAlive : Boolean
1734: Function KeysToShiftState(Keys: Word): TShiftState;
1735: Function KeyDataToShiftState(KeyData: Longint): TShiftState;
1736: Function KeyboardStateToShiftState2(const KeyboardState: TKeyboardState): TShiftState;
1737: Function KeyboardStateToShiftState: TShiftState; overload;
1738: Function Languages : TLanguages
1739: Function Last : TClass
1740: Function Last : TComponent
1741: Function Last : TObject
1742: Function LastDelimiter( Delimiters, S : string) : Integer
1743: function LastDelimiter(const Delimiters: string; const S: string): Integer)
1744: Function LastPos( const ASubstr : string; const AStr : string) : Integer
1745: Function Latitude2WGS84(lat: double): double;
1746: Function LCM(m,n:longint):longint;
1747: Function LCMJ( const X, Y : Cardinal) : Cardinal
1748: Function Ldexp( const X : Extended; const P : Integer) : Extended
1749: Function LeftStr( const AText : AnsiString; const ACount : Integer) : AnsiString;
1750: Function LeftStr( const AText : WideString; const ACount : Integer) : WideString;
1751: function Length: Integer;
1752: Procedure LetFileList(FileList: TStringlist; apath: string);
1753: function lengthmp3(mp3path: string):integer;
```

```
1754: Function LineInRect( const P1, P2 : TPoint; const Rect : TRect) : Boolean;
1755: Function LineInRect1( const P1, P2 : TFloatPoint; const Rect : TFloatRect) : Boolean;
1756: Function LineSegmentIntersection(const L1P1 : TFloatPoint; L1P2 : TFloatPoint; const L2P1 : TFloatPoint;
      L2P2 : TFloatPoint; var P : TFloatPoint) : Boolean
1757: function LineStart(Buffer, BufPos: PChar): PChar
1758: function LineStart(Buffer, BufPos: PChar): PChar)
1759: function ListSeparator: char;
1760: function Ln(x: Extended): Extended;
1761: Function LnXP1( const X : Extended) : Extended
1762: function Lo(vdat: word): byte;
1763: Function LoadCursor(hInstance: HINST; lpCursorName: PChar): HCURSOR
1764: Function LoadedModulesList( const List : TStrings; ProcessID : DWORD; HandlesOnly : Boolean) : Boolean
1765: Function LoadFileAsString( const FileName : string) : string
1766: Function LoadFromFile( const FileName : string) : TBitmapLoader
1767: Function LoadLibraryEx(LibName: PChar; hFile: Longint; Flags: Longint): Longint; stdcall;
1768: Function LoadPackage(const Name: string): HMODULE
1769: Function LoadResource( ModuleHandle : HMODULE; ResHandle : TResourceHandle) : HGLOBAL
1770: Function LoadStr( Ident : Integer) : string
1771: Function LoadString(Instance: Longint; IDent: Integer; Buffer: PChar; Size: Integer): Integer; stdcall;
1772: Function LoadWideStr( Ident : Integer) : WideString
1773: Function LOCATE(const KEYFIELDS: String;const KEYVALUES:VARIANT;OPTIONS: TLOCATEOPTIONS) : BOOLEAN
1774: Function LockRegion( libOffset : Longint; cb : Largeint; dwLockType : Longint) : HResult
1775: Function LockServer( fLock : LongBool) : HResult
1776: Function LockVolume( const Volume : string; var Handle : THandle) : Boolean
1777: Function Log( const X : Extended) : Extended
1778: Function Log10( const X : Extended) : Extended
1779: Function Log2( const X : Extended) : Extended
1780: function LogBase10(X: Float): Float;
1781: Function LogBase2(X: Float): Float;
1782: Function LogBaseN(Base, X: Float): Float;
1783: Function LogN( const Base, X : Extended) : Extended
1784: Function LogOffOS : Boolean
1785: Function LoginDialog( const ADatabaseName : string; var AUserName, APassword : string) : Boolean
1786: Function LoginDialogEx(const ADatabaseName:string;var AUserName,APassword:string;NameReadOnly:Bool):Bool;
1787: Function LongDateFormat: string;
1788: function LongTimeFormat: string;
1789: Function LongWordToFourChar( ACardinal : LongWord) : string
1790: Function LOOKUP(const KEYFIELDS: String; const KEYVALUES: VARIANT; const RESULTFIELDS: String): VARIANT
1791: Function LookupName( const name : string) : TInAddr
1792: Function LookupService( const service : string) : Integer
1793: function Low: Int64;
1794: Function LowerCase( S : string) : string
1795: Function Lowercase(s : AnyString) : AnyString;
1796: Function LRot( const Value : Byte; const Count : TBitRange) : Byte;
1797: Function LRot1( const Value : Word; const Count : TBitRange) : Word;
1798: Function LRot2( const Value : Integer; const Count : TBitRange) : Integer;
1799: function MainInstance: longword
1800: function MainThreadID: longword
1801: Function Map(x, in_min, in_max, out_min, out_max: integer): integer;  //arduino
1802: Function mapMax(ax, in_min, in_max, out_min, out_max: integer): integer;
1803: Function MakeCanonicalIPv4Address( const AAddr : string) : string
1804: Function MakeCanonicalIPv6Address( const AAddr : string) : string
1805: Function MakeDIB( out Bitmap : PBitmapInfo) : Integer
1806: Function MakeDWordIntoIPv4Address( const ADWord : Cardinal) : string
1807: Function MakeFile(const FileName: string): integer)');
1808: function MakeLong(A, B: Word): Longint)
1809: Function MakeTempFilename( const APath : String) : string
1810: Function MakeValidFileName( const Str : string) : string
1811: Function MakeValueMap( Enumeration : string; ToCds : Boolean) : string
1812: function MakeWord(A, B: Byte): Word)
1813: Function MakeYear4Digit( Year, Pivot : Integer) : Integer
1814: Function MapDateTime(const DateFormatType:string; DateFormat:string;Value:string;ToCds:Boolean): string
1815: Function MapValues( Mapping : string; Value : string) : string
1816: Function MaskDoFormatText( const EditMask : string; const Value : string; Blank : Char) : string
1817: Function MaskGetCharType( const EditMask : string; MaskOffset : Integer) : TMaskCharType
1818: Function MaskGetCurrentDirectives( const EditMask : string; MaskOffset : Integer) : TMaskDirectives
1819: Function MaskGetFldSeparator( const EditMask : string) : Integer
1820: Function MaskGetMaskBlank( const EditMask : string) : Char
1821: Function MaskGetMaskSave( const EditMask : string) : Boolean
1822: Function MaskIntlLiteralToChar( IChar : Char) : Char
1823: Function MaskOffsetToOffset( const EditMask : String; MaskOffset : Integer) : Integer
1824: Function MaskOffsetToWideOffset( const EditMask : String; MaskOffset : Integer) : Integer
1825: Function MaskString( Mask, Value : String) : String
1826: Function Match( const sString : string) : TniRegularExpressionMatchResul
1827: Function Match1( const sString : string; iStart : integer) : TniRegularExpressionMatchResult
1828: Function Matches( const Filename : string) : Boolean
1829: Function MatchesMask( const Filename, Mask : string) : Boolean
1830: Function MatchStr( const AText : string; const AValues : array of string) : Boolean
1831: Function MatchText( const AText : string; const AValues : array of string) : Boolean
1832: Function Max( AValueOne, AValueTwo : Integer) : Integer
1833: function Max(const x,y: Integer): Integer;
1834: Function Max1( const B1, B2 : Shortint) : Shortint;
1835: Function Max2( const B1, B2 : Smallint) : Smallint;
1836: Function Max3( const B1, B2 : Word) : Word;
1837: function Max3(const x,y,z: Integer): Integer;
1838: Function Max4( const B1, B2 : Integer) : Integer;
1839: Function Max5( const B1, B2 : Cardinal) : Cardinal;
1840: Function Max6( const B1, B2 : Int64) : Int64;
1841: Function Max64( const AValueOne, AValueTwo : Int64) : Int64
```

```
1842: Function MaxFloat( const X, Y : Float) : Float
1843: Function MaxFloatArray( const B : TDynFloatArray) : Float
1844: Function MaxFloatArrayIndex( const B : TDynFloatArray) : Integer
1845: function MaxIntValue(const Data: array of Integer):Integer)
1846: Function MaxJ( const B1, B2 : Byte) : Byte;
1847: function MaxPath: string;
1848: function MaxValue(const Data: array of Double): Double)
1849: Function MaxCalc( const Formula : string) : Extended  //math expression parser
1850: Procedure MaxCalcF( const Formula : string);   //out to console memo2
1851: function MD5(const fileName: string): string;
1852: Function Mean( const Data : array of Double) : Extended
1853: Function Median( const X : TDynFloatArray) : Float
1854: Function Memory : Pointer
1855: Function MemoryPos( const ASubStr : string; MemBuff : PChar; MemorySize : Integer) : Integer
1856: Function MessageBox(hndl: cardinal; text, caption: string; utype: cardinal): Integer;
1857: function MESSAGEBOX(TEXT,CAPTION:PCHAR;FLAGS:WORD):INTEGER
1858: Function MessageDlg(const Msg:string;DlgType:TMsgDlgType;Buttons:TMsgDlgButtons;HelpCtx:Longint): Integer;
1859: Function MessageDlg1(const
      Msg:string;DlgType:TMsgDlgType;Buttons:TMsgDlgButtons;HelpCtx:Longint;DefaultButton:TMsgDlgBtn): Integer;
1860: Function MessageDlgPos(const Msg:string;DlgType:TMsgDlgType;Buttons:TMsgDlgButtons;HelpCtx:Longint;X,
      Y:Integer):Integer;
1861: Function MessageDlgPos1( const Msg : string; DlgType : TMsgDlgType; Buttons : TMsgDlgButtons; HelpCtx :
      Longint; X, Y : Integer; DefaultButton : TMsgDlgBtn) : Integer;
1862: Function MessageDlgPosHelp( const Msg : string; DlgType : TMsgDlgType; Buttons : TMsgDlgButtons; HelpCtx :
      Longint; X, Y : Integer; const HelpFileName : string) : Integer;
1863: Function MessageDlgPosHelp1( const Msg : string; DlgType : TMsgDlgType; Buttons : TMsgDlgButtons; HelpCtx
      : Longint; X, Y : Integer; const HelpFileName : string; DefaultButton : TMsgDlgBtn) : Integer;
1864: Function MibToId( Mib : string) : string
1865: Function MidStr( const AText : AnsiString; const AStart, ACount : Integer) : AnsiString;
1866: Function MidStr( const AText : WideString; const AStart, ACount : Integer) : WideString;
1867: Function microsecondsToCentimeters(mseconds: longint): longint;  //340m/s speed of sound
1868: Function Micros(const Timer:THPTimer;const TimerRunning:Boolean):Int64//TypeS('THPTimer', 'Int64
1869: Function MIDIOut( DeviceID : Cardinal) : IJclMIDIOut
1870: Procedure GetMidiOutputs( const List : TStrings)
1871: Function MIDISingleNoteTuningData( Key : TMIDINote; Frequency : Single) : TSingleNoteTuningData
1872: Function MIDINoteToStr( Note : TMIDINote) : string
1873: Function WinMidiOut( DeviceID : Cardinal) : IJclWinMidiOut
1874: Procedure GetMidiOutputs( const List : TStrings)
1875: Procedure MidiOutCheck( Code : MMResult)
1876: Procedure MidiInCheck( Code : MMResult)
1877: Function MilliSecondOf( const AValue : TDateTime) : Word
1878: Function MilliSecondOfTheDay( const AValue : TDateTime) : LongWord
1879: Function MilliSecondOfTheHour( const AValue : TDateTime) : LongWord
1880: Function MilliSecondOfTheMinute( const AValue : TDateTime) : LongWord
1881: Function MilliSecondOfTheMonth( const AValue : TDateTime) : LongWord
1882: Function MilliSecondOfTheSecond( const AValue : TDateTime) : Word
1883: Function MilliSecondOfTheWeek( const AValue : TDateTime) : LongWord
1884: Function MilliSecondOfTheYear( const AValue : TDateTime) : Int64
1885: Function MilliSecondsBetween( const ANow, AThen : TDateTime) : Int64
1886: Function MilliSecondSpan( const ANow, AThen : TDateTime) : Double
1887: Function milliToDateTime( MilliSecond : LongInt) : TDateTime');
1888: Function Micros( const Timer : THPTimer; const TimerRunning : Boolean) : Int64
1889: Function millis: int64;
1890: Function Min( AValueOne, AValueTwo : Integer) : Integer
1891: Function Min1( const B1, B2 : Shortint) : Shortint;
1892: Function Min2( const B1, B2 : Smallint) : Smallint;
1893: Function Min3( const B1, B2 : Word) : Word;
1894: Function Min4( const B1, B2 : Integer) : Integer;
1895: Function Min5( const B1, B2 : Cardinal) : Cardinal;
1896: Function Min6( const B1, B2 : Int64) : Int64;
1897: Function Min64( const AValueOne, AValueTwo : Int64) : Int64
1898: Function MinClientRect : TRect;
1899: Function MinClientRect1( IncludeScroller : Boolean) : TRect;
1900: Function MinClientRect2( TabCount : Integer; IncludeScroller : Boolean) : TRect;
1901: Function MinFloat( const X, Y : Float) : Float
1902: Function MinFloatArray( const B : TDynFloatArray) : Float
1903: Function MinFloatArrayIndex( const B : TDynFloatArray) : Integer
1904: Function MinimizeName( const Filename : string; Canvas : TCanvas; MaxLen : Integer) : string
1905: Function MinimizeName( const Filename : TFileName; Canvas : TCanvas; MaxLen : Integer) : TFileName
1906: function MinimizeName(const Filename: String; Canvas: TCanvas;MaxLen: Integer): TFileName
1907: Function MinIntValue( const Data : array of Integer) : Integer
1908: function MinIntValue(const Data: array of Integer):Integer)
1909: Function MinJ( const B1, B2 : Byte) : Byte;
1910: Function MinuteOf( const AValue : TDateTime) : Word
1911: Function MinuteOfTheDay( const AValue : TDateTime) : Word
1912: Function MinuteOfTheHour( const AValue : TDateTime) : Word
1913: Function MinuteOfTheMonth( const AValue : TDateTime) : Word
1914: Function MinuteOfTheWeek( const AValue : TDateTime) : Word
1915: Function MinuteOfTheYear( const AValue : TDateTime) : LongWord
1916: Function MinutesBetween( const ANow, AThen : TDateTime) : Int64
1917: Function MinuteSpan( const ANow, AThen : TDateTime) : Double
1918: Function MinValue( const Data : array of Double) : Double
1919: function MinValue(const Data: array of Double): Double)
1920: Function MixerLeftRightToArray( Left, Right : Cardinal) : TDynCardinalArray
1921: Function MMCheck( const MciError : MCIERROR; const Msg : string) : MCIERROR
1922: Function ModFloat( const X, Y : Float) : Float
1923: Function ModifiedJulianDateToDateTime( const AValue : Double) : TDateTime
1924: Function Modify( const Key : string; Value : Integer) : Boolean
1925: Function ModuleCacheID : Cardinal
```

```
1926: Function ModuleFromAddr( const Addr : Pointer) : HMODULE
1927: Function MonitorFromPoint( const Point : TPoint; MonitorDefault : TMonitorDefaultTo) : TMonitor
1928: Function MonitorFromRect( const Rect : TRect; MonitorDefault : TMonitorDefaultTo) : TMonitor
1929: Function MonitorFromWindow( const Handle : THandle; MonitorDefault : TMonitorDefaultTo) : TMonitor
1930: Function MonthOf( const AValue : TDateTime) : Word
1931: Function MonthOfTheYear( const AValue : TDateTime) : Word
1932: Function MonthsBetween( const ANow, AThen : TDateTime) : Integer
1933: Function MonthSpan( const ANow, AThen : TDateTime) : Double
1934: Function MonthStr( DateTime : TDateTime) : string
1935: Function MouseCoord( X, Y : Integer) : TGridCoord
1936: Function MOVEBY( DISTANCE : INTEGER) : INTEGER
1937: Function MoveFile( Source, Dest : string; Flags : FILEOP_FLAGS) : Boolean
1938: Function MoveNext : Boolean
1939: Function MSecsToTimeStamp( MSecs : Comp) : TTimeStamp
1940: function MSecsToTimeStamp(MSecs: Comp): TTimeStamp)
1941: Function Name : string
1942: Function NetPresentValue(const Rate:Extended;const CashFlows:array of
      Double;PaymentTime:TPaymentTime):Extended
1943: function NetworkVolume(DriveChar: Char): string
1944: Function NEWBOTTOMLINE : INTEGER
1945: Function NewCompareNode( Field : TField; Operator : TCANOperator; const Value : Variant) : PExprNode
1946: Function NEWITEM( const ACAPTION : String; ASHORTCUT : TSHORTCUT; ACHECKED, AENABLED : BOOLEAN; AONCLICK :
      TNOTIFYEVENT; HCTX : WORD; const ANAME : String) : TMENUITEM
1947: Function NEWLINE : TMENUITEM
1948: Function NEWMENU( OWNER : TCOMPONENT; const ANAME : STRING; ITEMS : array of TMenuItem) : TMAINMENU
1949: Function NewNode(Kind: TExprNodeKind; Operator:TCANOperator; const Data:Variant; Left,
      Right:PExprNode):PExprNode
1950: Function NEWPOPUPMENU(OWNER:TCOMPONENT;const ANAME:String; ALIGNMENT:TPOPUPALIGNMENT;AUTOPOPUP:BOOLEAN;
      const ITEMS : array of TCMENUITEM) : TPOPUPMENU
1951: Function NewState( eType : TniRegularExpressionStateType) : TniRegularExpressionState
1952: Function NEWSUBMENU(const ACAPT:String;HCTX:WORD;const ANAME:String;ITEMS:array of
      TMenuItem;AENABLED:BOOL): TMENUITEM
1953: Function NEWTOPLINE : INTEGER
1954: Function Next : TIdAuthWhatsNext
1955: Function NextCharIndex( S : String; Index : Integer) : Integer
1956: Function NextRecordSet : TCustomSQLDataSet
1957: Function NextRecordset( var RecordsAffected : Integer) : _Recordset
1958: Function NextSQLToken1( var p : WideChar; out Token : WideString; CurSection : TSQLToken) : TSQLToken;
1959: Function NextToken : Char
1960: Function nextToken : WideString
1961: function NextToken:Char
1962: Function Norm( const Data : array of Double) : Extended
1963: Function NormalizeAngle( const Angle : Extended) : Extended
1964: Function NormalizeBcd( const InBcd : TBcd; var OutBcd : TBcd; const Prec, Scale : Word) : Boolean
1965: Function NormalizeRect( const Rect : TRect) : TRect
1966: function NormalizeRect(const Rect: TRect): TRect;
1967: Function Now : TDateTime
1968: function Now2: tDateTime
1969: Function NumProcessThreads : integer
1970: Function NumThreadCount : integer
1971: Function NthDayOfWeek( const AValue : TDateTime) : Word
1972: Function NtProductType : TNtProductType
1973: Function NtProductTypeString : string
1974: function Null: Variant;
1975: Function NullPoint : TPoint
1976: Function NullRect : TRect
1977: Function Null2Blank(aString:String):String;
1978: Function NumberOfPeriods( const Rate : Extended; Payment : Extended; const PresentValue, FutureValue :
      Extended; PaymentTime : TPaymentTime) : Extended
1979: Function NumIP : integer
1980: function Odd(x: Longint): boolean;
1981: Function OffsetFromUTC : TDateTime
1982: Function OffsetPoint( const P, Offset : TPoint) : TPoint
1983: Function OffsetRect( var Rect : TRect; DX : Integer; DY : Integer) : Boolean
1984: function OffsetRect(var Rect: TRect; DX:Integer; DY:Integer): Boolean)
1985: Function OffsetToMaskOffset( const EditMask : string; Offset : Integer) : Integer
1986: Function OkToChangeFieldAlignment( AField : TField; Alignment : TAlignment) : Boolean
1987: Function OldBCDToCurr( const BCD : TBcd; var Curr : Currency) : Boolean
1988: Function OldCurrToBCD(const Curr:Currency; var BCD:TBcd; Precision:Integer;Decimals:Integer): Boolean
1989: function OpenBit:Integer
1990: Function OpenDatabase : TDatabase
1991: Function OpenDatabase( const DatabaseName : string) : TDatabase
1992: Procedure OpenDir(adir: string);
1993: Function OpenGLColorToWinColor( const Red, Green, Blue : Float) : TColor
1994: Function OpenObject( Value : PChar) : Boolean;
1995: Function OpenObject1( Value : string) : Boolean;
1996: Function OpenSession( const SessionName : string) : TSession
1997: Function OpenVolume( const Drive : Char) : THandle
1998: function OrdFourByteToCardinal(AByte1, AByte2, AByte3, AByte4 : Byte): Cardinal
1999: Function OrdFourByteToLongWord( AByte1, AByte2, AByte3, AByte4 : Byte) : LongWord
2000: Function OrdToBinary( const Value : Byte) : string;
2001: Function OrdToBinary1( const Value : Shortint) : string;
2002: Function OrdToBinary2( const Value : Smallint) : string;
2003: Function OrdToBinary3( const Value : Word) : string;
2004: Function OrdToBinary4( const Value : Integer) : string;
2005: Function OrdToBinary5( const Value : Cardinal) : string;
2006: Function OrdToBinary6( const Value : Int64) : string;
2007: Function OSCheck( RetVal : Boolean) : Boolean
2008: Function OSFileTypeToString( const OSFileType : DWORD; const OSFileSubType : DWORD) : string
```

```
2009: Function OSIdentToString( const OSIdent : DWORD) : string
2010: Function Output: Text)
2011: Function Overlay( ImageIndex : Integer; Overlay : TOverlay) : Boolean
2012: Function Owner : TCustomListView
2013: function Owner : TPersistent
2014: Function PadInputLiterals( const EditMask : String; const Value : string; Blank : Char) : string
2015: Function PadL( pStr : String; pLth : integer) : String
2016: Function Padl(s : AnyString;I : longInt) : AnyString;
2017: Function PadLCh( pStr : String; pLth : integer; pChr : char) : String
2018: Function PadR( pStr : String; pLth : integer) : String
2019: Function Padr(s : AnyString;I : longInt) : AnyString;
2020: Function PadRCh( pStr : String; pLth : integer; pChr : char) : String
2021: Function PadString( const AString : String; const ALen : Integer; const AChar : Char) : String
2022: Function Padz(s : AnyString;I : longInt) : AnyString;
2023: Function PaethPredictor( a, b, c : Byte) : Byte
2024: Function PARAMBYNAME( const VALUE : String) : TPARAM
2025: Function ParamByName( const Value : WideString) : TParameter
2026: Function ParamCount: Integer
2027: Function ParamsEncode( const ASrc : string) : string
2028: function ParamStr(Index: Integer): string)
2029: Function ParseDate( const DateStr : string) : TDateTime
2030: Function PARSESQL( SQL : String; DOCREATE : BOOLEAN) : String
2031: Function ParseSQL( SQL : WideString; DoCreate : Boolean) : WideString
2032: Function PathAddExtension( const Path, Extension : string) : string
2033: Function PathAddSeparator( const Path : string) : string
2034: Function PathAppend( const Path, Append : string) : string
2035: Function PathBuildRoot( const Drive : Byte) : string
2036: Function PathCanonicalize( const Path : string) : string
2037: Function PathCommonPrefix( const Path1, Path2 : string) : Integer
2038: Function PathCompactPath(const DC:HDC;const Path:string;const Width:Integer;CmpFmt:TCompactPath):string;
2039: Function PathCompactPath1(const Canv:TCanvas;const Path:string;const Width:Int;CmpFmt:TCompactPath):string;
2040: Function PathEncode( const ASrc : string) : string
2041: Function PathExtractFileDirFixed( const S : AnsiString) : AnsiString
2042: Function PathExtractFileNameNoExt( const Path : string) : string
2043: Function PathExtractPathDepth( const Path : string; Depth : Integer) : string
2044: Function PathGetDepth( const Path : string) : Integer
2045: Function PathGetLongName( const Path : string) : string
2046: Function PathGetLongName2( Path : string) : string
2047: Function PathGetShortName( const Path : string) : string
2048: Function PathIsAbsolute( const Path : string) : Boolean
2049: Function PathIsChild( const Path, Base : AnsiString) : Boolean
2050: Function PathIsDiskDevice( const Path : string) : Boolean
2051: Function PathIsUNC( const Path : string) : Boolean
2052: Function PathRemoveExtension( const Path : string) : string
2053: Function PathRemoveSeparator( const Path : string) : string
2054: Function Payment(Rate:Extended;NPeriods:Int;const PresentVal,
      FutureVal:Extended;PaymentTime:TPaymentTime):Extended
2055: Function Peek : Pointer
2056: Function Peek : TObject
2057: function PERFORM(MSG:CARDINAL;WPARAM,LPARAM:LONGINT):LONGINT
2058: Function PeriodPayment(const Rate:Extended;Period,NPeriods:Integer; const PresentValue, FutureValue :
      Extended; PaymentTime : TPaymentTime) : Extended
2059: function Permutation(npr, k: integer): extended;
2060: function PermutationInt(npr, k: integer): Int64;
2061: Function PermutationJ( N, R : Cardinal) : Float
2062: Function Pi : Extended;
2063: Function PiE : Extended;
2064: Function PixelsToDialogsX( const Pixels : Word) : Word
2065: Function PixelsToDialogsY( const Pixels : Word) : Word
2066: Function PlaySound(s: pchar; flag,syncflag: integer): boolean;
2067: Function Point( X, Y : Integer) : TPoint
2068: function Point(X, Y: Integer): TPoint)
2069: Function PointAssign( const X, Y : Integer) : TPoint
2070: Function PointDist( const P1, P2 : TPoint) : Double;
2071: function PointDist(const P1,P2: TFloatPoint): Double;
2072: Function PointDist1( const P1, P2 : TFloatPoint) : Double;
2073: function PointDist2(const P1,P2: TPoint): Double;
2074: Function PointEqual( const P1, P2 : TPoint) : Boolean
2075: Function PointIsNull( const P : TPoint) : Boolean
2076: Function PointToLineSegmentDist( const Point, LineP1, LineP2 : TFloatPoint) : Double
2077: Function Poly( const X : Extended; const Coefficients : array of Double) : Extended
2078: Function PortTCPIsOpen(dwPort : Word; ipAddressStr: String): boolean;
2079: Function IsTCPPortOpen(dwPort : Word; ipAddressStr: String): boolean;
2080: Function Pop : Pointer
2081: Function Pop : TObject
2082: Function PopnStdDev( const Data : array of Double) : Extended
2083: Function PopnVariance( const Data : array of Double) : Extended
2084: Function PopulationVariance( const X : TDynFloatArray) : Float
2085: function Pos(SubStr, S: AnyString): Longint;
2086: Function PosEqual( const Rect : TRect) : Boolean
2087: Function PosEx( const SubStr, S : string; Offset : Integer) : Integer
2088: Function PosInSmallIntArray( const ASearchInt : SmallInt; AArray : array of SmallInt) : Integer
2089: Function PosInStrArray(const SearchStr:string;Contents:array of string;const CaseSensitive:Boolean):Integer
2090: Function Post1( AURL : string; const ASource : TStrings) : string;
2091: Function Post2( AURL : string; const ASource : TStream) : string;
2092: Function Post3( AURL : string; const ASource : TIdMultiPartFormDataStream) : string;
2093: Function PostData( const UserData : WideString; const CheckSum : DWORD) : Boolean
2094: Function PostData( const UserData : WideString; const CheckSum : integer): Boolean
2095: function PostMessage(hWnd: HWND; Msg: longword; wParam: longint; lParam: longint): Boolean;
```

```
2096: Function Power( const Base, Exponent : Extended) : Extended
2097: Function PowerBig(aval, n:integer): string;
2098: Function PowerIntJ( const X : Float; N : Integer) : Float;
2099: Function PowerJ( const Base, Exponent : Float) : Float;
2100: Function PowerOffOS : Boolean
2101: Function PreformatDateString( Ps : string) : string
2102: Function PresentValue(const Rate:Extend;NPeriods:Int;const Payment,
      FutureVal:Extend;PaymentTime:TPaymentTime):Extended
2103: Function PrimeFactors( N : Cardinal) : TDynCardinalArray
2104: Function Printer : TPrinter
2105: Function ProcessPath2( const ABasePath:String; const APath: String; const APathDelim:string): string
2106: Function ProcessResponse : TIdHTTPWhatsNext
2107: Function ProduceContent : string
2108: Function ProduceContentFromStream( Stream : TStream) : string
2109: Function ProduceContentFromString( const S : string) : string
2110: Function ProgIDToClassID(const ProgID: string): TGUID;
2111: Function PromptDataLinkFile( ParentHandle : THandle; InitialFile : WideString) : WideString
2112: Function PromptDataSource( ParentHandle : THandle; InitialString : WideString) : WideString
2113: Function PromptForFileName( var AFileName : string; const AFilter : string; const ADefaultExt : string;
      const ATitle : string; const AInitialDir : string; SaveDialog : Boolean) : Boolean
2114: function PromptForFileName(var AFileName: string; const AFilter: string; const ADefaultExt: string;const
      ATitle: string; const AInitialDir: string; SaveDialog: Boolean): Boolean)
2115: Function PSScriptNeedFile(Sender:TObject;const OrginFileName:String;var FileName,Output:String):Boolean
2116: Function PtInRect( const Rect : TRect; const P : TPoint) : Boolean
2117: function PtInRect(const Rect: TRect; const P: TPoint): Boolean)
2118: Function Push( AItem : Pointer) : Pointer
2119: Function Push( AObject : TObject) : TObject
2120: Function Put1( AURL : string; const ASource : TStream) : string;
2121: Function Pythagoras( const X, Y : Extended) : Extended
2122: Function queryDLLInterface( var queryList : TStringList) : TStringList
2123: Function queryDLLInterfaceTwo( var queryList : TStringList) : TStringList
2124: Function QueryInterface(const IID: TGUID; out Obj): HResult, CdStdCall
2125: Function queryPerformanceCounter2(mse: int64): int64;
2126: //Function QueryPerformanceCounter(var lpPerformanceCount: Int64): LongBool; stdcall;
2127: //Function QueryPerformanceFrequency(mse: int64): boolean;
2128: Function QueryPerformanceCounter(var lcount: Int64): Boolean; stdcall;
2129: Function QueryPerformanceFrequency(var lfreq: int64): boolean; stdcall;
2130: Procedure QueryPerformanceCounter1(var aC: Int64);
2131: Function QueryPerformanceFrequency1(var freq: int64): boolean;
2132: Function Quote( const ACommand : String) : SmallInt
2133: Function QuotedStr( S : string) : string
2134: Function RadToCycle( const Radians : Extended) : Extended
2135: Function RadToDeg( const Radians : Extended) : Extended
2136: Function RadToDeg( const Value : Extended) : Extended;
2137: Function RadToDeg1( const Value : Double) : Double;
2138: Function RadToDeg2( const Value : Single) : Single;
2139: Function RadToGrad( const Radians : Extended) : Extended
2140: Function RadToGrad( const Value : Extended) : Extended;
2141: Function RadToGrad1( const Value : Double) : Double;
2142: Function RadToGrad2( const Value : Single) : Single;
2143: Function RandG( Mean, StdDev : Extended) : Extended
2144: function Random(const ARange: Integer): Integer;
2145: function random2(a: integer): double
2146: function RandomE: Extended;
2147: function RandomF: Extended;
2148: Function RandomFrom( const AValues : array of string) : string;
2149: Function RandomRange( const AFrom, ATo : Integer) : Integer
2150: function randSeed: longint
2151: Function RawToDataColumn( ACol : Integer) : Integer
2152: Function Read : Char
2153: Function Read( pv : Pointer; cb : Longint; pcbRead : PLongint) : HResult
2154: function Read(Buffer:String;Count:LongInt):LongInt
2155: Function ReadBinaryStream( const Section, Name : string; Value : TStream) : Integer
2156: Function ReadBool( const Section, Ident : string; Default : Boolean) : Boolean
2157: Function ReadCardinal( const AConvert : boolean) : Cardinal
2158: Function ReadChar : Char
2159: Function ReadClient( var Buffer, Count : Integer) : Integer
2160: Function ReadDate( const Section, Name : string; Default : TDateTime) : TDateTime
2161: Function ReadDateTime( const Section, Name : string; Default : TDateTime) : TDateTime
2162: Function ReadFloat( const Section, Name : string; Default : Double) : Double
2163: Function ReadFromStack(const ARaiseExceptfDisconnected:Bool;ATimeout:Int;const ARaiseExceptonTimeout:
      Bool):Int
2164: Function ReadInteger( const AConvert : boolean) : Integer
2165: Function ReadInteger( const Section, Ident : string; Default : Longint) : Longint
2166: Function ReadLn : string
2167: Function ReadLn( ATerminator : string; const ATimeout : Integer; AMaxLineLength : Integer) : string
2168: function Readln(question: string): string;
2169: Function ReadLnWait( AFailCount : Integer) : string
2170: Function ReadReg(Base: HKEY; KeyName, ValueName: string): string;
2171: Function ReadRegistry(Base: HKEY; KeyName, ValueName: string): string;
2172: Function ReadSmallInt( const AConvert : boolean) : SmallInt
2173: Function ReadString( const ABytes : Integer) : string
2174: Function ReadString( const Section, Ident, Default : string) : string
2175: Function ReadString( Count : Integer) : string
2176: Function ReadTime( const Section, Name : string; Default : TDateTime) : TDateTime
2177: Function ReadTimeStampCounter : Int64
2178: Function RebootOS : Boolean
2179: Function Receive( ATimeOut : Integer) : TReplyStatus
2180: Function ReceiveBuf( var Buf, Count : Integer) : Integer
```

```
2181: Function ReceiveLength : Integer
2182: Function ReceiveText : string
2183: Function ReceiveSerialData(var Data: TByteArray; DataSize: cardinal): cardinal
2184: Function ReceiveSerialText: string
2185: Function RecodeDate( const AValue : TDateTime; const AYear, AMonth, ADay : Word) : TDateTime
2186: Function RecodeDateTime(const AValue:TDateTime;const AYear,AMonth,ADay,AHr,AMin,ASec,
      AMilliSec:Word):TDateTime
2187: Function RecodeDay( const AValue : TDateTime; const ADay : Word) : TDateTime
2188: Function RecodeHour( const AValue : TDateTime; const AHour : Word) : TDateTime
2189: Function RecodeMilliSecond( const AValue : TDateTime; const AMilliSecond : Word) : TDateTime
2190: Function RecodeMinute( const AValue : TDateTime; const AMinute : Word) : TDateTime
2191: Function RecodeMonth( const AValue : TDateTime; const AMonth : Word) : TDateTime
2192: Function RecodeSecond( const AValue : TDateTime; const ASecond : Word) : TDateTime
2193: Function RecodeTime( const AValue: TDateTime;const AHour,AMinute,ASecond,AMilliSecond:Word):TDateTime
2194: Function RecodeYear( const AValue : TDateTime; const AYear : Word) : TDateTime
2195: Function Reconcile( const Results : OleVariant) : Boolean
2196: Function Rect( Left, Top, Right, Bottom : Integer) : TRect
2197: function Rect(ALeft: Integer; ATop: Integer; ARight: Integer; ABottom: Integer): TRect)
2198: Function Rect2( const ATopLeft, ABottomRight : TPoint) : TRect;
2199: Function RectAssign( const Left, Top, Right, Bottom : Integer) : TRect
2200: Function RectAssignPoints( const TopLeft, BottomRight : TPoint) : TRect
2201: Function RectBounds( const Left, Top, Width, Height : Integer) : TRect
2202: Function RectCenter( const R : TRect) : TPoint
2203: Function RectEqual( const R1, R2 : TRect) : Boolean
2204: Function RectHeight( const R : TRect) : Integer
2205: Function RectIncludesPoint( const R : TRect; const Pt : TPoint) : Boolean
2206: Function RectIncludesRect( const R1, R2 : TRect) : Boolean
2207: Function RectIntersection( const R1, R2 : TRect) : TRect
2208: Function RectIntersectRect( const R1, R2 : TRect) : Boolean
2209: Function RectIsEmpty( const R : TRect) : Boolean
2210: Function RectIsNull( const R : TRect) : Boolean
2211: Function RectIsSquare( const R : TRect) : Boolean
2212: Function RectIsValid( const R : TRect) : Boolean
2213: Function RectsAreValid( R : array of TRect) : Boolean
2214: Function RectUnion( const R1, R2 : TRect) : TRect
2215: Function RectWidth( const R : TRect) : Integer
2216: Function RedComponent( const Color32 : TColor32) : Integer
2217: Function Refresh : Boolean
2218: Function RefStringListCopy(aRefArray:TStringlist):TStringList;
2219: Function RegisterConversionFamily( const ADescription : string) : TConvFamily
2220: Function RegisterConversionType( AConvTypeInfo : TConvTypeInfo; out AType : TConvType) : Boolean;
2221: Function RegisterConversionType(const AFam:TConvFamil;const ADescr:string;const AFact:Double):TConvType
2222: Function RegistryRead(keyHandle: Longint; keyPath, myField: String): string;
2223: Function ReleaseDC(hdwnd: HWND; hdc: HDC): integer;
2224: Function ReleaseHandle : HBITMAP
2225: Function ReleaseHandle : HENHMETAFILE
2226: Function ReleaseHandle : HICON
2227: Function ReleasePalette : HPALETTE
2228: Function RemainderFloat( const X, Y : Float) : Float
2229: Function Remove( AClass : TClass) : Integer
2230: Function Remove( AComponent : TComponent) : Integer
2231: Function Remove( AItem : Integer) : Integer
2232: Function Remove( AItem : Pointer) : Pointer
2233: Function Remove( AItem : TObject) : TObject
2234: Function Remove( AObject : TObject) : Integer
2235: Function RemoveBackslash( const PathName : string) : string
2236: Function RemoveDF( aString : String) : String  //removes thousand separator
2237: Function RemoveDir( Dir : string) : Boolean
2238: function RemoveDir(const Dir: string): Boolean)
2239: Function RemoveDirectory(PathName: PChar): WordBool; stdcall;
2240: Function RemoveFileExt( const FileName : string) : string
2241: Function RemoveHeaderEntry( AHeader, AEntry : string) : string
2242: Function RenameFile( OldName, NewName : string) : Boolean
2243: function RenameFile(const OldName: string; const NewName: string): Boolean)
2244: Function ReplaceStr( const AText, AFromText, AToText : string) : string
2245: Function ReplaceText( const AText, AFromText, AToText : string) : string
2246: Function Replicate(c : char;I : longInt) : String;
2247: Function Request : TWebRequest
2248: Function ResemblesText( const AText, AOther : string) : Boolean
2249: Function Reset : Boolean
2250: function Reset2(mypath: string):string;
2251: Function ResInstLoad(Instance:THandle;ResType:TResType; const Name:string;MaskColor: TColor): Boolean
2252: Function ResourceLoad( ResType : TResType; const Name : string; MaskColor : TColor) : Boolean
2253: Function Response : TWebResponse
2254: Function ResumeSupported : Boolean
2255: Function RETHINKHOTKEYS : BOOLEAN
2256: Function RETHINKLINES : BOOLEAN
2257: Function Retrieve( const MsgNum : Integer; AMsg : TIdMessage) : Boolean
2258: Function RetrieveCurrentDir : string
2259: Function RetrieveDeltas( const cdsArray : array of TClientDataset) : Variant
2260: Function RetrieveHeader( const MsgNum : Integer; AMsg : TIdMessage) : Boolean
2261: Function RetrieveMailBoxSize : integer
2262: Function RetrieveMsgSize( const MsgNum : Integer) : Integer
2263: Function RetrieveProviders( const cdsArray : array of TClientDataset) : Variant
2264: Function RetrieveRaw( const MsgNum : Integer; const Dest : TStrings) : boolean
2265: Function ReturnMIMEType( var MediaType, EncType : String) : Boolean
2266: Function ReverseBits( Value : Byte) : Byte;
2267: Function ReverseBits1( Value : Shortint) : Shortint;
2268: Function ReverseBits2( Value : Smallint) : Smallint;
```

```
2269: Function ReverseBits3( Value : Word) : Word;
2270: Function ReverseBits4( Value : Cardinal) : Cardinal;
2271: Function ReverseBits4( Value : Integer) : Integer;
2272: Function ReverseBits5( Value : Int64) : Int64;
2273: Function ReverseBytes( Value : Word) : Word;
2274: Function ReverseBytes1( Value : Smallint) : Smallint;
2275: Function ReverseBytes2( Value : Integer) : Integer;
2276: Function ReverseBytes3( Value : Cardinal) : Cardinal;
2277: Function ReverseBytes4( Value : Int64) : Int64;
2278: Function ReverseString( const AText : string) : string
2279: Function ReverseDNSLookup(const IPAddrs:String;DNSServer:String;Timeout,Retries:Int;var
      HostName:String):Bool;
2280: Function Revert : HResult
2281: Function RGB(R,G,B: Byte): TColor;
2282: Function RGB2BGR( const Color : TColor) : TColor
2283: Function RGB2TColor( R, G, B : Byte) : TColor
2284: Function RGBToWebColorName( RGB : Integer) : string
2285: Function RGBToWebColorStr( RGB : Integer) : string
2286: Function RgbToHtml( Value : TColor) : string
2287: Function HtmlToRgb(const Value: string): TColor;
2288: Function RightStr( const AStr : String; Len : Integer) : String
2289: Function RightStr( const AText : AnsiString; const ACount : Integer) : AnsiString;
2290: Function RightStr( const AText : WideString; const ACount : Integer) : WideString;
2291: Function ROL( AVal : LongWord; AShift : Byte) : LongWord
2292: Function ROR( AVal : LongWord; AShift : Byte) : LongWord
2293: Function RotatePoint( Point : TFloatPoint; const Center : TFloatPoint; const Angle : Float) : TFloatPoint
2294: function RotatePoint(Point: TFloatPoint; const Center: TFloatPoint; const Angle: Double): TFloatPoint;
2295: Function Round(e : Extended) : Longint;
2296: Function Round64(e: extended): Int64;
2297: Function RoundAt( const Value : string; Position : SmallInt) : string
2298: type TRoundToRange = -37..37; TRoundToEXRangeExtended = -20..20;
2299: Function RoundTo(const AValue: Extended; const ADigit: TRoundToEXRangeExtended): Extended;');
2300: Function SimpleRoundTo(const AValue: Extended; const ADigit: TRoundToRange): Extended;');
2301: Function RoundFrequency( const Frequency : Integer) : Integer
2302: Function RoundInt( Value : Integer; StepSize : Integer) : Integer
2303: Function RoundPoint( const X, Y : Double) : TPoint
2304: Function RoundRect( const ALeft, ATop, ARight, ABottom : Double) : TRect
2305: Function RowCount : Integer
2306: Function RowRequest( const Row : OleVariant; RequestType : Integer; var OwnerData : OleVariant): OleVariant
2307: Function RowRequest( Row : OleVariant; Options : TFetchOptions) : OleVariant
2308: Function RPos( const ASub, AIn : String; AStart : Integer) : Integer
2309: Function RRot( const Value : Byte; const Count : TBitRange) : Byte;
2310: Function RRot1( const Value : Word; const Count : TBitRange) : Word;
2311: Function RRot2( const Value : Integer; const Count : TBitRange) : Integer;
2312: Function RunDLL32(const ModuleNa,FuncName,CmdLine:string;WaitForCompletion:Bool;CmdShow:Integer):Boolean
2313: Function RunningProcessesList( const List : TStrings; FullPath : Boolean) : Boolean
2314: Function S_AddBackSlash( const ADirName : string) : string
2315: Function S_AllTrim( const cStr : string) : string
2316: Function S_AtRepl( const cAT, cStr, cRepl : string) : string
2317: Function S_Cut( const cStr : string; const iLen : integer) : string
2318: Function S_DecryptCRC32( const crc : string; StartKey, MultKey, AddKey : integer) : integer
2319: Function S_DirExists( const ADir : string) : Boolean
2320: Function S_Empty( const cStr : string) : boolean
2321: Function S_EncryptCRC32( const crc : LongWORD; StartKey, MultKey, AddKey : integer) : string
2322: Function S_LargeFontsActive : Boolean
2323: Function S_LimitDigits( AValue : Extended; ANumDigits : Integer) : Extended
2324: Function S_LTrim( const cStr : string) : string
2325: Function S_ReadNextTextLineFromStream( stream : TStream) : string
2326: Function S_RepeatChar( const iLen : integer; const AChar : Char) : String
2327: Function S_ReplFirst( const cAT, cStr, cRepl : string) : string
2328: Function S_RoundDecimal( AValue : Extended; APlaces : Integer) : Extended
2329: Function S_RTrim( const cStr : string) : string
2330: Function S_RTrimCopy( const cStr : string; iPos, iLen : integer) : string
2331: //Type TS_ShellExecuteCmd = (seCmdOpen,seCmdPrint,seCmdExplore);
2332: Function S_ShellExecute( aFilename : string; aParameters : string; aCommand : TS_ShellExecuteCmd) : string
2333: Function S_Space( const iLen : integer) : String
2334: Function S_StrBlanks( const cStr : string; const iLen : integer) : string
2335: Function S_StrBlanksCuttooLong( const cStr : string; const iLen : integer) : string
2336: Function S_StrCRC32( const Text : string) : LongWORD
2337: Function S_StrDecrypt96( const InString : string; StartKey, MultKey, AddKey : Integer) : string
2338: Function S_StrEncrypt96( const InString : string; StartKey, MultKey, AddKey : Integer) : string
2339: Function S_StringtoUTF_8( const AString : string) : string
2340: Function S_StrLBlanks( const cStr : string; const iLen : integer) : string
2341: function S_StrToReal(const cStr: string; var R: Double): Boolean
2342: Function S_TokenEnd( cBuffer : PChar; lEmptyToken : boolean) : boolean
2343: Function S_TokenNext( cBuffer : PChar; lEmptyToken : boolean) : string
2344: Function S_UTF_8ToString( const AString : string) : string
2345: Function S_WBox( const AText : string) : integer
2346: Function SameDate( const A, B : TDateTime) : Boolean
2347: function SameDate(const A, B: TDateTime): Boolean;
2348: Function SameDateTime( const A, B : TDateTime) : Boolean
2349: function SameDateTime(const A, B: TDateTime): Boolean;
2350: Function SameFileName( S1, S2 : string) : Boolean
2351: Function SameText( S1, S2 : string) : Boolean
2352: function SameText(const S1: string; const S2: string): Boolean)
2353: Function SameTime( const A, B : TDateTime) : Boolean
2354: function SameTime(const A, B: TDateTime): Boolean;
2355: function SameValue(const A, B: Extended; Epsilon: Extended): Boolean //overload;
2356: function SameValue1(const A, B: Double; Epsilon: Double): Boolean //overload;
```

```
2357: function SameValue2(const A, B: Single; Epsilon: Single): Boolean //overload;
2358: Function SampleVariance( const X : TDynFloatArray) : Float
2359: Function Sar( const Value : Shortint; const Count : TBitRange) : Shortint;
2360: Function Sar1( const Value : Smallint; const Count : TBitRange) : Smallint;
2361: Function Sar2( const Value : Integer; const Count : TBitRange) : Integer;
2362: Function SaveToFile( const AFileName : TFileName) : Boolean
2363: Function SaveAsExcelFile(AGrid: TStringGrid; ASheetName, AFileName: string; open: boolean): Boolean;
2364: Function SaveAsExcel(aGrid: TStringGrid; aSheetName, aFileName: string; openexcel: boolean): Boolean;
2365: Function ScanF(const aformat: String; const args: array of const): string;
2366: Function SCREENTOCLIENT(POINT:TPOINT):TPOINT
2367: Function SearchBuf(Buf:PChar; BufLen:Integer;SelStart,SelLength:Integer;SearchString:String;Options:
      TStringSearchOptions):PChar
2368: Function SearchBuf2(Buf: String;SelStart,SelLength:Integer; SearchString:
      String;Options:TStringSearchOptions):Integer;
2369: function SearchRecattr: integer;
2370: function SearchRecExcludeAttr: integer;
2371: Function SearchRecFileSize64( const SearchRec : TSearchRec) : Int64
2372: function SearchRecname: string;
2373: function SearchRecsize: integer;
2374: function SearchRecTime: integer;
2375: Function Sec( const X : Extended) : Extended
2376: Function Secant( const X : Extended) : Extended
2377: Function SecH( const X : Extended) : Extended
2378: Function SecondOf( const AValue : TDateTime) : Word
2379: Function SecondOfTheDay( const AValue : TDateTime) : LongWord
2380: Function SecondOfTheHour( const AValue : TDateTime) : Word
2381: Function SecondOfTheMinute( const AValue : TDateTime) : Word
2382: Function SecondOfTheMonth( const AValue : TDateTime) : LongWord
2383: Function SecondOfTheWeek( const AValue : TDateTime) : LongWord
2384: Function SecondOfTheYear( const AValue : TDateTime) : LongWord
2385: Function SecondsBetween( const ANow, AThen : TDateTime) : Int64
2386: Function SecondSpan( const ANow, AThen : TDateTime) : Double
2387: Function SectionExists( const Section : string) : Boolean
2388: Function Seek( const KeyValues : Variant; SeekOption : TSeekOption) : Boolean
2389: Function Seek( dlibMove : Longint; dwOrigin : Longint; out libNewPosition : Largeint) : HResult
2390: function Seek(Offset:LongInt;Origin:Word):LongInt
2391: Function SelectDirectory( var Directory : string; Options : TSelectDirOpts; HelpCtx:Longint): Boolean;
2392: Function SelectDirectory1( const Caption : string; const Root : WideString; var Directory : string;
      Options : TSelectDirExtOpts; Parent : TWinControl) : Boolean;
2393: Function SelectImage( var AFileName : string; const Extensions, Filter : string) : Boolean
2394: function SendAppMessage(Msg: Cardinal; WParam, LParam: Longint): Longint
2395: Function SendBuf( var Buf, Count : Integer) : Integer
2396: Function SendCmd( const AOut : string; const AResponse : SmallInt) : SmallInt;
2397: Function SendCmd1( const AOut : string; const AResponse : array of SmallInt) : SmallInt;
2398: Function SendKey( AppName : string; Key : Char) : Boolean
2399: function SendMessage(hWnd: HWND; Msg: longword; wParam: longint; lParam: longint): Boolean;
2400: Function SendStream( AStream : TStream) : Boolean
2401: Function SendStreamThenDrop( AStream : TStream) : Boolean
2402: Function SendText( const S : string) : Integer
2403: Function SendSerialData(Data: TByteArray; DataSize: cardinal): cardinal
2404: Function SendSerialText(Data: String): cardinal
2405: Function Sent : Boolean
2406: Function ServicesFilePath: string
2407: Function SetAlpha( const Color32 : TColor32; NewAlpha : Integer) : TColor32
2408: Function SetBit( const Value : Byte; const Bit : TBitRange) : Byte;
2409: Function SetBit1( const Value : Shortint; const Bit : TBitRange) : Shortint;
2410: Function SetBit2( const Value : Smallint; const Bit : TBitRange) : Smallint;
2411: Function SetBit3( const Value : Word; const Bit : TBitRange) : Word;
2412: Function SetBit4( const Value : Cardinal; const Bit : TBitRange) : Cardinal;
2413: Function SetBit4( const Value : Integer; const Bit : TBitRange) : Integer;
2414: Function SetBit5( const Value : Int64; const Bit : TBitRange) : Int64;
2415: Function SetClipboard( NewClipboard : TClipboard) : TClipboard
2416: Function SetColorBlue( const Color : TColor; const Blue : Byte) : TColor
2417: Function SetColorFlag( const Color : TColor; const Flag : Byte) : TColor
2418: Function SetColorGreen( const Color : TColor; const Green : Byte) : TColor
2419: Function SetColorRed( const Color : TColor; const Red : Byte) : TColor
2420: Function SetCurrentDir( Dir : string) : Boolean
2421: function SetCurrentDir(const Dir: string): Boolean)
2422: Function SetCurrentDirectory(PathName: PChar): WordBool; stdcall;
2423: Function SetDirCreation( const DirName : string; const DateTime : TDateTime) : Boolean
2424: Function SetDirLastAccess( const DirName : string; const DateTime : TDateTime) : Boolean
2425: Function SetDirLastWrite( const DirName : string; const DateTime : TDateTime) : Boolean
2426: Function SetDisplayResolution( const XRes, YRes : DWORD) : Longint
2427: Function SetEndOfFile(Handle: Integer): LongBool; stdcall;
2428: Function SetEnvironmentVar( const Name, Value : string) : Boolean
2429: Function SetErrorProc( ErrorProc : TSocketErrorProc) : TSocketErrorProc
2430: Function SetFileCreation( const FileName : string; const DateTime : TDateTime) : Boolean
2431: Function SetFileLastAccess( const FileName : string; const DateTime : TDateTime) : Boolean
2432: Function SetFileLastWrite( const FileName : string; const DateTime : TDateTime) : Boolean
2433: Function SetFileTimeStamp( const FileName : string; TimeStamp : Integer) : Boolean
2434: function SETFOCUSEDCONTROL(CONTROL:TWINCONTROL):BOOLEAN
2435: Function SetLocalTime( Value : TDateTime) : boolean
2436: Function SetPrecisionTolerance( NewTolerance : Float) : Float
2437: Function SetPrinter( NewPrinter : TPrinter) : TPrinter
2438: Function SetPrivilege(privilegeName: string; enable: boolean): boolean;
2439: Function SetRGBValue( const Red, Green, Blue : Byte) : TColor
2440: Function SetSequence( S, Localizar, Substituir : shortstring) : shortstring
2441: Function SetSize( libNewSize : Longint) : HResult
2442: Function SetUserObjectFullAccess( hUserObject : THandle) : Boolean
```

```
2443: Function Sgn( const X : Extended) : Integer
2444: function SHA1(const fileName: string): string;
2445: function SHA256(astr: string; amode: char): string)
2446: function SHA512(astr: string; amode: char): string)
2447: Function ShareMemoryManager : Boolean
2448: function ShellExecute(hWnd:HWND;Operation,FileN,Parameters,Dir:string;ShowCmd:Integer):integer;stdcall;
2449: function Shellexecute2(hwnd: HWND; const FileName: string):integer; stdcall;
2450: Function ShellExecute3(aFilename: string; aParameters: string; aCommand:TS_ShellExecuteCmd): string;
2451: Function SHORTCUT( KEY : WORD; SHIFT : TSHIFTSTATE) : TSHORTCUT
2452: Function SHORTCUTTOTEXT( SHORTCUT : TSHORTCUT) : String
2453: function ShortDateFormat: string;
2454: Function ShortenString(const DC:HDC;const S:WideString;const Width:Int;const
      RTL:Bool;EllipsisWidth:Int):WideString
2455: function ShortTimeFormat: string;
2456: function SHOWMODAL:INTEGER
2457: Function ShowModalControl(aControl : TControl; BS : TFormBorderStyle; BI : TBorderIcons; WS :
      TWindowState; aColor : TColor; BW : Integer; Title : String; BeforeShowModal : TNotifyEvent) :
      TModalResult');
2458: Function
      ShowModalPanel(aPnl:TCustomPanel;Titl:String;ShowCloseIcn:Bool;BefShowModal:TNotifyEvent):TModalResult;
2459: function ShowWindow(C1: HWND; C2: integer): boolean;
2460: procedure ShowMemory     //in Dialog
2461: function ShowMemory2: string;
2462: Function ShutDownOS : Boolean
2463: Function Signe( const X, Y : Extended) : Extended
2464: Function Sign( const X : Extended) : Integer
2465: Function Sin(e : Extended) : Extended;
2466: Function sinc( const x : Double) : Double
2467: Function SinJ( X : Float) : Float
2468: Function Size( const AFileName : String) : Integer
2469: function SizeOf: Longint;
2470: Function SizeofResource( ModuleHandle : HMODULE; ResHandle : TResourceHandle) : Integer
2471: function SlashSep(const Path, S: String): String
2472: Function SLNDepreciation( const Cost, Salvage : Extended; Life : Integer) : Extended
2473: Function SleepEx( dwMilliseconds : DWORD; bAlertable : BOOL) : DWORD
2474: Function SmallPoint(X, Y: Integer): TSmallPoint)
2475: Function Soundex( const AText : string; ALength : TSoundexLength) : string
2476: Function SoundexCompare( const AText, AOther : string; ALength : TSoundexLength) : Integer
2477: Function SoundexInt( const AText : string; ALength : TSoundexIntLength) : Integer
2478: Function SoundexProc( const AText, AOther : string) : Boolean
2479: Function SoundexSimilar( const AText, AOther : string; ALength : TSoundexLength) : Boolean
2480: Function SoundexWord( const AText : string) : Word
2481: Function SourcePos : Longint
2482: function SourcePos:LongInt
2483: Function Split0( Str : string; const substr : string) : TStringList
2484: Procedure SplitNameValue( const Line : string; var Name, Value : string)
2485: Function SQLRequiresParams( const SQL : WideString) : Boolean
2486: Function Sqr(e : Extended) : Extended;
2487: Function Sqrt(e : Extended) : Extended;
2488: Function StartIP : String
2489: Function StartPan( WndHandle : THandle; AControl : TControl) : Boolean
2490: Function StartOfADay( const AYear, AMonth, ADay : Word) : TDateTime;
2491: Function StartOfADay1( const AYear, ADayOfYear : Word) : TDateTime;
2492: Function StartOfAMonth( const AYear, AMonth : Word) : TDateTime
2493: Function StartOfAWeek( const AYear, AWeekOfYear : Word; const ADayOfWeek : Word) : TDateTime
2494: Function StartOfAYear( const AYear : Word) : TDateTime
2495: Function StartOfTheDay( const AValue : TDateTime) : TDateTime
2496: Function StartOfTheMonth( const AValue : TDateTime) : TDateTime
2497: Function StartOfTheWeek( const AValue : TDateTime) : TDateTime
2498: Function StartOfTheYear( const AValue : TDateTime) : TDateTime
2499: Function StartsStr( const ASubText, AText : string) : Boolean
2500: Function StartsText( const ASubText, AText : string) : Boolean
2501: Function StartsWith( const ANSIStr, APattern : String) : Boolean
2502: Function StartsWith( const str : string; const sub : string) : Boolean
2503: Function StartsWithACE( const ABytes : TIdBytes) : Boolean
2504: Function StatusString( StatusCode : Integer) : string
2505: Function StdDev( const Data : array of Double) : Extended
2506: Function Stop : Float
2507: Function StopCount( var Counter : TJclCounter) : Float
2508: Function StoreColumns : Boolean
2509: Function StrAfter( const sString : string; const sDelimiters : string) : string;
2510: Function StrAfter1( const sString : string; const sDelimiters : string; out cDelimiter : char) : string;
2511: Function StrAlloc( Size : Cardinal) : PChar
2512: function StrAlloc(Size: Cardinal): PChar)
2513: Function StrBefore( const sString : string; const sDelimiters : string) : string;
2514: Function StrBefore1( const sString : string; const sDelimiters:string; out cDelimiter:char): string;
2515: Function StrBufSize( Str : PChar) : Cardinal
2516: function StrBufSize(const Str: PChar): Cardinal)
2517: Function StrByteType( Str : PChar; Index : Cardinal) : TMbcsByteType
2518: function StrByteType(Str: PChar; Index: Cardinal): TMbcsByteType)
2519: Function StrCat( Dest : PChar; Source : PChar) : PChar
2520: function StrCat(Dest: PChar; const Source: PChar): PChar)
2521: Function StrCharLength( Str : PChar) : Integer
2522: Function StrComp( Str1, Str2 : PChar) : Integer
2523: function StrComp(const Str1: PChar; const Str2: PChar): Integer)
2524: Function StrCopy( Dest : PChar; Source : PChar) : PChar
2525: function StrCopy(Dest: PChar; const Source: PChar): PChar)
2526: Function Stream_to_AnsiString( Source : TStream) : ansistring
2527: Function Stream_to_Base64( Source : TStream) : ansistring
```

```
2528: Function Stream_to_decimalbytes( Source : TStream) : string
2529: Function Stream2WideString( oStream : TStream) : WideString
2530: Function StreamtoAnsiString( Source : TStream) : ansistring
2531: Function StreamToByte( Source : TStream) : string
2532: Function StreamToDecimalbytes( Source : TStream) : string
2533: Function StreamtoOrd( Source : TStream) : string
2534: Function StreamToString( Source : TStream) : string
2535: Function StrECopy( Dest : PChar; Source : PChar) : PChar
2536: Function StrEmpty( const sString : string) : boolean
2537: Function StrEnd( Str : PChar) : PChar
2538: function StrEnd(const Str: PChar): PChar)
2539: Function StrFilter( const sString : string; xValidChars : TCharSet) : string
2540: Function StrFmt(Buffer, Format: PChar; const Args: array of const): PChar)
2541: Function StrGet(var S : String; I : Integer) : Char;
2542: Function StrGet2(S : String; I : Integer) : Char;
2543: Function StrHasPrefix( const sString : string; const sPrefix : string) : boolean
2544: Function StrHasSuffix( const sString : string; const sSuffix : string) : boolean
2545: Function StrHtmlDecode( const AStr : String) : String
2546: Function StrHtmlEncode( const AStr : String) : String
2547: Function StrToBytes(const Value: String): TBytes;
2548: Function StrIComp( Str1, Str2 : PChar) : Integer
2549: Function StringOfChar(c : char;I : longInt) : String;
2550: Function StringOfChar2( ch : WideChar; Count : Integer) : WideString;
2551: Function StringPad(InputStr,FillChar: String; StrLen:Integer; StrJustify:Boolean): String;
2552: Function StringRefCount(const s: String): integer;
2553: Function StringReplace( S, OldPattern, NewPattern : string; Flags : TReplaceFlags) : string
2554: Function JStringReplace( const S, OldPattern, NewPattern : string; Flags : TReplaceFlags) : string
2555: Function StringReplace(const SourceString, OldPattern,NewPattern:string; Flags:TReplaceFlags): string;
2556: Function StringRemove( const S, Pattern : string; Flags : TReplaceFlags) : string
2557: Function StringToBoolean( const Ps : string) : Boolean
2558: function StringToColor(const S: string): TColor)
2559: function StringToCursor(const S: string): TCursor;
2560: function StringToGUID(const S: string): TGUID)
2561: Function StringTokenizer( const str : string; const delim : string) : IStringTokenizer
2562: Function StringToStringArray( const str : string; const delim : string) : TStringDynArray
2563: Function StringWidth( S : string) : Integer
2564: Function StrInternetToDateTime( Value : string) : TDateTime
2565: Function StrIsDateTime( const Ps : string) : Boolean
2566: Function StrIsFloatMoney( const Ps : string) : Boolean
2567: Function StrIsInteger( const S : string) : Boolean
2568: Function StrLCat( Dest : PChar; Source : PChar; MaxLen : Cardinal) : PChar
2569: Function StrLComp( Str1, Str2 : PChar; MaxLen : Cardinal) : Integer
2570: Function StrLCopy( Dest : PChar; Source : PChar; MaxLen : Cardinal) : PChar
2571: Function StrLen( Str : PChar) : Cardinal
2572: function StrLen(const Str: PChar): Cardinal)
2573: Function StrLessPrefix( const sString : string; const sPrefix : string) : string
2574: Function StrLessSuffix( const sString : string; const sSuffix : string) : string
2575: Function StrLIComp( Str1, Str2 : PChar; MaxLen : Cardinal) : Integer
2576: Function StrLower( Str : PChar) : PChar
2577: Function StrMove( Dest : PChar; Source : PChar; Count : Cardinal) : PChar
2578: function StrMove(Dest: PChar; const Source: PChar; Count: Cardinal): PChar)
2579: Function StrNew( Str : PChar) : PChar
2580: function StrNew(const Str: PChar): PChar)
2581: Function StrNextChar( Str : PChar) : PChar
2582: Function StrPad( const sString : string; const sPad : string; const iLength : integer) : string
2583: Function StrParse( var sString : string; const sDelimiters : string) : string;
2584: Function StrParse1( var sString : string; const sDelimiters : string; out cDelimiter : char) : string;
2585: Function StrPas( Str : PChar) : string
2586: function StrPas(const Str: PChar): string)
2587: Function StrPCopy( Dest : PChar; Source : string) : PChar
2588: function StrPCopy(Dest: PChar; const Source: string): PChar)
2589: Function StrPLCopy( Dest : PChar; Source : string; MaxLen : Cardinal) : PChar
2590: Function StrPos( Str1, Str2 : PChar) : PChar
2591: Function StrScan(const Str: PChar; Chr: Char): PChar)
2592: Function StrRScan(const Str: PChar; Chr: Char): PChar)
2593: Function StrToBcd( const AValue : string) : TBcd
2594: Function StrToBool( S : string) : Boolean
2595: Function StrToBoolDef( S : string; Default : Boolean) : Boolean
2596: Function StrToCard( const AStr : String) : Cardinal
2597: Function StrToConv( AText : string; out AType : TConvType) : Double
2598: Function StrToCurr( S : string) : Currency;
2599: function StrToCurr(const S: string): Currency)
2600: Function StrToCurrDef( S : string; Default : Currency) : Currency;
2601: Function StrToDate( S : string) : TDateTime;
2602: function StrToDate(const s: string): TDateTime;
2603: Function StrToDateDef( S : string; Default : TDateTime) : TDateTime;
2604: Function StrToDateTime( S : string) : TDateTime;
2605: function StrToDateTime(const S: string): TDateTime)
2606: Function StrToDateTimeDef( S : string; Default : TDateTime) : TDateTime;
2607: Function StrToDay( const ADay : string) : Byte
2608: Function StrToFloat( S : string) : Extended;
2609: function StrToFloat(s: String): Extended;
2610: Function StrToFloatDef( S : string; Default : Extended) : Extended;
2611: function StrToFloatDef(const S: string; const Default: Extended): Extended)
2612: Function StrToFloat( S : string) : Extended;
2613: Function StrToFloat2( S : string; FormatSettings : TFormatSettings) : Extended;
2614: Function StrToFloatDef( S : string; Default : Extended) : Extended;
2615: Function StrToFloatDef2(S: string; Default: Extended;FormatSettings:TFormatSettings): Extended;
2616: Function StrToCurr( S : string) : Currency;
```

```
2617: Function StrToCurr2( S : string; FormatSettings : TFormatSettings) : Currency;
2618: Function StrToCurrDef( S : string; Default : Currency) : Currency;
2619: Function StrToCurrDef2( S : string; Default : Currency; FormatSettings : TFormatSettings) : Currency;
2620: Function StrToTime2( S : string; FormatSettings : TFormatSettings) : TDateTime;
2621: Function StrToTimeDef( S : string; Default : TDateTime) : TDateTime;
2622: Function StrToTimeDef2( S : string; Default : TDateTime; FormatSettings:TFormatSettings):TDateTime;
2623: Function TryStrToTime( S : string; Value : TDateTime) : Boolean;
2624: Function StrToDateTime( S : string) : TDateTime;
2625: Function StrToDateTime2( S : string; FormatSettings : TFormatSettings) : TDateTime;
2626: Function StrToDateTimeDef( S : string; Default : TDateTime) : TDateTime;
2627: Function StrToFloatRegionalIndependent(aValue: String;aDecimalSymbol:Char;aDigitGroupSymbol:Char): Extended
2628: Function StrToInt( S : string) : Integer
2629: function StrToInt(s: String): Longint;
2630: Function StrToInt64( S : string) : Int64
2631: function StrToInt64(s: String): int64;
2632: Function StrToInt64Def( S : string; Default : Int64) : Int64
2633: function StrToInt64Def(const S: string; const Default: Int64):Int64)
2634: Function StrToIntDef( S : string; Default : Integer) : Integer
2635: function StrToIntDef(const S: string; Default: Integer): Integer)
2636: function StrToIntDef(s: String; def: Longint): Longint;
2637: Function StrToMonth( const AMonth : string) : Byte
2638: Function StrToTime( S : string) : TDateTime;
2639: function StrToTime(const S: string): TDateTime)
2640: Function StrToTimeDef( S : string; Default : TDateTime) : TDateTime;
2641: Function StrToWord( const Value : String) : Word
2642: Function StrToXmlDate( const DateStr : string; const Format : string) : string
2643: Function StrToXmlDateTime( const DateStr : string; const Format : string) : string
2644: Function StrToXmlTime( const TimeStr : string; const Format : string) : string
2645: Function StrUpper( Str : PChar) : PChar
2646: Function StuffString( const AText : string; AStart, ALength : Cardinal; const ASubText : string) : string
2647: Function Sum( const Data : array of Double) : Extended
2648: Function SumFloatArray( const B : TDynFloatArray) : Float
2649: Function SumInt( const Data : array of Integer) : Integer
2650: Function SumOfSquares( const Data : array of Double) : Extended
2651: Function SumPairProductFloatArray( const X, Y : TDynFloatArray) : Float
2652: Function SumSquareDiffFloatArray( const B : TDynFloatArray; Diff : Float) : Float
2653: Function SumSquareFloatArray( const B : TDynFloatArray) : Float
2654: Function Supports( CursorOptions : TCursorOptions) : Boolean
2655: Function SupportsClipboardFormat( AFormat : Word) : Boolean
2656: Function SwapWord(w : word): word)
2657: Function SwapInt(i : integer): integer)
2658: Function SwapLong(L : longint): longint)
2659: Function Swap(i : integer): integer)
2660: Function SYDDepreciation( const Cost, Salvage : Extended; Life, Period : Integer) : Extended
2661: Function SyncTime : Boolean
2662: Function SysErrorMessage( ErrorCode : Integer) : string
2663: function SysErrorMessage(ErrorCode: Integer): string)
2664: Function SystemTimeToDateTime( SystemTime : TSystemTime) : TDateTime
2665: function SystemTimeToDateTime(const SystemTime: TSystemTime): TDateTime;
2666: Function SysStringLen(const S: WideString): Integer; stdcall;
2667: Function TabRect( Index : Integer) : TRect
2668: Function Tan( const X : Extended) : Extended
2669: Function TaskMessageDlg(const Title,
      Msg:string;DlgType:TMsgDlgType;Buttons:TMsgDlgButtons;HelpCtx:Longint): Integer;
2670: Function TaskMessageDlg1( const Title, Msg : string; DlgType : TMsgDlgType; Buttons : TMsgDlgButtons;
      HelpCtx : Longint; DefaultButton : TMsgDlgBtn) : Integer;
2671: Function TaskMessageDlgPos( const Title, Msg : string; DlgType : TMsgDlgType; Buttons : TMsgDlgButtons;
      HelpCtx : Longint; X, Y : Integer) : Integer;
2672: Function TaskMessageDlgPos1( const Title, Msg : string; DlgType : TMsgDlgType; Buttons : TMsgDlgButtons;
      HelpCtx : Longint; X, Y : Integer; DefaultButton : TMsgDlgBtn) : Integer;
2673: Function TaskMessageDlgPosHelp( const Title, Msg : string; DlgType : TMsgDlgType; Buttons :
      TMsgDlgButtons; HelpCtx : Longint; X, Y : Integer; const HelpFileName : string) : Integer;
2674: Function TaskMessageDlgPosHelp1(const Title, Msg:string;DlgType: TMsgDlgType; Buttons : TMsgDlgButtons;
      HelpCtx:Longint; X,Y: Integer;const HelpFileName:string;DefaultButton:TMsgDlgBtn): Integer;
2675: Function TenToY( const Y : Float) : Float
2676: Function TerminateApp( ProcessID : DWORD; Timeout : Integer) : TJclTerminateAppResult
2677: Function TerminateTask( Wnd : HWND; Timeout : Integer) : TJclTerminateAppResult
2678: Function TestBit( const Value : Byte; const Bit : TBitRange) : Boolean;
2679: Function TestBit2( const Value : Shortint; const Bit : TBitRange) : Boolean;
2680: Function TestBit3( const Value : Smallint; const Bit : TBitRange) : Boolean;
2681: Function TestBit4( const Value : Word; const Bit : TBitRange) : Boolean;
2682: Function TestBit5( const Value : Cardinal; const Bit : TBitRange) : Boolean;
2683: Function TestBit6( const Value : Integer; const Bit : TBitRange) : Boolean;
2684: Function TestBit7( const Value : Int64; const Bit : TBitRange) : Boolean;
2685: Function TestBits( const Value, Mask : Byte) : Boolean;
2686: Function TestBits1( const Value, Mask : Shortint) : Boolean;
2687: Function TestBits2( const Value, Mask : Smallint) : Boolean;
2688: Function TestBits3( const Value, Mask : Word) : Boolean;
2689: Function TestBits4( const Value, Mask : Cardinal) : Boolean;
2690: Function TestBits5( const Value, Mask : Integer) : Boolean;
2691: Function TestBits6( const Value, Mask : Int64) : Boolean;
2692: Function TestFDIVInstruction : Boolean
2693: function TestStreamFormat(Stream: TStream): TStreamOriginalFormat
2694: Function TextExtent( const Text : string) : TSize
2695: function TextHeight(Text: string): Integer;
2696: Function TextIsSame( const A1 : string; const A2 : string) : Boolean
2697: Function TextStartsWith( const S, SubS : string) : Boolean
2698: function TextToFloat(Buffer: PChar; var Value: Extended; ValueType: TFloatValue): Boolean)
2699: Function ConvInteger(i : integer):string;
```

```
2700: Function IntegerToText(i : integer):string;
2701: Function TEXTTOSHORTCUT( TEXT : String) : TSHORTCUT
2702: function TextWidth(Text: string): Integer;
2703: Function ThreadCount : integer
2704: function ThousandSeparator: char;
2705: Function Ticks : Cardinal
2706: Function Time : TDateTime
2707: function Time: TDateTime;
2708: function TimeGetTime: int64;
2709: Function TimeOf( const AValue : TDateTime) : TDateTime
2710: function TimeSeparator: char;
2711: function TimeStampToDateTime(const TimeStamp: TTimeStamp): TDateTime
2712: Function TimeStampToMSecs( TimeStamp : TTimeStamp) : Comp
2713: function TimeStampToMSecs(const TimeStamp: TTimeStamp): Comp)
2714: Function TimeToStr( DateTime : TDateTime) : string;
2715: function TimeToStr(const DateTime: TDateTime): string;
2716: Function TimeZoneBias : TDateTime
2717: Function ToCommon( const AValue : Double) : Double
2718: function ToCommon(const AValue: Double): Double;
2719: Function Today : TDateTime
2720: Function ToggleBit( const Value : Byte; const Bit : TBitRange) : Byte;
2721: Function ToggleBit1( const Value : Shortint; const Bit : TBitRange) : Shortint;
2722: Function ToggleBit2( const Value : Smallint; const Bit : TBitRange) : Smallint;
2723: Function ToggleBit3( const Value : Word; const Bit : TBitRange) : Word;
2724: Function ToggleBit4( const Value : Cardinal; const Bit : TBitRange) : Cardinal;
2725: Function ToggleBit5( const Value : Integer; const Bit : TBitRange) : Integer;
2726: Function ToggleBit6( const Value : Int64; const Bit : TBitRange) : Int64;
2727: function TokenComponentIdent:String
2728: Function TokenFloat : Extended
2729: function TokenFloat:Extended
2730: Function TokenInt : Longint
2731: function TokenInt:LongInt
2732: Function TokenString : string
2733: function TokenString:String
2734: Function TokenSymbolIs( const S : string) : Boolean
2735: function TokenSymbolIs(S:String):Boolean
2736: Function Tomorrow : TDateTime
2737: Function ToRightOf( const pc : TControl; piSpace : Integer) : Integer
2738: Function ToString : string
2739: Function TotalVariance( const Data : array of Double) : Extended
2740: Function Trace2( AURL : string) : string;
2741: Function TrackMenu( Button : TToolButton) : Boolean
2742: Function TRANSLATE( SRC, DEST : PCHAR; TOOEM : BOOLEAN) : INTEGER
2743: Function TranslateURI( const URI : string) : string
2744: Function TranslationMatchesLanguages( Exact : Boolean) : Boolean
2745: Function TransparentStretchBlt( DstDC :HDC;DstX,DstY,DstW,DstH:Integer;SrcDC:HDC;SrcX,SrcY,SrcW,
     SrcH:Integer;MaskDC : HDC; MaskX, MaskY : Integer) : Boolean
2746: Function Trim( S : string) : string;
2747: Function Trim( S : WideString) : WideString;
2748: Function Trim(s : AnyString) : AnyString;
2749: Function TrimAllOf( ATrim, AText : String) : String
2750: Function TrimLeft( S : string) : string;
2751: Function TrimLeft( S : WideString) : WideString;
2752: function TrimLeft(const S: string): string)
2753: Function TrimRight( S : string) : string;
2754: Function TrimRight( S : WideString) : WideString;
2755: function TrimRight(const S: string): string)
2756: function TrueBoolStrs: array of string
2757: Function Trunc(e : Extended) : Longint;
2758: Function Trunc64(e: extended): Int64;
2759: Function TruncPower( const Base, Exponent : Float) : Float
2760: Function TryConvTypeToFamily( const AFrom, ATo : TConvType; out AFamily : TConvFamily) : Boolean;
2761: Function TryConvTypeToFamily1( const AType : TConvType; out AFamily : TConvFamily) : Boolean;
2762: function TryEncodeDate(Year, Month, Day: Word; var Date: TDateTime): Boolean;
2763: Function TryEncodeDateDay( const AYear, ADayOfYear : Word; out AValue : TDateTime) : Boolean
2764: Function TryEncodeDateMonthWeek(const AY,AMonth,AWeekOfMonth,ADayOfWeek:Word;var AValue:TDateTime): Boolean
2765: Function TryEncodeDateTime(const AYear,AMonth,ADay,AHour,AMin,ASec,AMilliSecond:Word; out
     AValue:TDateTime):Boolean
2766: Function TryEncodeDateWeek(const AY,AWeekOfYear:Word;out AValue:TDateTime;const ADayOfWeek:Word): Boolean
2767: Function TryEncodeDayOfWeekInMonth(const AYear,AMonth,ANthDayOfWeek,ADayOfWeek:Word;out
     AVal:TDateTime):Bool
2768: function TryEncodeTime(Hour, Min, Sec, MSec: Word; var Time: TDateTime): Boolean;
2769: Function TryFloatToDateTime( Value : Extended; AResult : TDateTime) : Boolean
2770: Function TryJulianDateToDateTime( const AValue : Double; out ADateTime : TDateTime) : Boolean
2771: Function TryLock : Boolean
2772: Function TryModifiedJulianDateToDateTime( const AValue : Double; out ADateTime : TDateTime) : Boolean
2773: Function TryRecodeDateTime( const AValue : TDateTime; const AYear, AMonth, ADay, AHour, AMinute, ASecond,
     AMilliSecond : Word; out AResult : TDateTime) : Boolean
2774: Function TryStrToBcd( const AValue : string; var Bcd : TBcd) : Boolean
2775: Function TryStrToConv( AText : string; out AValue : Double; out AType : TConvType) : Boolean
2776: Function TryStrToDate( S : string; Value : TDateTime) : Boolean;
2777: Function TryStrToDateTime( S : string; Value : TDateTime) : Boolean;
2778: Function TryStrToTime( S : string; Value : TDateTime) : Boolean;
2779: Function TryStrToInt(const S: AnsiString; var I: Integer): Boolean;
2780: Function TryStrToInt64(const S: AnsiString; var I: Int64): Boolean;
2781: Function TwoByteToWord( AByte1, AByte2 : Byte) : Word
2782: Function TwoCharToWord( AChar1, AChar2 : Char) : Word
2783: Function TwoToY( const Y : Float) : Float
2784: Function UCS4StringToWideString( const S : UCS4String) : WideString
```

```
2785: Function UIDL( const ADest : TStrings; const AMsgNum : Integer) : Boolean
2786: function Unassigned: Variant;
2787: Function UndoLastChange( FollowChange : Boolean) : Boolean
2788: function UniCodeToStr(Value: string): string;
2789: Function UnionRect( out Rect : TRect; const R1, R2 : TRect) : Boolean
2790: function UnionRect(out Rect: TRect; const R1, R2: TRect): Boolean)
2791: Function UnixDateTimeToDelphiDateTime( UnixDateTime : Cardinal) : TDateTime
2792: Function UnixPathToDosPath( const Path : string) : string
2793: Function UnixToDateTime( const AValue : Int64) : TDateTime
2794: function UnixToDateTime(U: Int64): TDateTime;
2795: Function UnlockRegion( libOffset : Longint; cb : Largeint; dwLockType : Longint) : HResult
2796: Function UnlockResource( ResData : HGLOBAL) : LongBool
2797: Function UnlockVolume( var Handle : THandle) : Boolean
2798: Function UnMaskString( Mask, Value : String) : String
2799: function UpCase(ch : Char ) : Char;
2800: Function UpCaseFirst( const AStr : string) : string
2801: Function UpCaseFirstWord( const AStr : string) : string
2802: Function UpdateAction( Action : TBasicAction) : Boolean
2803: Function UpdateKind : TUpdateKind
2804: Function UPDATESTATUS : TUPDATESTATUS
2805: Function UpperCase( S : string) : string
2806: Function Uppercase(s : AnyString) : AnyString;
2807: Function URLDecode( ASrc : string) : string
2808: Function URLEncode( const ASrc : string) : string
2809: Function UseRightToLeftAlignment : Boolean
2810: Function UseRightToLeftAlignmentForField( const AField : TField; Alignment : TAlignment) : Boolean
2811: Function UseRightToLeftReading : Boolean
2812: Function UTF8CharLength( Lead : Char) : Integer
2813: Function UTF8CharSize( Lead : Char) : Integer
2814: Function UTF8Decode( const S : UTF8String) : WideString
2815: Function UTF8Encode( const WS : WideString) : UTF8String
2816: Function UTF8LowerCase( const S : UTF8string) : UTF8string
2817: Function Utf8ToAnsi( const S : UTF8String) : string
2818: Function Utf8ToAnsiEx( const S : UTF8String; const cp : integer) : string
2819: Function UTF8UpperCase( const S : UTF8string) : UTF8string
2820: Function ValidFieldIndex( FieldIndex : Integer) : Boolean
2821: Function ValidParentForm(control: TControl): TForm
2822: Function Value : Variant
2823: Function ValueExists( const Section, Ident : string) : Boolean
2824: Function ValueOf( const Key : string) : Integer
2825: Function ValueInSet(AValue: Variant; ASet: Variant): Boolean;
2826: Function VALUEOFKEY( const AKEY : VARIANT) : VARIANT
2827: Function VarArrayFromStrings( Strings : TStrings) : Variant
2828: Function VarArrayFromWideStrings( Strings : TWideStrings) : Variant
2829: Function VarArrayGet(var S : Variant; I : Integer) : Variant;
2830: Function VarFMTBcd : TVarType
2831: Function VarFMTBcdCreate1 : Variant;
2832: Function VarFMTBcdCreate2( const AValue : string; Precision, Scale : Word) : Variant;
2833: Function VarFMTBcdCreate3( const AValue : Double; Precision : Word; Scale : Word) : Variant;
2834: Function VarFMTBcdCreate4( const ABcd : TBcd) : Variant;
2835: Function Variance( const Data : array of Double) : Extended
2836: Function VariantAdd2( const V1 : Variant; const V2 : Variant) : Variant
2837: Function VariantAnd2( const V1 : Variant; const V2 : Variant) : Variant
2838: Function VariantDiv2( const V1 : Variant; const V2 : Variant) : Variant
2839: Function VariantGetElement( const V : Variant; i1 : integer) : Variant;
2840: Function VariantGetElement1( const V : Variant; i1, i2 : integer) : Variant;
2841: Function VariantGetElement2( const V : Variant; i1, i2, i3 : integer) : Variant;
2842: Function VariantGetElement3( const V : Variant; i1, i2, i3, i4 : integer) : Variant;
2843: Function VariantGetElement4( const V : Variant; i1, i2, i3, i4, i5 : integer) : Variant;
2844: Function VariantMod2( const V1 : Variant; const V2 : Variant) : Variant
2845: Function VariantMul2( const V1 : Variant; const V2 : Variant) : Variant
2846: Function VariantNeg( const V1 : Variant) : Variant
2847: Function VariantNot( const V1 : Variant) : Variant
2848: Function VariantOr2( const V1 : Variant; const V2 : Variant) : Variant
2849: Function VariantShl2( const V1 : Variant; const V2 : Variant) : Variant
2850: Function VariantShr2( const V1 : Variant; const V2 : Variant) : Variant
2851: Function VariantSub2( const V1 : Variant; const V2 : Variant) : Variant
2852: Function VariantXor2( const V1 : Variant; const V2 : Variant) : Variant
2853: function VarIsEmpty(const V: Variant): Boolean;
2854: Function VarIsFMTBcd( const AValue : Variant) : Boolean;
2855: function VarIsNull(const V: Variant): Boolean;
2856: Function VarToBcd( const AValue : Variant) : TBcd
2857: function VarType(const V: Variant): TVarType;
2858: Function VarType( const V : Variant) : TVarType
2859: Function VarAsType( const V : Variant; AVarType : TVarType) : Variant
2860: Function VarIsType( const V : Variant; AVarType : TVarType) : Boolean;
2861: Function VarIsType1( const V : Variant; const AVarTypes : array of TVarType) : Boolean;
2862: Function VarIsByRef( const V : Variant) : Boolean
2863: Function VarIsEmpty( const V : Variant) : Boolean
2864: Procedure VarCheckEmpty( const V : Variant)
2865: Function VarIsNull( const V : Variant) : Boolean
2866: Function VarIsClear( const V : Variant) : Boolean
2867: Function VarIsCustom( const V : Variant) : Boolean
2868: Function VarIsOrdinal( const V : Variant) : Boolean
2869: Function VarIsFloat( const V : Variant) : Boolean
2870: Function VarIsNumeric( const V : Variant) : Boolean
2871: Function VarIsStr( const V : Variant) : Boolean
2872: Function VarToStr( const V : Variant) : string
2873: Function VarToStrDef( const V : Variant; const ADefault : string) : string
```

```
2874: Function VarToWideStr( const V : Variant) : WideString
2875: Function VarToWideStrDef( const V : Variant; const ADefault : WideString) : WideString
2876: Function VarToDateTime( const V : Variant) : TDateTime
2877: Function VarFromDateTime( const DateTime : TDateTime) : Variant
2878: Function VarInRange( const AValue, AMin, AMax : Variant) : Boolean
2879: Function VarEnsureRange( const AValue, AMin, AMax : Variant) : Variant
2880: TVariantRelationship', '( vrEqual, vrLessThan, vrGreaterThan, vrNotEqual )
2881: Function VarSameValue( const A, B : Variant) : Boolean
2882: Function VarCompareValue( const A, B : Variant) : TVariantRelationship
2883: Function VarIsEmptyParam( const V : Variant) : Boolean
2884: Function VarIsError( const V : Variant; out AResult : HRESULT) : Boolean;
2885: Function VarIsError1( const V : Variant) : Boolean;
2886: Function VarAsError( AResult : HRESULT) : Variant
2887: Procedure VarCopyNoInd( var Dest : Variant; const Source : Variant)
2888: Function VarIsArray( const A : Variant) : Boolean;
2889: Function VarIsArray1( const A : Variant; AResolveByRef : Boolean) : Boolean;
2890: Function VarArrayCreate( const Bounds : array of Integer; AVarType : TVarType) : Variant
2891: Function VarArrayOf( const Values : array of Variant) : Variant
2892: Function VarArrayRef( const A : Variant) : Variant
2893: Function VarTypeIsValidArrayType( const AVarType : TVarType) : Boolean
2894: Function VarTypeIsValidElementType( const AVarType : TVarType) : Boolean
2895: Function VarArrayDimCount( const A : Variant) : Integer
2896: Function VarArrayLowBound( const A : Variant; Dim : Integer) : Integer
2897: Function VarArrayHighBound( const A : Variant; Dim : Integer) : Integer
2898: Function VarArrayLock( const A : Variant) : ___Pointer
2899: Procedure VarArrayUnlock( const A : Variant)
2900: Function VarArrayGet( const A : Variant; const Indices : array of Integer) : Variant
2901: Procedure VarArrayPut( var A : Variant; const Value : Variant; const Indices : array of Integer)
2902: Procedure DynArrayToVariant( var V : Variant; const DynArray : ___Pointer; TypeInfo : ___Pointer)
2903: Procedure DynArrayFromVariant( var DynArray : ___Pointer; const V : Variant; TypeInfo : ___Pointer)
2904: Function Unassigned : Variant
2905: Function Null : Variant
2906: Function VectorAdd( const V1, V2 : TFloatPoint) : TFloatPoint
2907: function VectorAdd(const V1,V2: TFloatPoint): TFloatPoint;
2908: Function VectorDot( const V1, V2 : TFloatPoint) : Double
2909: function VectorDot(const V1,V2: TFloatPoint): Double;
2910: Function VectorLengthSqr( const V : TFloatPoint) : Double
2911: function VectorLengthSqr(const V: TFloatPoint): Double;
2912: Function VectorMult( const V : TFloatPoint; const s : Double) : TFloatPoint
2913: function VectorMult(const V: TFloatPoint; const s: Double): TFloatPoint;
2914: Function VectorSubtract( const V1, V2 : TFloatPoint) : TFloatPoint
2915: function VectorSubtract(const V1,V2: TFloatPoint): TFloatPoint;
2916: Function Verify( AUserName : String) : String
2917: Function Versine( X : Float) : Float
2918: function VersionCheck: boolean;
2919: function VersionCheckAct: string;
2920: Function VersionLanguageId( const LangIdRec : TLangIdRec) : string
2921: Function VersionLanguageName( const LangId : Word) : string
2922: Function VersionResourceAvailable( const FileName : string) : Boolean
2923: Function Visible : Boolean
2924: function VolumeID(DriveChar: Char): string
2925: Function WaitFor( const AString : string) : string
2926: Function WaitFor( const TimeOut : Cardinal) : TJclWaitResult
2927: Function WaitFor1 : TWaitResult;
2928: Function WaitForData( Timeout : Longint) : Boolean
2929: Function WebColorNameToColor( WebColorName : string) : TColor
2930: Function WebColorStrToColor( WebColor : string) : TColor
2931: Function WebColorToRGB( WebColor : Integer) : Integer
2932: Function wGet(aURL, afile: string): boolean;'
2933: Function wGet2(aURL, afile: string): boolean;'  //without file open
2934: Function WebGet(aURL, afile: string): boolean;'
2935: Function WebExists: boolean;   //alias to isinternet
2936: Function WeekOf( const AValue : TDateTime) : Word
2937: Function WeekOfTheMonth( const AValue : TDateTime) : Word;
2938: Function WeekOfTheMonth1( const AValue : TDateTime; var AYear, AMonth : Word) : Word;
2939: Function WeekOfTheYear( const AValue : TDateTime) : Word;
2940: Function WeekOfTheYear1( const AValue : TDateTime; var AYear : Word) : Word;
2941: Function WeeksBetween( const ANow, AThen : TDateTime) : Integer
2942: Function WeeksInAYear( const AYear : Word) : Word
2943: Function WeeksInYear( const AValue : TDateTime) : Word
2944: Function WeekSpan( const ANow, AThen : TDateTime) : Double
2945: Function WideAdjustLineBreaks( const S : WideString; Style : TTextLineBreakStyle) : WideString
2946: Function WideCat( const x, y : WideString) : WideString
2947: Function WideCompareStr( S1, S2 : WideString) : Integer
2948: function WideCompareStr(const S1: WideString; const S2: WideString): Integer)
2949: Function WideCompareText( S1, S2 : WideString) : Integer
2950: function WideCompareText(const S1: WideString; const S2: WideString): Integer)
2951: Function WideCopy( const src : WideString; index, count : Integer) : WideString
2952: Function WideDequotedStr( const S : WideString; AQuote : WideChar) : WideString
2953: Function WideEqual( const x, y : WideString) : Boolean
2954: function WideFormat(const Format: WideString; const Args: array of const): WideString)
2955: Function WideGreater( const x, y : WideString) : Boolean
2956: Function WideLength( const src : WideString) : Integer
2957: Function WideLess( const x, y : WideString) : Boolean
2958: Function WideLowerCase( S : WideString) : WideString
2959: function WideLowerCase(const S: WideString): WideString)
2960: Function WidePos( const src, sub : WideString) : Integer
2961: Function WideQuotedStr( const S : WideString; Quote : WideChar) : WideString
2962: Function WideReplaceStr( const AText, AFromText, AToText : WideString) : WideString
```

```
2963: Function WideReplaceText( const AText, AFromText, AToText : WideString) : WideString
2964: Function WideSameStr( S1, S2 : WideString) : Boolean
2965: function WideSameStr(const S1: WideString; const S2: WideString): Boolean)
2966: Function WideSameText( S1, S2 : WideString) : Boolean
2967: function WideSameText(const S1: WideString; const S2: WideString): Boolean)
2968: Function WideStringReplace(const S,OldPattern, NewPattern: Widestring; Flags: TReplaceFlags): Widestring
2969: Function WideStringToUCS4String( const S : WideString) : UCS4String
2970: Function WideUpperCase( S : WideString) : WideString
2971: Function Win32BackupFile( const FileName : string; Move : Boolean) : Boolean
2972: function Win32Check(RetVal: boolean): boolean)
2973: Function Win32DeleteFile( const FileName : string; MoveToRecycleBin : Boolean) : Boolean
2974: Function Win32RestoreFile( const FileName : string) : Boolean
2975: Function Win32Type : TIdWin32Type
2976: Function WinColor( const Color32 : TColor32) : TColor
2977: function winexec(FileName: pchar; showCmd: integer): integer;
2978: Function WinExec32( const Cmd : string; const CmdShow : Integer) : Boolean
2979: Function WinExec32AndWait( const Cmd : string; const CmdShow : Integer) : Cardinal
2980: Function WithinPastDays( const ANow, AThen : TDateTime; const ADays : Integer) : Boolean
2981: Function WithinPastHours( const ANow, AThen : TDateTime; const AHours : Int64) : Boolean
2982: Function WithinPastMilliSeconds( const ANow, AThen : TDateTime; const AMilliSeconds : Int64) : Boolean
2983: Function WithinPastMinutes( const ANow, AThen : TDateTime; const AMinutes : Int64) : Boolean
2984: Function WithinPastMonths( const ANow, AThen : TDateTime; const AMonths : Integer) : Boolean
2985: Function WithinPastSeconds( const ANow, AThen : TDateTime; const ASeconds : Int64) : Boolean
2986: Function WithinPastWeeks( const ANow, AThen : TDateTime; const AWeeks : Integer) : Boolean
2987: Function WithinPastYears( const ANow, AThen : TDateTime; const AYears : Integer) : Boolean
2988: Function WNetAddConnection( lpRemoteName, lpPassword, lpLocalName : PChar) : DWORD
2989: Function WordToStr( const Value : Word) : String
2990: Function WordGridFormatIdentToInt( const Ident : string; var Value : Longint) : Boolean
2991: Function IntToWordGridFormatIdent( Value : Longint; var Ident : string) : Boolean
2992: Procedure GetWordGridFormatValues( Proc : TGetStrProc)
2993: Function WorkArea : Integer
2994: Function WrapText( Line : string; MaxCol : Integer) : string;
2995: Function WrapText2( Line, BreakStr : string; BreakChars : TSysCharSet; MaxCol : Integer) : string;
2996: Function Write( pv : Pointer; cb : Longint; pcbWritten : PLongint) : HResult
2997: function Write(Buffer:String;Count:LongInt):LongInt
2998: Function WriteClient( var Buffer, Count : Integer) : Integer
2999: Function WriteFile( const AFile : string; const AEnableTransferFile : Boolean) : Cardinal
3000: Function WriteHeaders( StatusCode : Integer; const ReasonString, Headers : string) : Boolean
3001: Function WriteString( const AString : string) : Boolean
3002: Function WStrGet(var S : AnyString; I : Integer) : WideChar;
3003: Function wvsprintf( Output : PChar; Format : PChar; arglist : va_list) : Integer
3004: Function wsprintf( Output : PChar; Format : PChar) : Integer
3005: Function XmlDateTimeToStr( const XmlDateTime : string; const Format : string) : string
3006: Function XmlTimeToStr( const XmlTime : string; const Format : string) : string
3007: Function XorDecode( const Key, Source : string) : string
3008: Function XorEncode( const Key, Source : string) : string
3009: Function XorString( const Key, Src : ShortString) : ShortString
3010: Function Yield : Bool
3011: Function YearOf( const AValue : TDateTime) : Word
3012: Function YearsBetween( const ANow, AThen : TDateTime) : Integer
3013: Function YearSpan( const ANow, AThen : TDateTime) : Double
3014: Function Yesterday : TDateTime
3015: Function YesNoDialog(const ACaption, AMsg: string): boolean;
3016: Function( const Name : string; Proc : TUserFunction)
3017: Function using Special_Scholz from 3.8.5.0
3018: Function TimeToFloat(value:Extended):Extended; // Normalstunden --> Industriestunden
3019: Function FloatToTime(value:Extended):Extended; // Industriestunden --> Normalstunden
3020: Function FloatToTime2Dec(value:Extended):Extended;
3021: Function MinToStd(value:Extended):Extended;
3022: Function MinToStdAsString(value:Extended):String;
3023: Function RoundFloatToStr(zahl:Extended; decimals:integer):String;
3024: Function RoundFloat(zahl:Extended; decimals:integer):Extended;
3025: Function Round2Dec (zahl:Extended):Extended;
3026: Function GetAngle(x,y:Extended):Double;
3027: Function AddAngle(a1,a2:Double):Double;
3028:
3029: ************************************************************************
3030: unit uPSI_StText;
3031: ************************************************************************
3032: Function TextSeek( var F : TextFile; Target : LongInt) : Boolean
3033: Function TextFileSize( var F : TextFile) : LongInt
3034: Function TextPos( var F : TextFile) : LongInt
3035: Function TextFlush( var F : TextFile) : Boolean
3036:
3037: ************************************************************************
3038: from  JvVCLUtils;
3039: ************************************************************************
3040: { Windows resources (bitmaps and icons) VCL-oriented routines }
3041: procedure DrawBitmapTransparent(Dest:TCanvas;DstX,DstY:Integer;Bitmap:TBitmap;TransparentColor:TColor);
3042: procedure DrawBitmapRectTransparent(Dest: TCanvas;DstX,
     DstY:Int;SrcRect:TRect;Bitmap:TBitmap;TransparColor:TColor);
3043: procedure StretchBitmapRectTransparent(Dest: TCanvas; DstX, DstY, DstW,DstH: Integer; SrcRect: TRect;
     Bitmap: TBitmap; TransparentColor: TColor);
3044: function MakeBitmap(ResID: PChar): TBitmap;
3045: function MakeBitmapID(ResID: Word): TBitmap;
3046: function MakeModuleBitmap(Module: THandle; ResID: PChar): TBitmap;
3047: function CreateTwoColorsBrushPattern(Color1, Color2: TColor): TBitmap;
3048: function CreateDisabledBitmap_NewStyle(FOriginal: TBitmap; BackColor: TColor): TBitmap;
3049: function CreateDisabledBitmapEx(FOriginal: TBitmap; OutlineColor, BackColor,
```

```
3050:   HighlightColor, ShadowColor: TColor; DrawHighlight: Boolean): TBitmap;
3051: function CreateDisabledBitmap(FOriginal: TBitmap; OutlineColor: TColor): TBitmap;
3052: function ChangeBitmapColor(Bitmap: TBitmap; Color, NewColor: TColor): TBitmap;
3053: procedure AssignBitmapCell(Source: TGraphic; Dest: TBitmap; Cols, Rows,Index: Integer);
3054: {$IFDEF WIN32}
3055: procedure ImageListDrawDisabled(Images: TImageList; Canvas: TCanvas;
3056:   X, Y, Index: Integer; HighlightColor, GrayColor: TColor; DrawHighlight: Boolean);
3057: {$ENDIF}
3058: function MakeIcon(ResID: PChar): TIcon;
3059: function MakeIconID(ResID: Word): TIcon;
3060: function MakeModuleIcon(Module: THandle; ResID: PChar): TIcon;
3061: function CreateBitmapFromIcon(Icon: TIcon; BackColor: TColor): TBitmap;
3062: {$IFDEF WIN32}
3063: function CreateIconFromBitmap(Bitmap: TBitmap; TransparentColor: TColor): TIcon;
3064: {$ENDIF}
3065: { Service routines }
3066: procedure NotImplemented;
3067: procedure ResourceNotFound(ResID: PChar);
3068: function PointInRect(const P: TPoint; const R: TRect): Boolean;
3069: function PointInPolyRgn(const P: TPoint; const Points: array of TPoint): Boolean;
3070: function PaletteColor(Color: TColor): Longint;
3071: function WidthOf(R: TRect): Integer;
3072: function HeightOf(R: TRect): Integer;
3073: procedure PaintInverseRect(const RectOrg, RectEnd: TPoint);
3074: procedure DrawInvertFrame(ScreenRect: TRect; Width: Integer);
3075: procedure CopyParentImage(Control: TControl; Dest: TCanvas);
3076: procedure Delay(MSecs: Longint);
3077: procedure CenterControl(Control: TControl);
3078: Function PaletteEntries( Palette : HPALETTE) : Integer
3079: Function WindowClassName( Wnd : HWND) : string
3080: Function ScreenWorkArea : TRect
3081: Procedure MoveWindowOrg( DC : HDC; DX, DY : Integer)
3082: Procedure SwitchToWindow( Wnd : HWND; Restore : Boolean)
3083: Procedure ActivateWindow( Wnd : HWND)
3084: Procedure ShowWinNoAnimate( Handle : HWND; CmdShow : Integer)
3085: Procedure CenterWindow( Wnd : HWND)
3086: Procedure ShadeRect( DC : HDC; const Rect : TRect)
3087: Procedure KillMessage( Wnd : HWND; Msg : Cardinal)
3088: Function DialogsToPixelsX( Dlgs : Word) : Word
3089: Function DialogsToPixelsY( Dlgs : Word) : Word
3090: Function PixelsToDialogsX( Pixs : Word) : Word
3091: Function PixelsToDialogsY( Pixs : Word) : Word
3092: {$IFDEF WIN32}
3093: procedure ShowMDIClientEdge(ClientHandle: THandle; ShowEdge: Boolean);
3094: function MakeVariant(const Values: array of Variant): Variant;
3095: {$ENDIF}
3096: function CreateRotatedFont(Font: TFont; Angle: Integer): HFONT;
3097: function MsgBox(const Caption, Text: string; Flags: Integer): Integer;
3098: function MsgDlg(const Msg:string; AType:TMsgDlgType; AButtons: TMsgDlgButtons; HelpCtx: Longint): Word;
3099: {$IFDEF CBUILDER}
3100: function FindPrevInstance(const MainFormClass: ShortString; const ATitle: string): HWND;
3101: function ActivatePrevInstance(const MainFormClass: ShortString; const ATitle: string): Boolean;
3102: {$ELSE}
3103: function FindPrevInstance(const MainFormClass, ATitle: string): HWND;
3104: function ActivatePrevInstance(const MainFormClass, ATitle: string): Boolean;
3105: {$ENDIF CBUILDER}
3106: function IsForegroundTask: Boolean;
3107: procedure MergeForm(AControl: TWinControl; AForm: TForm; Align: TAlign; Show: Boolean);
3108: function GetAveCharSize(Canvas: TCanvas): TPoint;
3109: function MinimizeText(const Text: string; Canvas: TCanvas; MaxWidth: Integer): string;
3110: procedure FreeUnusedOle;
3111: procedure Beep;
3112: function GetWindowsVersionJ: string;
3113: function LoadDLL(const LibName: string): THandle;
3114: function RegisterServer(const ModuleName: string): Boolean;
3115: {$IFNDEF WIN32}
3116: function IsLibrary: Boolean;
3117: {$ENDIF}
3118: { Gradient filling routine }
3119: type TFillDirection = (fdTopToBottom, fdBottomToTop, fdLeftToRight, fdRightToLeft);
3120: procedure GradientFillRect(Canvas: TCanvas; ARect: TRect; StartColor, EndColor: TColor; Direction:
     TFillDirection; Colors: Byte);
3121: { String routines }
3122: function GetEnvVar(const VarName: string): string;
3123: function AnsiUpperFirstChar(const S: string): string;
3124: function StringToPChar(var S: string): PChar;
3125: function StrPAlloc(const S: string): PChar;
3126: procedure SplitCommandLine(const CmdLine: string; var ExeName,Params: string);
3127: function DropT(const S: string): string;
3128: { Memory routines }
3129: function AllocMemo(Size: Longint): Pointer;
3130: function ReallocMemo(fpBlock: Pointer; Size: Longint): Pointer;
3131: procedure FreeMemo(var fpBlock: Pointer);
3132: function GetMemoSize(fpBlock: Pointer): Longint;
3133: function CompareMem(fpBlock1, fpBlock2: Pointer; Size: Cardinal): Boolean;
3134: {$IFNDEF COMPILER5_UP}
3135: procedure FreeAndNil(var Obj);
3136: {$ENDIF}
3137: // from PNGLoader
```

```
3138: Function OptimizeForPNG(Image:TLinearBitmap;QuantizationSteps:Integer;TransparentColor:TColor):Integer
3139: Procedure TransformRGB2LOCO( Image : TLinearBitmap)
3140: Procedure TransformLOCO2RGB( Image : TLinearBitmap)
3141: Procedure SortPalette( const Pal : TPalette; var ColorMap : TColorMap)
3142: Function DrawButtonFace( Canvas : TCanvas; const Client : TRect; BevelWidth : Integer; Style :
      TButtonStyle; IsRounded, IsDown, IsFocused : Boolean) : TRect  //TButtons
3143:   Function IsAnAllResult( const AModalResult : TModalResult) : Boolean
3144:   Function InitWndProc( HWindow : HWnd; Message, WParam : Longint; LParam : Longint) : Longint
3145:  AddConstantN('CTL3D_ALL','LongWord').SetUInt( $FFFF);
3146:  //Procedure ChangeBiDiModeAlignment( var Alignment : TAlignment)
3147:  //Function SendAppMessage( Msg : Cardinal; WParam, LParam : Longint) : Longint
3148:  //Procedure MoveWindowOrg( DC : HDC; DX, DY : Integer)
3149:  Procedure SetImeMode( hWnd : HWND; Mode : TImeMode)
3150:  Procedure SetImeName( Name : TImeName)
3151:  Function Win32NLSEnableIME( hWnd : HWND; Enable : Boolean) : Boolean
3152:  Function Imm32GetContext( hWnd : HWND) : HIMC
3153:  Function Imm32ReleaseContext( hWnd : HWND; hImc : HIMC) : Boolean
3154:  Function Imm32GetConversionStatus( hImc : HIMC; var Conversion, Sentence : longword) : Boolean
3155:  Function Imm32SetConversionStatus( hImc : HIMC; Conversion, Sentence : longword) : Boolean
3156:  Function Imm32SetOpenStatus( hImc : HIMC; fOpen : Boolean) : Boolean
3157: // Function Imm32SetCompositionWindow( hImc : HIMC; lpCompForm : PCOMPOSITIONFORM) : Boolean
3158:  //Function Imm32SetCompositionFont( hImc : HIMC; lpLogfont : PLOGFONTA) : Boolean
3159:  Function Imm32GetCompositionString(hImc:HIMC;dWord1:longword;lpBuf:string;dwBufLen:longint):Longint
3160:  Function Imm32IsIME( hKl : longword) : Boolean
3161:  Function Imm32NotifyIME( hImc : HIMC; dwAction, dwIndex, dwValue:longword):Boolean
3162:  Procedure DragDone( Drop : Boolean)
3163:
3164:
3165: //**************************************added  from jvjvclutils
3166: function CanvasMaxTextHeight(Canvas: TCanvas): Integer;
3167: function ReplaceComponentReference(This,NewReference:TComponent;var VarReference:TComponent):Boolean;
3168: procedure DrawLine(Canvas: TCanvas; X, Y, X2, Y2: Integer);
3169: function IsPositiveResult(Value: TModalResult): Boolean;
3170: function IsNegativeResult(Value: TModalResult): Boolean;
3171: function IsAbortResult(const Value: TModalResult): Boolean;
3172: function StripAllFromResult(const Value: TModalResult): TModalResult;
3173: // returns either BrightColor or DarkColor depending on the luminance of AColor
3174: // This function gives the same result (AFAIK) as the function used in Windows to
3175: // calculate the desktop icon text color based on the desktop background color
3176: function SelectColorByLuminance(AColor, DarkColor, BrightColor: TColor): TColor;
3177: type TJvHTMLCalcType = (htmlShow, htmlCalcWidth, htmlCalcHeight, htmlHyperLink);
3178:
3179: procedure HTMLDrawTextEx(Canvas: TCanvas; Rect: TRect;
3180:   const State: TOwnerDrawState; const Text: string; var Width: Integer;
3181:   CalcType: TJvHTMLCalcType;  MouseX, MouseY: Integer; var MouseOnLink: Boolean;
3182:   var LinkName: string; Scale: Integer = 100); overload;
3183: procedure HTMLDrawTextEx(Canvas: TCanvas; Rect: TRect;
3184:   const State: TOwnerDrawState; const Text: string; var Width, Height: Integer;
3185:   CalcType: TJvHTMLCalcType;  MouseX, MouseY: Integer; var MouseOnLink: Boolean;
3186:   var LinkName: string; Scale: Integer = 100); overload;
3187: function HTMLDrawText(Canvas: TCanvas; Rect: TRect;
3188:   const State: TOwnerDrawState; const Text: string; Scale: Integer = 100): string;
3189: function HTMLDrawTextHL(Canvas: TCanvas; Rect: TRect;
3190:   const State: TOwnerDrawState; const Text: string; MouseX, MouseY: Integer;
3191:   Scale: Integer = 100): string;
3192: function HTMLPlainText(const Text: string): string;
3193: function HTMLTextExtent(Canvas: TCanvas; Rect: TRect;
3194:   const State: TOwnerDrawState; const Text: string; Scale: Integer = 100): TSize;
3195: function HTMLTextWidth(Canvas: TCanvas; Rect: TRect;
3196:   const State: TOwnerDrawState; const Text: string; Scale: Integer = 100): Integer;
3197: function HTMLTextHeight(Canvas: TCanvas; const Text: string; Scale: Integer = 100): Integer;
3198: function HTMLPrepareText(const Text: string): string;
3199:
3200: ************************************** uPSI_JvAppUtils;
3201: Function GetDefaultSection( Component : TComponent) : string
3202: Procedure GetDefaultIniData(Control:TControl; var IniFileName, Section : string; UseRegistry : Boolean)
3203: Procedure GetDefaultIniData( Control : TControl; var IniFileName, Section : string)
3204: Function GetDefaultIniName : string
3205:  //'OnGetDefaultIniName','TOnGetDefaultIniName);
3206: Function GetDefaultIniRegKey : string
3207: Function FindForm( FormClass : TFormClass) : TForm
3208: Function FindShowForm( FormClass : TFormClass; const Caption : string) : TForm
3209: Function ShowDialog( FormClass : TFormClass) : Boolean
3210:  //Function InstantiateForm( FormClass : TFormClass; var Reference) : TForm
3211: Procedure SaveFormPlacement( Form : TForm; const IniFileName : string; UseRegistry : Boolean)
3212: Procedure RestoreFormPlacement( Form : TForm; const IniFileName : string; UseRegistry : Boolean)
3213: Procedure SaveMDIChildrenReg( MainForm : TForm; IniFile : TRegIniFile)
3214: Procedure SaveFormPlacement( Form : TForm; const IniFileName : string)
3215: Procedure RestoreFormPlacement( Form : TForm; const IniFileName : string)
3216: Function GetUniqueFileNameInDir( const Path, FileNameMask : string) : string
3217: Function StrToIniStr( const Str : string) : string
3218: Function IniStrToStr( const Str : string) : string
3219: Function IniReadString( IniFile : TObject; const Section, Ident, Default : string) : string
3220: Procedure IniWriteString( IniFile : TObject; const Section, Ident, Value : string)
3221: Function IniReadInteger( IniFile : TObject; const Section, Ident : string; Default : Longint) : Longint
3222: Procedure IniWriteInteger( IniFile : TObject; const Section, Ident : string; Value : Longint)
3223: Function IniReadBool( IniFile : TObject; const Section, Ident : string; Default : Boolean) : Boolean
3224: Procedure IniWriteBool( IniFile : TObject; const Section, Ident : string; Value : Boolean)
3225: Procedure IniReadSections( IniFile : TObject; Strings : TStrings)
```

```
3226: Procedure IniEraseSection( IniFile : TObject; const Section : string)
3227: Procedure IniDeleteKey( IniFile : TObject; const Section, Ident : string)
3228: Procedure AppBroadcast( Msg, wParam : Longint; lParam : Longint)
3229: Procedure AppBroadcast( Msg, wParam : Word; lParam : Longint)
3230: Procedure AppTaskbarIcons( AppOnly : Boolean)
3231: Procedure InternalSaveGridLayout( Grid : TCustomGrid; IniFile : TObject; const Section : string)
3232: Procedure InternalRestoreGridLayout( Grid : TCustomGrid; IniFile : TObject; const Section : string)
3233: Procedure InternalSaveMDIChildren( MainForm : TForm; IniFile : TObject)
3234: Procedure InternalRestoreMDIChildren( MainForm : TForm; IniFile : TObject)
3235: ****************************************** uPSI_JvDBUtils;
3236: Function CreateLocate( DataSet : TDataSet) : TJvLocateObject
3237: Function IsDataSetEmpty( DataSet : TDataSet) : Boolean
3238: Procedure RefreshQuery( Query : TDataSet)
3239: Function DataSetSortedSearch(DataSet:TDataSet;const Value,FieldName:string;CaseInsensitive:Bool):Boolean
3240: Function DataSetSectionName( DataSet : TDataSet) : string
3241: Procedure InternalSaveFields( DataSet : TDataSet; IniFile : TObject; const Section : string)
3242: Procedure InternalRestoreFields(DataSet:TDataSet;IniFile:TObject;const Section:string;RestoreVisible:Bool)
3243: Function DataSetLocateThrough(DataSet:TDataSet; const KeyFields: string; const KeyValues: Variant;
      Options: TLocateOptions) : Boolean
3244: Procedure SaveFields( DataSet : TDataSet; IniFile : TIniFile)
3245: Procedure RestoreFields( DataSet : TDataSet; IniFile : TIniFile; RestoreVisible : Boolean)
3246: Procedure AssignRecord( Source, Dest : TDataSet; ByName : Boolean)
3247: Function ConfirmDelete : Boolean
3248: Procedure ConfirmDataSetCancel( DataSet : TDataSet)
3249: Procedure CheckRequiredField( Field : TField)
3250: Procedure CheckRequiredFields( const Fields : array of TField)
3251: Function DateToSQL( Value : TDateTime) : string
3252: Function FormatSQLDateRange( Date1, Date2 : TDateTime; const FieldName : string) : string
3253: Function FormatSQLDateRangeEx( Date1, Date2 : TDateTime; const FieldName : string) : string
3254: Function FormatSQLNumericRange(const FieldName:string;LowVal,HighVal,LowEmpty,
      HighEmpty:Double;Inclusive:Bool):string
3255: Function StrMaskSQL( const Value : string) : string
3256: Function FormatSQLCondition(const FieldName,Operator,Val:string;FieldType:TFieldType;Exact:Bool):string
3257: Function FormatAnsiSQLCondition(const FieldName,Operator,Val:string;FieldType:TFieldType;Exact:Bool):string
3258: Procedure _DBError( const Msg : string)
3259:  Const('TrueExpr','String '0=0
3260:  Const('sdfStandard16','String '''"''mm''/''dd''/''yyyy''"'''
3261:  Const('sdfStandard32','String ''''''dd/mm/yyyy''''''
3262:  Const('sdfOracle','String '"TO_DATE(''"dd/mm/yyyy"'', ''DD/MM/YYYY'')"
3263:  Const('sdfInterbase','String '"CAST(''"mm"/"dd"/"yyyy"'' AS DATE)"
3264:  Const('sdfMSSQL','String '"CONVERT(datetime, ''"mm"/"dd"/"yyyy"'', 103)"
3265:  AddTypeS('Largeint', 'Longint
3266:  addTypeS('TIFException', '(ErNoError, erCannotImport, erInvalidType, ErInternalError, '+
3267:    'erInvalidHeader, erInvalidOpcode, erInvalidOpcodeParameter, erNoMainProc, erOutOfGlobalVarsRange, '+
3268:    'erOutOfProcRange, ErOutOfRange, erOutOfStackRange, ErTypeMismatch, erUnexpectedEof, '+
3269:    'erVersionError, ErDivideByZero, ErMathError,erCouldNotCallProc, erOutofRecordRange, '+
3270:    'erOutOfMemory,erException,erNullPointerException,erNullVariantErrorerInterfaceNotSupportederError);
3271: (*----------------------------------------------------------------------------*)
3272: procedure SIRegister_JclIniFiles(CL: TPSPascalCompiler);
3273: begin
3274:  Function JIniReadBool( const FileName, Section, Line : string) : Boolean
3275:  Function JIniReadInteger( const FileName, Section, Line : string) : Integer
3276:  Function JIniReadString( const FileName, Section, Line : string) : string
3277:  Procedure JIniWriteBool( const FileName, Section, Line : string; Value : Boolean)
3278:  Procedure JIniWriteInteger( const FileName, Section, Line : string; Value : Integer)
3279:  Procedure JIniWriteString( const FileName, Section, Line, Value : string)
3280:  Procedure JIniReadStrings( IniFile : TCustomIniFile; const Section : string; Strings : TStrings)
3281:  Procedure JIniWriteStrings( IniFile : TCustomIniFile; const Section : string; Strings : TStrings)
3282: end;
3283:
3284: (* === compile-time registration functions === *)
3285: (*----------------------------------------------------------------------------*)
3286: procedure SIRegister_JclDateTime(CL: TPSPascalCompiler);
3287: begin
3288:  'UnixTimeStart','LongInt'( 25569);
3289:  Function JEncodeDate( const Year : Integer; Month, Day : Word) : TDateTime
3290:  Procedure JDecodeDate( Date : TDateTime; var Year, Month, Day : Word);
3291:  Procedure DecodeDate1( Date : TDateTime; var Year : Integer; var Month, Day : Word);
3292:  Procedure DecodeDate2( Date : TDateTime; var Year, Month, Day : Integer);
3293:  Function CenturyOfDate( const DateTime : TDateTime) : Integer
3294:  Function CenturyBaseYear( const DateTime : TDateTime) : Integer
3295:  Function DayOfDate( const DateTime : TDateTime) : Integer
3296:  Function MonthOfDate( const DateTime : TDateTime) : Integer
3297:  Function YearOfDate( const DateTime : TDateTime) : Integer
3298:  Function JDayOfTheYear( const DateTime : TDateTime; var Year : Integer) : Integer;
3299:  Function DayOfTheYear1( const DateTime : TDateTime) : Integer;
3300:  Function DayOfTheYearToDateTime( const Year, Day : Integer) : TDateTime
3301:  Function HourOfTime( const DateTime : TDateTime) : Integer
3302:  Function MinuteOfTime( const DateTime : TDateTime) : Integer
3303:  Function SecondOfTime( const DateTime : TDateTime) : Integer
3304:  Function GetISOYearNumberOfDays( const Year : Word) : Word
3305:  Function IsISOLongYear( const Year : Word) : Boolean;
3306:  Function IsISOLongYear1( const DateTime : TDateTime) : Boolean;
3307:  Function ISODayOfWeek( const DateTime : TDateTime) : Word
3308:  Function JISOWeekNumber( DateTime : TDateTime; var YearOfWeekNumber, WeekDay : Integer) : Integer;
3309:  Function ISOWeekNumber1( DateTime : TDateTime; var YearOfWeekNumber : Integer) : Integer;
3310:  Function ISOWeekNumber2( DateTime : TDateTime) : Integer;
3311:  Function ISOWeekToDateTime( const Year, Week, Day : Integer) : TDateTime
3312:  Function JIsLeapYear( const Year : Integer) : Boolean;
```

```
3313:  Function IsLeapYear1( const DateTime : TDateTime) : Boolean;
3314:  Function JDaysInMonth( const DateTime : TDateTime) : Integer
3315:  Function Make4DigitYear( Year, Pivot : Integer) : Integer
3316:  Function JMakeYear4Digit( Year, WindowsillYear : Integer) : Integer
3317:  Function JEasterSunday( const Year : Integer) : TDateTime // TDosDateTime', 'Integer
3318:  Function JFormatDateTime( Form : string; DateTime : TDateTime) : string
3319:  Function FATDatesEqual( const FileTime1, FileTime2 : Int64) : Boolean;
3320:  Function FATDatesEqual1( const FileTime1, FileTime2 : TFileTime) : Boolean;
3321:  Function HoursToMSecs( Hours : Integer) : Integer
3322:  Function MinutesToMSecs( Minutes : Integer) : Integer
3323:  Function SecondsToMSecs( Seconds : Integer) : Integer
3324:  Function TimeOfDateTimeToSeconds( DateTime : TDateTime) : Integer
3325:  Function TimeOfDateTimeToMSecs( DateTime : TDateTime) : Integer
3326:  Function DateTimeToLocalDateTime( DateTime : TDateTime) : TDateTime
3327:  Function LocalDateTimeToDateTime( DateTime : TDateTime) : TDateTime
3328:  Function DateTimeToDosDateTime( const DateTime : TDateTime) : TDosDateTime
3329:  Function JDateTimeToFileTime( DateTime : TDateTime) : TFileTime
3330:  Function JDateTimeToSystemTime( DateTime : TDateTime) : TSystemTime;
3331:  Procedure DateTimeToSystemTime1( DateTime : TDateTime; var SysTime : TSystemTime);
3332:  Function LocalDateTimeToFileTime( DateTime : TDateTime) : FileTime
3333:  Function DosDateTimeToDateTime( const DosTime : TDosDateTime) : TDateTime
3334:  Function JDosDateTimeToFileTime( DosTime : TDosDateTime) : TFileTime;
3335:  Procedure DosDateTimeToFileTime1( DTH, DTL : Word; FT : TFileTime);
3336:  Function DosDateTimeToSystemTime( const DosTime : TDosDateTime) : TSystemTime
3337:  Function DosDateTimeToStr( DateTime : Integer) : string
3338:  Function JFileTimeToDateTime( const FileTime : TFileTime) : TDateTime
3339:  Function FileTimeToLocalDateTime( const FileTime : TFileTime) : TDateTime
3340:  Function JFileTimeToDosDateTime( const FileTime : TFileTime) : TDosDateTime;
3341:  Procedure FileTimeToDosDateTime1( const FileTime : TFileTime; var Date, Time : Word);
3342:  Function JFileTimeToSystemTime( const FileTime : TFileTime) : TSystemTime;
3343:  Procedure FileTimeToSystemTime1( const FileTime : TFileTime; var ST : TSystemTime);
3344:  Function FileTimeToStr( const FileTime : TFileTime) : string
3345:  Function SystemTimeToDosDateTime( const SystemTime : TSystemTime) : TDosDateTime
3346:  Function JSystemTimeToFileTime( const SystemTime : TSystemTime) : TFileTime;
3347:  Procedure SystemTimeToFileTime1( const SystemTime : TSystemTime; FTime : TFileTime);
3348:  Function SystemTimeToStr( const SystemTime : TSystemTime) : string
3349:  Function CreationDateTimeOfFile( const Sr : TSearchRec) : TDateTime
3350:  Function LastAccessDateTimeOfFile( const Sr : TSearchRec) : TDateTime
3351:  Function LastWriteDateTimeOfFile( const Sr : TSearchRec) : TDateTime
3352:   TJclUnixTime32', 'Longword
3353:  Function JDateTimeToUnixTime( DateTime : TDateTime) : TJclUnixTime32
3354:  Function JUnixTimeToDateTime( const UnixTime : TJclUnixTime32) : TDateTime
3355:  Function FileTimeToUnixTime( const AValue : TFileTime) : TJclUnixTime32
3356:  Function UnixTimeToFileTime( const AValue : TJclUnixTime32) : TFileTime
3357:  Function JNullStamp : TTimeStamp
3358:  Function JCompareTimeStamps( const Stamp1, Stamp2 : TTimeStamp) : Int64
3359:  Function JEqualTimeStamps( const Stamp1, Stamp2 : TTimeStamp) : Boolean
3360:  Function JIsNullTimeStamp( const Stamp : TTimeStamp) : Boolean
3361:  Function TimeStampDOW( const Stamp : TTimeStamp) : Integer
3362:  Function FirstWeekDay( const Year, Month : Integer; var DOW : Integer) : Integer;
3363:  Function FirstWeekDay1( const Year, Month : Integer) : Integer;
3364:  Function LastWeekDay( const Year, Month : Integer; var DOW : Integer) : Integer;
3365:  Function LastWeekDay1( const Year, Month : Integer) : Integer;
3366:  Function IndexedWeekDay( const Year, Month : Integer; Index : Integer) : Integer
3367:  Function FirstWeekendDay( const Year, Month : Integer; var DOW : Integer) : Integer;
3368:  Function FirstWeekendDay1( const Year, Month : Integer) : Integer;
3369:  Function LastWeekendDay( const Year, Month : Integer; var DOW : Integer) : Integer;
3370:  Function LastWeekendDay1( const Year, Month : Integer) : Integer;
3371:  Function IndexedWeekendDay( const Year, Month : Integer; Index : Integer) : Integer
3372:  Function FirstDayOfWeek( const Year, Month, DayOfWeek : Integer) : Integer
3373:  Function LastDayOfWeek( const Year, Month, DayOfWeek : Integer) : Integer
3374:  Function IndexedDayOfWeek( const Year, Month, DayOfWeek, Index : Integer) : Integer
3375:   FindClass('TOBJECT'),'EJclDateTimeError
3376: end;
3377:
3378: procedure SIRegister_JclMiscel2(CL: TPSPascalCompiler);
3379: begin
3380:  Function SetDisplayResolution( const XRes, YRes : DWORD) : Longint
3381:  Function CreateDOSProcessRedirected( const CommandLine, InputFile, OutputFile : string) : Boolean
3382:  Function WinExec32( const Cmd : string; const CmdShow : Integer) : Boolean
3383:  Function WinExec32AndWait( const Cmd : string; const CmdShow : Integer) : Cardinal
3384:  Function WinExec32AndRedirectOutput(const Cmd: string; var Output: string; RawOutput:Boolean):Cardinal
3385:   TJclKillLevel', '( klNormal, klNoSignal, klTimeOut )
3386:  Function ExitWindows( ExitCode : Cardinal) : Boolean
3387:  Function LogOffOS( KillLevel : TJclKillLevel) : Boolean
3388:  Function PowerOffOS( KillLevel : TJclKillLevel) : Boolean
3389:  Function ShutDownOS( KillLevel : TJclKillLevel) : Boolean
3390:  Function RebootOS( KillLevel : TJclKillLevel) : Boolean
3391:  Function HibernateOS( Force, DisableWakeEvents : Boolean) : Boolean
3392:  Function SuspendOS( Force, DisableWakeEvents : Boolean) : Boolean
3393:  Function ShutDownDialog( const DialogMessage:string;TimeOut:DWORD;Force,Reboot:Boolean):Boolean;;
3394:  Function ShutDownDialog1(const MachineName,DialogMessage:string;TimeOut:DWORD;Force,Reboot:Bool):Bool;
3395:  Function AbortShutDown : Boolean;
3396:  Function AbortShutDown1( const MachineName : string) : Boolean;
3397:   TJclAllowedPowerOperation', '( apoHibernate, apoShutdown, apoSuspend )
3398:   TJclAllowedPowerOperations', 'set of TJclAllowedPowerOperation
3399:  Function GetAllowedPowerOperations : TJclAllowedPowerOperations
3400:   FindClass('TOBJECT'),'EJclCreateProcessError
3401:  Procedure CreateProcAsUser( const UserDomain, UserName, PassWord, CommandLine : string)
```

```
3402:  Procedure CreateProcAsUserEx(const UserDomain,UserName,Password,CommandLine:string;const
      Environment:PChar);
3403:   // with Add(EJclCreateProcessError) do
3404:  end;
3405:
3406:
3407: procedure SIRegister_JclAnsiStrings(CL: TPSPascalCompiler);
3408: begin
3409:   //'AnsiSigns','Set').SetSet(['-', '+']);
3410:  'C1_UPPER','LongWord( $0001);
3411:  'C1_LOWER','LongWord( $0002);
3412:  'C1_DIGIT','LongWord').SetUInt( $0004);
3413:  'C1_SPACE','LongWord').SetUInt( $0008);
3414:  'C1_PUNCT','LongWord').SetUInt( $0010);
3415:  'C1_CNTRL','LongWord').SetUInt( $0020);
3416:  'C1_BLANK','LongWord').SetUInt( $0040);
3417:  'C1_XDIGIT','LongWord').SetUInt( $0080);
3418:  'C1_ALPHA','LongWord').SetUInt( $0100);
3419:   AnsiChar', 'Char
3420:  Function StrIsAlpha( const S : AnsiString) : Boolean
3421:  Function StrIsAlphaNum( const S : AnsiString) : Boolean
3422:  Function StrIsAlphaNumUnderscore( const S : AnsiString) : Boolean
3423:  Function StrContainsChars(const S:AnsiString;Chars:TSysCharSet; CheckAll : Boolean) : Boolean
3424:  Function StrConsistsOfNumberChars( const S : AnsiString) : Boolean
3425:  Function StrIsDigit( const S : AnsiString) : Boolean
3426:  Function StrIsSubset( const S : AnsiString; const ValidChars : TSysCharSet) : Boolean
3427:  Function StrSame( const S1, S2 : AnsiString) : Boolean
3428:  //Function StrCenter( const S : AnsiString; L : Integer; C : AnsiChar) : AnsiString
3429:  Function StrCharPosLower( const S : AnsiString; CharPos : Integer) : AnsiString
3430:  Function StrCharPosUpper( const S : AnsiString; CharPos : Integer) : AnsiString
3431:  Function StrDoubleQuote( const S : AnsiString) : AnsiString
3432:  Function StrEnsureNoPrefix( const Prefix, Text : AnsiString) : AnsiString
3433:  Function StrEnsureNoSuffix( const Suffix, Text : AnsiString) : AnsiString
3434:  Function StrEnsurePrefix( const Prefix, Text : AnsiString) : AnsiString
3435:  Function StrEnsureSuffix( const Suffix, Text : AnsiString) : AnsiString
3436:  Function StrEscapedToString( const S : AnsiString) : AnsiString
3437:  Function JStrLower( const S : AnsiString) : AnsiString
3438:  Procedure StrLowerInPlace( var S : AnsiString)
3439:  ///Procedure StrLowerBuff( S : PAnsiChar)
3440:  Procedure JStrMove( var Dest:AnsiString; const Source:AnsiString;const ToIndex,FromIndex,Count:Integer;
3441:  Function StrPadLeft( const S : AnsiString; Len : Integer; C : AnsiChar) : AnsiString
3442:  Function StrPadRight( const S : AnsiString; Len : Integer; C : AnsiChar) : AnsiString
3443:  Function StrProper( const S : AnsiString) : AnsiString
3444:  //Procedure StrProperBuff( S : PAnsiChar)
3445:  Function StrQuote( const S : AnsiString; C : AnsiChar) : AnsiString
3446:  Function StrRemoveChars( const S : AnsiString; const Chars : TSysCharSet) : AnsiString
3447:  Function StrKeepChars( const S : AnsiString; const Chars : TSysCharSet) : AnsiString
3448:  Procedure JStrReplace(var S:AnsiString; const Search, Replace : AnsiString; Flags : TReplaceFlags)
3449:  Function StrReplaceChar( const S : AnsiString; const Source, Replace : AnsiChar) : AnsiString
3450:  Function StrReplaceChars(const S:AnsiString;const Chars:TSysCharSet;Replace:AnsiChar):AnsiString
3451:  Function StrReplaceButChars(const S:AnsiString;const Chars:TSysCharSet;Replace:AnsiChar):AnsiString;
3452:  Function StrRepeat( const S : AnsiString; Count : Integer) : AnsiString
3453:  Function StrRepeatLength( const S : AnsiString; const L : Integer) : AnsiString
3454:  Function StrReverse( const S : AnsiString) : AnsiString
3455:  Procedure StrReverseInPlace( var S : AnsiString)
3456:  Function StrSingleQuote( const S : AnsiString) : AnsiString
3457:  Function StrSmartCase( const S : AnsiString; Delimiters : TSysCharSet) : AnsiString
3458:  Function StrStringToEscaped( const S : AnsiString) : AnsiString
3459:  Function StrStripNonNumberChars( const S : AnsiString) : AnsiString
3460:  Function StrToHex( const Source : AnsiString) : AnsiString
3461:  Function StrTrimCharLeft( const S : AnsiString; C : AnsiChar) : AnsiString
3462:  Function StrTrimCharsLeft( const S : AnsiString; const Chars : TSysCharSet) : AnsiString
3463:  Function StrTrimCharRight( const S : AnsiString; C : AnsiChar) : AnsiString
3464:  Function StrTrimCharsRight( const S : AnsiString; const Chars : TSysCharSet) : AnsiString
3465:  Function StrTrimQuotes( const S : AnsiString) : AnsiString
3466:  Function JStrUpper( const S : AnsiString) : AnsiString
3467:  Procedure StrUpperInPlace( var S : AnsiString)
3468:  //Procedure StrUpperBuff( S : PAnsiChar)
3469:  Function StrOemToAnsi( const S : AnsiString) : AnsiString
3470:  Function StrAnsiToOem( const S : AnsiString) : AnsiString
3471:  Procedure StrAddRef( var S : AnsiString)
3472:  Function StrAllocSize( const S : AnsiString) : Longint
3473:  Procedure StrDecRef( var S : AnsiString)
3474:  //Function StrLen( S : PAnsiChar) : Integer
3475:  Function StrLength( const S : AnsiString) : Longint
3476:  Function StrRefCount( const S : AnsiString) : Longint
3477:  Procedure StrResetLength( var S : AnsiString)
3478:  Function StrCharCount( const S : AnsiString; C : AnsiChar) : Integer
3479:  Function StrCharsCount( const S : AnsiString; Chars : TSysCharSet) : Integer
3480:  Function StrStrCount( const S, SubS : AnsiString) : Integer
3481:  Function StrCompare( const S1, S2 : AnsiString) : Integer
3482:  Function StrCompareRange( const S1, S2 : AnsiString; const Index, Count : Integer) : Integer
3483:  //Function StrFillChar( const C : AnsiChar; Count : Integer) : AnsiString;
3484:  Function StrFillChar1( const C : Char; Count : Integer) : AnsiString;
3485:  Function StrFillChar(const C: Char; Count: Integer): string)');
3486:  Function IntFillChar(const I: Integer; Count: Integer): string)');
3487:  Function ByteFillChar(const B: Byte; Count: Integer): string)');
3488:  Function ArrFillChar(const AC: Char; Count: Integer): TCharArray;');
3489:  Function ArrByteFillChar(const AB: Char; Count: Integer): TByteArray;
```

```
3490:  Function StrFind( const Substr, S : AnsiString; const Index : Integer) : Integer
3491:  //Function StrHasPrefix( const S : AnsiString; const Prefixes : array of AnsiString) : Boolean
3492:  Function StrIndex( const S : AnsiString; const List : array of AnsiString) : Integer
3493:  Function StrILastPos( const SubStr, S : AnsiString) : Integer
3494:  Function StrIPos( const SubStr, S : AnsiString) : Integer
3495:  Function StrIsOneOf( const S : AnsiString; const List : array of AnsiString) : Boolean
3496:  Function StrLastPos( const SubStr, S : AnsiString) : Integer
3497:  Function StrMatch( const Substr, S : AnsiString; const Index : Integer) : Integer
3498:  Function StrMatches( const Substr, S : AnsiString; const Index : Integer) : Boolean
3499:  Function StrNIPos( const S, SubStr : AnsiString; N : Integer) : Integer
3500:  Function StrNPos( const S, SubStr : AnsiString; N : Integer) : Integer
3501:  Function StrPrefixIndex( const S : AnsiString; const Prefixes : array of AnsiString) : Integer
3502:  Function StrSearch( const Substr, S : AnsiString; const Index : Integer) : Integer
3503:  //Function StrAfter( const SubStr, S : AnsiString) : AnsiString
3504:  //Function StrBefore( const SubStr, S : AnsiString) : AnsiString
3505:  Function StrBetween( const S : AnsiString; const Start, Stop : AnsiChar) : AnsiString
3506:  Function StrChopRight( const S : AnsiString; N : Integer) : AnsiString
3507:  Function StrLeft( const S : AnsiString; Count : Integer) : AnsiString
3508:  Function StrMid( const S : AnsiString; Start, Count : Integer) : AnsiString
3509:  Function StrRestOf( const S : AnsiString; N : Integer) : AnsiString
3510:  Function StrRight( const S : AnsiString; Count : Integer) : AnsiString
3511:  Function CharEqualNoCase( const C1, C2 : AnsiChar) : Boolean
3512:  Function CharIsAlpha( const C : AnsiChar) : Boolean
3513:  Function CharIsAlphaNum( const C : AnsiChar) : Boolean
3514:  Function CharIsBlank( const C : AnsiChar) : Boolean
3515:  Function CharIsControl( const C : AnsiChar) : Boolean
3516:  Function CharIsDelete( const C : AnsiChar) : Boolean
3517:  Function CharIsDigit( const C : AnsiChar) : Boolean
3518:  Function CharIsLower( const C : AnsiChar) : Boolean
3519:  Function CharIsNumberChar( const C : AnsiChar) : Boolean
3520:  Function CharIsPrintable( const C : AnsiChar) : Boolean
3521:  Function CharIsPunctuation( const C : AnsiChar) : Boolean
3522:  Function CharIsReturn( const C : AnsiChar) : Boolean
3523:  Function CharIsSpace( const C : AnsiChar) : Boolean
3524:  Function CharIsUpper( const C : AnsiChar) : Boolean
3525:  Function CharIsWhiteSpace( const C : AnsiChar) : Boolean
3526:  Function CharType( const C : AnsiChar) : Word
3527:  Function CharHex( const C : AnsiChar) : Byte
3528:  Function CharLower( const C : AnsiChar) : AnsiChar
3529:  Function CharUpper( const C : AnsiChar) : AnsiChar
3530:  Function CharToggleCase( const C : AnsiChar) : AnsiChar
3531:  Function CharPos( const S : AnsiString; const C : AnsiChar; const Index : Integer) : Integer
3532:  Function CharLastPos( const S : AnsiString; const C : AnsiChar; const Index : Integer) : Integer
3533:  Function CharIPos( const S : AnsiString; C : AnsiChar; const Index : Integer) : Integer
3534:  Function CharReplace( var S : AnsiString; const Search, Replace : AnsiChar) : Integer
3535:  Procedure StrIToStrings( S, Sep : AnsiString; const List : TStrings; const AllowEmptyString : Boolean)
3536:  Procedure StrToStrings( S, Sep : AnsiString; const List : TStrings; const AllowEmptyString : Boolean)
3537:  Function StringsToStr(const List:TStrings;const Sep:AnsiString;const AllowEmptyString:Bool):AnsiString;
3538:  Procedure TrimStrings( const List : TStrings; DeleteIfEmpty : Boolean)
3539:  Procedure TrimStringsRight( const List : TStrings; DeleteIfEmpty : Boolean)
3540:  Procedure TrimStringsLeft( const List : TStrings; DeleteIfEmpty : Boolean)
3541:  Function AddStringToStrings(const S:AnsiString;Strings:TStrings; const Unique:Boolean):Boolean
3542:  Function BooleanToStr( B : Boolean) : AnsiString
3543:  Function FileToString( const FileName : AnsiString) : AnsiString
3544:  Procedure StringToFile( const FileName, Contents : AnsiString; Append : Boolean)
3545:  Function StrToken( var S : AnsiString; Separator : AnsiChar) : AnsiString
3546:  Procedure StrTokens( const S : AnsiString; const List : TStrings)
3547:  Procedure StrTokenToStrings( S : AnsiString; Separator : AnsiChar; const List : TStrings)
3548:  //Function StrWord( var S : PAnsiChar; out Word : AnsiString) : Boolean
3549:  Function StrToFloatSafe( const S : AnsiString) : Float
3550:  Function StrToIntSafe( const S : AnsiString) : Integer
3551:  Procedure StrNormIndex( const StrLen : Integer; var Index : Integer; var Count : Integer);
3552:  Function ArrayOf( List : TStrings) : TDynStringArray;
3553:   EJclStringError', 'EJclError
3554:  function IsClass(Address: TObject): Boolean;
3555:  function IsObject(Address: TObject): Boolean;
3556:  // Console Utilities
3557:  //function ReadKey: Char;
3558:  function IntToStrZeroPad(Value, Count: Integer): AnsiString;
3559:  function JclGUIDToString(const GUID: TGUID): string;
3560:  function JclStringToGUID(const S: string): TGUID;
3561:
3562: end;
3563:
3564:
3565: ****************************************** uPSI_JvDBUtil;
3566: Procedure ExecuteSQLScript(Base:TDataBase; const Script: string; const
      Commit:TCommit;OnProgress:TOnProgress; const UserData : Integer)
3567: Function GetQueryResult( const DatabaseName, SQL : string) : Variant
3568: Function GetStoredProcResult( const ADatabaseName, AStoredProcName : string; AParams : array of Variant;
      const AResultName : string) : Variant
3569: //Function StrFieldDesc( Field : FLDDesc) : string
3570: Function Var2Type( V : Variant; const VarType : Integer) : Variant
3571: Procedure CopyRecord( DataSet : TDataSet)
3572: //Procedure AddReference( Tbl : TTable; RefName : string; RefField : Word; MasterTable : string;
      MasterField : Word; ModOp, DelOp : RINTQual)
3573: Procedure AddMasterPassword( Table : TTable; pswd : string)
3574: Procedure PackTable( Table : TTable)
3575: Procedure PackEncryptedTable( Table : TTable; pswd : string)
```

```
3576: Function EncodeQuotes( const S : string) : string
3577: Function Cmp( const S1, S2 : string) : Boolean
3578: Function SubStr( const S : string; const Index : Integer; const Separator : string) : string
3579: Function SubStrEnd( const S : string; const Index : Integer; const Separator : string) : string
3580: Function ReplaceString( S : string; const OldPattern, NewPattern : string) : string
3581: Procedure GetXYByPos( const S : string; const Pos : Integer; var X, Y : Integer)
3582: ********************************************uPSI_JvJvBDEUtils;***************
3583: //JvBDEUtils
3584: Function CreateDbLocate : TJvLocateObject
3585:  //Function CheckOpen( Status : DBIResult) : Boolean
3586: Procedure FetchAllRecords( DataSet : TBDEDataSet)
3587: Function TransActive( Database : TDatabase) : Boolean
3588: Function AsyncQrySupported( Database : TDatabase) : Boolean
3589: Function GetQuoteChar( Database : TDatabase) : string
3590: Procedure ExecuteQuery( const DbName, QueryText : string)
3591: Procedure ExecuteQueryEx( const SessName, DbName, QueryText : string)
3592: Function FieldLogicMap( FldType : TFieldType) : Integer
3593: Function FieldSubtypeMap( FldType : TFieldType) : Integer Value : string; Buffer : Pointer)
3594: Function GetAliasPath( const AliasName : string) : string
3595: Function IsDirectory( const DatabaseName : string) : Boolean
3596: Function GetBdeDirectory : string
3597: Function LoginToDatabase( Database : TDatabase; OnLogin : TDatabaseLoginEvent) : Boolean
3598: Function DataSetFindValue( ADataSet : TBDEDataSet; const Value, FieldName : string) : Boolean
3599: Function DataSetFindLike( ADataSet : TBDEDataSet; const Value, FieldName : string) : Boolean
3600: Function DataSetRecNo( DataSet : TDataSet) : Longint
3601: Function DataSetRecordCount( DataSet : TDataSet) : Longint
3602: Function DataSetPositionStr( DataSet : TDataSet) : string
3603: Procedure DataSetShowDeleted( DataSet : TBDEDataSet; Show : Boolean)
3604: Function CurrentRecordDeleted( DataSet : TBDEDataSet) : Boolean
3605: Function IsFilterApplicable( DataSet : TDataSet) : Boolean
3606: Function IsBookmarkStable( DataSet : TBDEDataSet) : Boolean
3607: Procedure SetIndex( Table : TTable; const IndexFieldNames : string)
3608: Procedure RestoreIndex( Table : TTable)
3609: Procedure DeleteRange( Table : TTable; IndexFields : array of const; FieldValues : array of const)
3610: Procedure PackTable( Table : TTable)
3611: Procedure ReindexTable( Table : TTable)
3612: Procedure BdeFlushBuffers
3613: Function GetNativeHandle( Database : TDatabase; Buffer : Pointer; BufSize : Integer) : Pointer
3614: Procedure ToggleDebugLayer( Active : Boolean; const DebugFile : string)
3615: Procedure DbNotSupported
3616: Procedure ExportDataSet( Source : TBDEDataSet; DestTable : TTable; TableType : TTableType; const
     AsciiCharSet : string; AsciiDelimited : Boolean; MaxRecordCount : Longint)
3617: Procedure ExportDataSetEx( Source : TBDEDataSet; DestTable : TTable; TableType : TTableType; const
     AsciiCharSet:string;AsciiDelimited:Boolean;AsciiDelimiter,AsciiSeparator:Char;MaxRecordCount:Longint);
3618: Procedure
     ImportDataSet(Source:TBDEDataSet;DestTable:TTable;MaxRecordCount:Longint;Mappings:TStrings;Mode:TBatchMode);
3619: Procedure InitRSRUN(Database: TDatabase;const ConName:string; ConType:Integer;const ConServer:string);
3620: ********************************************uPSI_JvDateUtil;
3621: function CurrentYear: Word;
3622: function IsLeapYear(AYear: Integer): Boolean;
3623: function DaysPerMonth(AYear, AMonth: Integer): Integer;
3624: function FirstDayOfPrevMonth: TDateTime;
3625: function LastDayOfPrevMonth: TDateTime;
3626: function FirstDayOfNextMonth: TDateTime;
3627: function ExtractDay(ADate: TDateTime): Word;
3628: function ExtractMonth(ADate: TDateTime): Word;
3629: function ExtractYear(ADate: TDateTime): Word;
3630: function IncDate(ADate: TDateTime; Days, Months, Years: Integer): TDateTime;
3631: function IncDay(ADate: TDateTime; Delta: Integer): TDateTime;
3632: function IncMonth(ADate: TDateTime; Delta: Integer): TDateTime;
3633: function IncYear(ADate: TDateTime; Delta: Integer): TDateTime;
3634: function ValidDate(ADate: TDateTime): Boolean;
3635: procedure DateDiff(Date1, Date2: TDateTime; var Days, Months, Years: Word);
3636: function MonthsBetween(Date1, Date2: TDateTime): Double;
3637: function DaysInPeriod(Date1, Date2: TDateTime): Longint;
3638: { Count days between Date1 and Date2 + 1, so if Date1 = Date2 result = 1 }
3639: function DaysBetween(Date1, Date2: TDateTime): Longint;
3640: { The same as previous but if Date2 < Date1 result = 0 }
3641: function IncTime(ATime: TDateTime; Hours, Minutes, Seconds, MSecs: Integer): TDateTime;
3642: function IncHour(ATime: TDateTime; Delta: Integer): TDateTime;
3643: function IncMinute(ATime: TDateTime; Delta: Integer): TDateTime;
3644: function IncSecond(ATime: TDateTime; Delta: Integer): TDateTime;
3645: function IncMSec(ATime: TDateTime; Delta: Integer): TDateTime;
3646: function CutTime(ADate: TDateTime): TDateTime; { Set time to 00:00:00:00 }
3647: { String to date conversions }
3648: function GetDateOrder(const DateFormat: string): TDateOrder;
3649: function MonthFromName(const S: string; MaxLen: Byte): Byte;
3650: function StrToDateDef(const S: string; Default: TDateTime): TDateTime;
3651: function StrToDateFmt(const DateFormat, S: string): TDateTime;
3652: function StrToDateFmtDef(const DateFormat, S: string; Default: TDateTime): TDateTime;
3653: function DefDateFormat(FourDigitYear: Boolean): string;
3654: function DefDateMask(BlanksChar: Char; FourDigitYear: Boolean): string;
3655: ------------------------------------------------------------------------------
3656: ******************************** JvUtils;*****************************
3657: { GetWordOnPos returns Word from string, S, on the cursor position, P}
3658: function GetWordOnPos(const S: string; const P: Integer): string;
3659: { GetWordOnPosEx work like GetWordOnPos function, also returns Word position in iBeg, iEnd variables }
3660: function GetWordOnPosEx(const S: string; const P: Integer; var iBeg, iEnd: Integer): string;
3661: { SubStr returns substring from string, S, separated with Separator string}
```

```
3662: function SubStr(const S: string; const Index: Integer; const Separator: string): string;
3663: { SubStrEnd same to previous function but Index numerated from the end of string }
3664: function SubStrEnd(const S: string; const Index: Integer; const Separator: string): string;
3665: { SubWord returns next Word from string, P, and offsets Pointer to the end of Word, P2 }
3666: function SubWord(P: PChar; var P2: PChar): string;
3667: { NumberByWord returns the text representation of
3668:   the number, N, in normal russian language. Was typed from Monitor magazine }
3669: function NumberByWord(const N: Longint): string;
3670: //  function CurrencyByWord(Value : Currency) : string; GetLineByPos returns Line number, there
3671:   //the symbol Pos is pointed. Lines separated with #13 symbol }
3672: function GetLineByPos(const S: string; const Pos: Integer): Integer;
3673: { GetXYByPos is same to previous function, but returns X position in line too}
3674: procedure GetXYByPos(const S: string; const Pos: Integer; var X, Y: Integer);
3675: { ReplaceString searches for all substrings, OldPattern,in a string, S, replaces them with NewPattern }
3676: function ReplaceString(S: string; const OldPattern, NewPattern: string): string;
3677: { ConcatSep concatenate S and S2 strings with Separator. if S = '', separator don't included }
3678: function ConcatSep(const S, S2, Separator: string): string;
3679: { ConcatLeftSep is same to previous function, but strings concatenate right to left }
3680: function ConcatLeftSep(const S, S2, Separator: string): string;
3681: { MinimizeString truncs long string, S, and appends '...' symbols, if Length of S is more than MaxLen }
3682: function MinimizeString(const S: string; const MaxLen: Integer): string;
3683: { Next 4 function for russian chars transliterating.
3684:   This functions are needed because Oem2Ansi and Ansi2Oem functions sometimes works sucks }
3685: procedure Dos2Win(var S: string);
3686: procedure Win2Dos(var S: string);
3687: function Dos2WinRes(const S: string): string;
3688: function Win2DosRes(const S: string): string;
3689: function Win2Koi(const S: string): string;
3690: { Spaces returns string consists on N space chars }
3691: function Spaces(const N: Integer): string;
3692: { AddSpaces add spaces to string, S, if it Length is smaller than N }
3693: function AddSpaces(const S: string; const N: Integer): string;
3694: { function LastDate for russian users only } { returns date relative to current date: '' }
3695: function LastDate(const Dat: TDateTime): string;
3696: { CurrencyToStr format currency, Cur, using ffCurrency float format}
3697: function CurrencyToStr(const Cur: currency): string;
3698: { Cmp compares two strings and returns True if they are equal. Case-insensitive.}
3699: function Cmp(const S1, S2: string): Boolean;
3700: { StringCat add S2 string to S1 and returns this string }
3701: function StringCat(var S1: string; S2: string): string;
3702: { HasChar returns True, if Char, Ch, contains in string, S }
3703: function HasChar(const Ch: Char; const S: string): Boolean;
3704: function HasAnyChar(const Chars: string; const S: string): Boolean;
3705: function CharInSet(const Ch: Char; const SetOfChar: TSetOfChar): Boolean;
3706: function CountOfChar(const Ch: Char; const S: string): Integer;
3707: function DefStr(const S: string; Default: string): string;
3708: {**** files routines}
3709: { GetWinDir returns Windows folder name }
3710: function GetWinDir: TFileName;
3711: function GetSysDir: String;
3712: { GetTempDir returns Windows temporary folder name }
3713: function GetTempDir: string;
3714: { GenTempFileName returns temporary file name on drive, there FileName is placed }
3715: function GenTempFileName(FileName: string): string;
3716: { GenTempFileNameExt same to previous function, but returning filename has given extension, FileExt }
3717: function GenTempFileNameExt(FileName: string; const FileExt: string): string;
3718: { ClearDir clears folder Dir }
3719: function ClearDir(const Dir: string): Boolean;
3720: { DeleteDir clears and than delete folder Dir }
3721: function DeleteDir(const Dir: string): Boolean;
3722: { FileEquMask returns True if file, FileName, is compatible with given dos file mask, Mask }
3723: function FileEquMask(FileName, Mask: TFileName): Boolean;
3724: { FileEquMasks returns True if file, FileName, is compatible with given Masks.
3725:   Masks must be separated with comma (';') }
3726: function FileEquMasks(FileName, Masks: TFileName): Boolean;
3727: procedure DeleteFiles(const Folder: TFileName; const Masks: string);
3728: { LZFileExpand expand file, FileSource into FileDest.File must be compressed,using MS Compress program }
3729: function LZFileExpand(const FileSource, FileDest: string): Boolean;
3730: { FileGetInfo fills SearchRec record for specified file attributes}
3731: function FileGetInfo(FileName: TFileName; var SearchRec: TSearchRec): Boolean;
3732: { HasSubFolder returns True, if folder APath contains other folders }
3733: function HasSubFolder(APath: TFileName): Boolean;
3734: { IsEmptyFolder returns True, if there are no files or folders in given folder, APath}
3735: function IsEmptyFolder(APath: TFileName): Boolean;
3736: { AddSlash add slash Char to Dir parameter, if needed }
3737: procedure AddSlash(var Dir: TFileName);
3738: { AddSlash returns string with added slash Char to Dir parameter, if needed }
3739: function AddSlash2(const Dir: TFileName): string;
3740: { AddPath returns FileName with Path, if FileName not contain any path }
3741: function AddPath(const FileName, Path: TFileName): TFileName;
3742: function AddPaths(const PathList, Path: string): string;
3743: function ParentPath(const Path: TFileName): TFileName;
3744: function FindInPath(const FileName, PathList: string): TFileName;
3745: function FindInPaths(const fileName,paths: String): String;
3746: {$IFNDEF BCB1}
3747: { BrowseForFolder displays Browse For Folder dialog }
3748: function BrowseForFolder(const Handle: HWND; const Title: string; var Folder: string): Boolean;
3749: {$ENDIF BCB1}
3750: Function BrowseForFolder(const ATitle: string; AllowCreate : Boolean; var ADirectory : string;
     AHelpContext : THelpContext) : Boolean
```

```
3751: Function BrowseForComputer(const ATitle : string; AllowCreate : Boolean; var ADirectory : string;
      AHelpContext : THelpContext) : Boolean
3752: Function BrowseDirectory(var AFolderName:string;const DlgText:string;AHelpContext:THelpContext):Boolean
3753: Function BrowseComputer(var AComputerName:string;const DlgText:string;AHelpContext:THelpContext):Boolean
3754:
3755: { DeleteReadOnlyFile clears R/O file attribute and delete file }
3756: function DeleteReadOnlyFile(const FileName: TFileName): Boolean;
3757: { HasParam returns True, if program running with specified parameter, Param }
3758: function HasParam(const Param: string): Boolean;
3759: function HasSwitch(const Param: string): Boolean;
3760: function Switch(const Param: string): string;
3761: { ExePath returns ExtractFilePath(ParamStr(0)) }
3762: function ExePath: TFileName;
3763: function CopyDir(const SourceDir, DestDir: TFileName): Boolean;
3764: function FileTimeToDateTime(const FT: TFileTime): TDateTime;
3765: function MakeValidFileName(const FileName: TFileName; const ReplaceBadChar: Char): TFileName;
3766: {**** Graphic routines }
3767: { TTFontSelected returns True, if True Type font is selected in specified device context }
3768: function TTFontSelected(const DC: HDC): Boolean;
3769: { TrueInflateRect inflates rect in other method, than InflateRect API function }
3770: function TrueInflateRect(const R: TRect; const I: Integer): TRect;
3771: {**** Windows routines }
3772: { SetWindowTop put window to top without recreating window }
3773: procedure SetWindowTop(const Handle: HWND; const Top: Boolean);
3774: {**** other routines }
3775: { KeyPressed returns True, if Key VK is now pressed }
3776: function KeyPressed(VK: Integer): Boolean;
3777: procedure SwapInt(var Int1, Int2: Integer);
3778: function IntPower(Base, Exponent: Integer): Integer;
3779: function ChangeTopException(E: TObject): TObject;
3780: function StrToBool(const S: string): Boolean;
3781: {$IFNDEF COMPILER3_UP}
3782: { AnsiStrLIComp compares S1 to S2, without case-sensitivity, up to a maximum
3783:   Length of MaxLen bytes. The compare operation is controlled by the
3784:   current Windows locale. The return value is the same as for CompareStr. }
3785: function AnsiStrLIComp(S1, S2: PChar; MaxLen: Cardinal): Integer;
3786: function AnsiStrIComp(S1, S2: PChar): Integer;
3787: {$ENDIF}
3788: function Var2Type(V: Variant; const VarType: Integer): Variant;
3789: function VarToInt(V: Variant): Integer;
3790: function VarToFloat(V: Variant): Double;
3791: { following functions are not documented because they are don't work properly , so don't use them }
3792: function ReplaceSokr1(S: string; const Word, Frase: string): string;
3793: { ReplaceSokr1 is full equal to ReplaceString function - only for compatibility - don't use }
3794: { GetSubStr is full equal to SubStr function - only for compatibility - don't use }
3795: function GetSubStr(const S: string; const Index: Integer; const Separator: Char): string;
3796: function GetParameter: string;
3797: function GetLongFileName(FileName: string): string;
3798: {* from  FileCtrl}
3799: function DirectoryExists(const Name: string): Boolean;
3800: procedure ForceDirectories(Dir: string);
3801: {# from  FileCtrl}
3802: function FileNewExt(const FileName, NewExt: TFileName): TFileName;
3803: function GetComputerID: string;
3804: function GetComputerName: string;
3805: {**** string routines }
3806: { ReplaceAllSokr searches for all substrings, Words,in a string, S, and replaces them with Frases with the
      same Index.Also see RAUtilsW.ReplaceSokr1 function }
3807: function ReplaceAllSokr(S: string; Words, Frases: TStrings): string;
3808: { ReplaceSokr searches the Word in a string, S, on PosBeg position,
3809:   in the list, Words, and if founds, replaces this Word with string from another list, Frases, with the
      same Index, and then update NewSelStart variable }
3810: function ReplaceSokr(S:string;PosBeg,Len:Integer;Words,Frases:TStrings;var NewSelStart:Integer): string;
3811: { CountOfLines calculates the lines count in a string,each line separated from another with CrLf sequence }
3812: function CountOfLines(const S: string): Integer;
3813: { DeleteEmptyLines deletes all empty lines from strings, Ss. Lines contained only spaces also deletes. }
3814: procedure DeleteEmptyLines(Ss: TStrings);
3815: { SQLAddWhere addes or modifies existing where-statement, where, to the strings, SQL.
3816:   Note: If strings SQL allready contains where-statement, it must be started on begining of any line }
3817: procedure SQLAddWhere(SQL: TStrings; const Where: string);
3818: {**** files routines - }
3819: { ResSaveToFile save resource named as Name with Typ type into file FileName.
3820:   Resource can be compressed using MS Compress program}
3821: function ResSaveToFile(const Typ,Name: string; const Compressed:Boolean; const FileName: string): Boolean;
3822: function ResSaveToFileEx(Inst:HINST;Typ,Name:PChar;const Compressed:Bool;const FileName:string): Bool
3823: function ResSaveToString(Instance: HINST; const Typ, Name: string; var S: string): Boolean;
3824: { Execute executes other program and waiting for it terminating, then return its Exit Code }
3825: function ExecuteJ(const CommandLine, WorkingDirectory: string): Integer;
3826: { IniReadSection read section, Section, from ini-file,
3827:   IniFileName, into strings, Ss.This function reads ALL strings from specified section.
3828:   Note: TIninFile.ReadSection function reads only strings with '=' symbol.}
3829: function IniReadSection(const IniFileName: TFileName; const Section: string; Ss: TStrings): Boolean;
3830: { LoadTextFile load text file, FileName, into string }
3831: function LoadTextFile(const FileName: TFileName): string;
3832: procedure SaveTextFile(const FileName: TFileName; const Source: string);
3833: { ReadFolder reads files list from disk folder, Folder, that are equal  Mask, into strings, FileList}
3834: function ReadFolder(const Folder, Mask: TFileName; FileList: TStrings): Integer;
3835: function ReadFolders(const Folder: TFileName; FolderList: TStrings): Integer;
3836: {$IFDEF COMPILER3_UP}
```

```
3837: { TargetFileName - if FileName is ShortCut returns filename ShortCut linked to }
3838: function TargetFileName(const FileName: TFileName): TFileName;
3839: { return filename ShortCut linked to }
3840: function ResolveLink(const hWnd: HWND; const LinkFile: TFileName; var FileName: TFileName): HRESULT;
3841: {$ENDIF COMPILER3_UP}
3842: {**** Graphic routines - }
3843: { LoadIcoToImage loads two icons from resource named NameRes,into two image lists ALarge and ASmall}
3844: procedure LoadIcoToImage(ALarge, ASmall: TImageList; const NameRes: string);
3845: { RATextOut same with TCanvas.TextOut procedure, but can clipping drawing with rectangle, RClip. }
3846: procedure RATextOut(Canvas: TCanvas; const R, RClip: TRect; const S: string);
3847: { RATextOutEx same with RATextOut function, but can calculate needed height for correct output }
3848: function RATextOutEx(Canvas:TCanvas; const R,RClip:TRect;const S: string;const CalcHeight:Boolean):Integer;
3849: { RATextCalcHeight calculate needed height to correct output, using RATextOut or RATextOutEx functions }
3850: function RATextCalcHeight(Canvas: TCanvas; const R: TRect; const S: string): Integer;
3851: { Cinema draws some visual effect }
3852: procedure Cinema(Canvas: TCanvas; rS {Source}, rD {Dest}: TRect);
3853: { Roughed fills rect with special 3D pattern }
3854: procedure Roughed(ACanvas: TCanvas; const ARect: TRect; const AVert: Boolean);
3855: { BitmapFromBitmap creates new small bitmap from part of source bitmap, SrcBitmap, with specified width
     and height, AWidth, AHeight and placed on a specified Index, Index in the source bitmap }
3856: function BitmapFromBitmap(SrcBitmap: TBitmap; const AWidth, AHeight, Index: Integer): TBitmap;
3857: { TextWidth calculate text with for writing using standard desktop font }
3858: function TextWidth(AStr: string): Integer;
3859: { DefineCursor load cursor from resource, and return available cursor number, assigned to it }
3860: function DefineCursor(Identifer: PChar): TCursor;
3861: {**** other routines - }
3862: { FindFormByClass returns first form specified class, FormClass,owned by Application global variable }
3863: function FindFormByClass(FormClass: TFormClass): TForm;
3864: function FindFormByClassName(FormClassName: string): TForm;
3865: { FindByTag returns the control with specified class, ComponentClass, from WinContol.Controls property,
3866:   having Tag property value, equaled to Tag parameter }
3867: function FindByTag(WinControl:TWinControl;ComponentClass:TComponentClass;const Tag:Integer):TComponent;
3868: { ControlAtPos2 equal to TWinControl.ControlAtPos function, but works better }
3869: function ControlAtPos2(Parent: TWinControl; X, Y: Integer): TControl;
3870: { RBTag searches WinControl.Controls for checked RadioButton and returns its Tag property value }
3871: function RBTag(Parent: TWinControl): Integer;
3872: { AppMinimized returns True, if Application is minimized }
3873: function AppMinimized: Boolean;
3874: { MessageBox is Application.MessageBox with string (not PChar) parameters.
3875:   if Caption parameter = '', it replaced with Application.Title }
3876: function MessageBoxJ(const Msg: string; Caption: string;const Flags: Integer): Integer;
3877: function MsgDlg2(const Msg, ACaption: string; DlgType: TMsgDlgType;
3878:   Buttons: TMsgDlgButtons; HelpContext: Integer; Control: TWinControl): Integer;
3879: function MsgDlgDef(const Msg, ACaption: string; DlgType: TMsgDlgType;
3880:   Buttons: TMsgDlgButtons; DefButton:TMsgDlgBtn; HelpContext: Integer;Control: TWinControl): Integer;
3881: { Delay stop program execution to MSec msec }
3882: procedure Delay(MSec: Longword);
3883: procedure CenterHor(Parent: TControl; MinLeft: Integer; Controls: array of TControl);
3884: procedure EnableControls(Control: TWinControl; const Enable: Boolean);
3885: procedure EnableMenuItems(MenuItem: TMenuItem; const Tag: Integer; const Enable: Boolean);
3886: procedure ExpandWidth(Parent: TControl; MinWidth: Integer; Controls: array of TControl);
3887: function PanelBorder(Panel: TCustomPanel): Integer;
3888: function Pixels(Control: TControl; APixels: Integer): Integer;
3889: procedure SetChildPropOrd(Owner: TComponent; PropName: string; Value: Longint);
3890: procedure Error(const Msg: string);
3891: procedure ItemHtDrawEx(Canvas: TCanvas; Rect: TRect;const State: TOwnerDrawState; const Text: string;
3892:   const HideSelColor: Boolean; var PlainItem: string; var Width: Integer; CalcWidth: Boolean);
3893:   {ex. Text parameter:'Item 1 <b>bold</b><i>italic ITALIC <c:Red>red<c:Green>green <c:blue>blue</i>'}
3894: function ItemHtDraw(Canvas: TCanvas; Rect: TRect; const State: TOwnerDrawState; const Text: string;
3895:   const HideSelColor: Boolean): string;
3896: function ItemHtWidth(Canvas: TCanvas; Rect: TRect;const State: TOwnerDrawState; const Text: string;
3897:   const HideSelColor: Boolean): Integer;
3898: function ItemHtPlain(const Text: string): string;
3899: { ClearList - clears list of TObject }
3900: procedure ClearList(List: TList);
3901: procedure MemStreamToClipBoard(MemStream: TMemoryStream; const Format: Word);
3902: procedure ClipBoardToMemStream(MemStream: TMemoryStream; const Format: Word);
3903: { RTTI support }
3904: function GetPropType(Obj: TObject; const PropName: string): TTypeKind;
3905: function GetPropStr(Obj: TObject; const PropName: string): string;
3906: function GetPropOrd(Obj: TObject; const PropName: string): Integer;
3907: function GetPropMethod(Obj: TObject; const PropName: string): TMethod;
3908: procedure PrepareIniSection(SS: TStrings);
3909: { following functions are not documented because they are don't work properly, so don't use them }
3910: {$IFDEF COMPILER2}
3911: function CompareMem(P1, P2: Pointer; Length: Integer): Boolean; assembler;
3912: {$ENDIF}
3913:
3914: procedure SIRegister_JvBoxProcs(CL: TPSPascalCompiler);
3915: begin
3916:  Procedure BoxMoveSelectedItems( SrcList, DstList : TWinControl)
3917:  Procedure BoxMoveAllItems( SrcList, DstList : TWinControl)
3918:  Procedure BoxDragOver(List:TWinControl;Source:TObject;X,Y:Int;State:TDragState;var
     Accept:Bool;Sorted:Bool;
3919:  Procedure BoxMoveFocusedItem( List : TWinControl; DstIndex : Integer)
3920:  Procedure BoxMoveSelected( List : TWinControl; Items : TStrings)
3921:  Procedure BoxSetItem( List : TWinControl; Index : Integer)
3922:  Function BoxGetFirstSelection( List : TWinControl) : Integer
3923:  Function BoxCanDropItem( List : TWinControl; X, Y : Integer; var DragIndex : Integer) : Boolean
```

```
3924: end;
3925:
3926: procedure SIRegister_JvCsvParse(CL: TPSPascalCompiler);
3927: begin
3928:  Const('MaxInitStrNum','LongInt'( 9);
3929: Function JvAnsiStrSplit( const InString : AnsiString; const SplitChar, QuoteChar:AnsiChar; var OutStrings
     : array of AnsiString; MaxSplit : Integer) : Integer
3930: Function JvStrSplit( const InString : string; const SplitChar, QuoteChar : Char; var OutStrings : array of
     string; MaxSplit : Integer) : Integer
3931: Function JvAnsiStrSplitStrings(const InStr:AnsiString;const SplitChar,
     QuoteChar:AnsiChar;OutStrs:TStrings):Integer;
3932: Function JvAnsiStrStrip( S : AnsiString) : AnsiString
3933: Function JvStrStrip( S : string) : string
3934: Function GetString( var Source : AnsiString; const Separator : AnsiString) : AnsiString
3935: Function PadString( const S : AnsiString; Len : Integer; PadChar : AnsiChar) : AnsiString
3936: Function BuildPathName( const PathName, FileName : AnsiString) : AnsiString
3937: Function StrEatWhiteSpace( const S : string) : string
3938: Function HexToAscii( const S : AnsiString) : AnsiString
3939: Function AsciiToHex( const S : AnsiString) : AnsiString
3940: Function StripQuotes( const S1 : AnsiString) : AnsiString
3941: Function ValidNumericLiteral( S1 : PAnsiChar) : Boolean
3942: Function ValidIntLiteral( S1 : PAnsiChar) : Boolean
3943: Function ValidHexLiteral( S1 : PAnsiChar) : Boolean
3944: Function HexPCharToInt( S1 : PAnsiChar) : Integer
3945: Function ValidStringLiteral( S1 : PAnsiChar) : Boolean
3946: Function StripPCharQuotes( S1 : PAnsiChar) : AnsiString
3947: Function JvValidIdentifierAnsi( S1 : PAnsiChar) : Boolean
3948: Function JvValidIdentifier( S1 : String) : Boolean
3949: Function JvEndChar( X : AnsiChar) : Boolean
3950: Procedure JvGetToken( S1, S2 : PAnsiChar)
3951: Function IsExpressionKeyword( S1 : PAnsiChar) : Boolean
3952: Function IsKeyword( S1 : PAnsiChar) : Boolean
3953: Function JvValidVarReference( S1 : PAnsiChar) : Boolean
3954: Function GetParenthesis( S1, S2 : PAnsiChar) : Boolean
3955: Procedure JvGetVarReference( S1, S2, SIdx : PAnsiChar)
3956: Procedure JvEatWhitespaceChars( S1 : PAnsiChar);
3957: Procedure JvEatWhitespaceChars1( S1 : PWideChar);
3958: Function GetTokenCount : Integer
3959: Procedure ResetTokenCount
3960: end;
3961:
3962: procedure SIRegister_JvDBQueryParamsForm(CL: TPSPascalCompiler);
3963: begin
3964:   SIRegister_TJvQueryParamsDialog(CL);
3965:  Function EditQueryParams( DataSet : TDataSet; List : TParams; AHelpContext : THelpContext) : Boolean
3966: end;
3967:
3968: ******************************** JvStrUtil /  JvStrUtils;*****************************
3969: function FindNotBlankCharPos(const S: string): Integer;
3970: function AnsiChangeCase(const S: string): string;
3971: function GetWordOnPos(const S: string; const P: Integer): string;
3972: function GetWordOnPosEx(const S: string; const P: Integer; var iBeg, iEnd: Integer): string;
3973: function Cmp(const S1, S2: string): Boolean;
3974: { Spaces returns string consists on N space chars }
3975: function Spaces(const N: Integer): string;
3976: { HasChar returns True, if char, Ch, contains in string, S }
3977: function HasChar(const Ch: Char; const S: string): Boolean;
3978: function HasAnyChar(const Chars: string; const S: string): Boolean;
3979: { SubStr returns substring from string, S, separated with Separator string}
3980: function SubStr(const S: string; const Index: Integer; const Separator: string): string;
3981: { SubStrEnd same to previous function but Index numerated from the end of string }
3982: function SubStrEnd(const S: string; const Index: Integer; const Separator: string): string;
3983: { ReplaceString searches for all substrings, OldPattern, in a string, S, replaces them with NewPattern }
3984: function ReplaceString(S: string; const OldPattern, NewPattern: string): string;
3985: function CharInSet(const Ch: Char; const SetOfChar: TSetOfChar): Boolean;
3986: { GetXYByPos is same to previous function, but returns X position in line too}
3987: procedure GetXYByPos(const S: string; const Pos: Integer; var X, Y: Integer);
3988: { AddSlash returns string with added slash char to Dir parameter, if needed }
3989: function AddSlash2(const Dir: TFileName): string;
3990: { AddPath returns FileName with Path, if FileName not contain any path }
3991: function AddPath(const FileName, Path: TFileName): TFileName;
3992: { ExePath returns ExtractFilePath(ParamStr(0)) }
3993: function ExePath: TFileName;
3994: function LoadTextFile(const FileName: TFileName): string;
3995: procedure SaveTextFile(const FileName: TFileName; const Source: string);
3996: { ConcatSep concatenate S and S2 strings with Separator. if S = '', separator don't included }
3997: function ConcatSep(const S, S2, Separator: string): string;
3998: { FileEquMask returns True if file, FileName, is compatible with given dos file mask, Mask }
3999: function FileEquMask(FileName, Mask: TFileName): Boolean;
4000: { FileEquMasks returns True if file, FileName, is compatible with given Masks.
4001:   Masks must be separated with comma (';') }
4002: function FileEquMasks(FileName, Masks: TFileName): Boolean;
4003: function StringEndsWith(const Str, SubStr: string): Boolean;
4004: function ExtractFilePath2(const FileName: string): string;
4005: function StrToOem(const AnsiStr: string): string;
4006: { StrToOem translates a string from the Windows character set into the OEM character set. }
4007: function OemToAnsiStr(const OemStr: string): string;
4008: { OemToAnsiStr translates a string from the OEM character set into the Windows character set. }
4009: function IsEmptyStr(const S: string; const EmptyChars: TCharSet): Boolean;
```

```
4010: { EmptyStr returns true if the given string contains only character from the EmptyChars. }
4011: function ReplaceStr(const S, Srch, Replace: string): string;
4012: { Returns string with every occurrence of Srch string replaced with Replace string. }
4013: function DelSpace(const S: string): string;
4014: { DelSpace return a string with all white spaces removed. }
4015: function DelChars(const S: string; Chr: Char): string;
4016: { DelChars return a string with all Chr characters removed. }
4017: function DelBSpace(const S: string): string;
4018: { DelBSpace trims leading spaces from the given string. }
4019: function DelESpace(const S: string): string;
4020: { DelESpace trims trailing spaces from the given string. }
4021: function DelRSpace(const S: string): string;
4022: { DelRSpace trims leading and trailing spaces from the given string. }
4023: function DelSpace1(const S: string): string;
4024: { DelSpace1 return a string with all non-single white spaces removed. }
4025: function Tab2Space(const S: string; Numb: Byte): string;
4026: { Tab2Space converts any tabulation character in the given string to the Numb spaces characters. }
4027: function NPos(const C: string; S: string; N: Integer): Integer;
4028: { NPos searches for a N-th position of substring C in a given string. }
4029: function MakeStr(C: Char; N: Integer): string;
4030: function MS(C: Char; N: Integer): string;
4031: { MakeStr return a string of length N filled with character C. }
4032: function AddChar(C: Char; const S: string; N: Integer): string;
4033: { AddChar return a string left-padded to length N with characters C. }
4034: function AddCharR(C: Char; const S: string; N: Integer): string;
4035: { AddCharR return a string right-padded to length N with characters C. }
4036: function LeftStr(const S: string; N: Integer): string;
4037: { LeftStr return a string right-padded to length N with blanks. }
4038: function RightStr(const S: string; N: Integer): string;
4039: { RightStr return a string left-padded to length N with blanks. }
4040: function CenterStr(const S: string; Len: Integer): string;
4041: { CenterStr centers the characters in the string based upon the Len specified. }
4042: function CompStr(const S1, S2: string): Integer;
4043: {CompStr compares S1 to S2, case-sensitivity. return val is -1 if S1 < S2,0 if S1 = S2,or 1 if S1>S2. }
4044: function CompText(const S1, S2: string): Integer;
4045: { CompText compares S1 to S2, without case-sensitivity. The return value is the same as for CompStr. }
4046: function Copy2Symb(const S: string; Symb: Char): string;
4047: { Copy2Symb returns a substring of a string S from begining to first character Symb. }
4048: function Copy2SymbDel(var S: string; Symb: Char): string;
4049: { Copy2SymbDel returns a substr of string S from to first character Symb and removes substring from S. }
4050: function Copy2Space(const S: string): string;
4051: { Copy2Symb returns a substring of a string S from begining to first white space. }
4052: function Copy2SpaceDel(var S: string): string;
4053: { Copy2SpaceDel returns a substring of a string S from begining to first
4054:   white space and removes this substring from S. }
4055: function AnsiProperCase(const S: string; const WordDelims: TCharSet): string;
4056: { Returns string, with the first letter of each word in uppercase,
4057:   all other letters in lowercase. Words are delimited by WordDelims. }
4058: function WordCount(const S: string; const WordDelims: TCharSet): Integer;
4059: { WordCount given a set of word delimiters, returns number of words in S. }
4060: function WordPosition(const N: Integer; const S: string; const WordDelims: TCharSet): Integer;
4061: { Given a set of word delimiters, returns start position of N'th word in S. }
4062: function ExtractWord(N: Integer; const S: string; const WordDelims: TCharSet): string;
4063: function ExtractWordPos(N:Integer; const S:string; const WordDelims:TCharSet;var Pos: Integer): string;
4064: function ExtractDelimited(N: Integer; const S: string; const Delims: TCharSet): string;
4065: { ExtractWord, ExtractWordPos and ExtractDelimited given a set of word
4066:   delimiters, return the N'th word in S. }
4067: function ExtractSubstr(const S: string; var Pos: Integer; const Delims: TCharSet): string;
4068: { ExtractSubstr given set of word delimiters,returns the substring from S,that started from position Pos.}
4069: function IsWordPresent(const W, S: string; const WordDelims: TCharSet): Boolean;
4070: { IsWordPresent given a set of word delimiters, returns True if word W is present in string S. }
4071: function QuotedString(const S: string; Quote: Char): string;
4072: { QuotedString returns the given string as a quoted string, using the provided Quote character. }
4073: function ExtractQuotedString(const S: string; Quote: Char): string;
4074: { ExtractQuotedString removes the Quote characters from the beginning and end of a quoted string,
4075:    and reduces pairs of Quote characters within the quoted string to a single character. }
4076: function FindPart(const HelpWilds, InputStr: string): Integer;
4077: { FindPart compares a string with '?' and another, returns the position of HelpWilds in InputStr. }
4078: function IsWild(InputStr, Wilds: string; IgnoreCase: Boolean): Boolean;
4079: { IsWild compares InputString with WildCard string and returns True if corresponds. }
4080: function XorString(const Key, Src: ShortString): ShortString;
4081: function XorEncode(const Key, Source: string): string;
4082: function XorDecode(const Key, Source: string): string;
4083: { ** Command line routines ** }
4084: {$IFNDEF COMPILER4_UP}
4085: function FindCmdLineSwitch(const Switch: string; SwitchChars: TCharSet;IgnoreCase: Boolean): Boolean;
4086: {$ENDIF}
4087: function GetCmdLineArg(const Switch: string; SwitchChars: TCharSet): string;
4088: { ** Numeric string handling routines ** }
4089: function Numb2USA(const S: string): string;
4090: { Numb2USA converts numeric string S to USA-format. }
4091: function Dec2Hex(N: Longint; A: Byte): string;
4092: function D2H(N: Longint; A: Byte): string;
4093: { Dec2Hex converts the given value to a hexadecimal string representation
4094:   with the minimum number of digits (A) specified. }
4095: function Hex2Dec(const S: string): Longint;
4096: function H2D(const S: string): Longint;
4097: { Hex2Dec converts the given hexadecimal string to the corresponding integer value. }
4098: function Dec2Numb(N: Longint; A, B: Byte): string;
```

```
4099: { Dec2Numb converts the given value to a string representation with the
4100:   base equal to B and with the minimum number of digits (A) specified. }
4101: function Numb2Dec(S: string; B: Byte): Longint;
4102: { Numb2Dec converts the given B-based numeric string to the corresponding integer value. }
4103: function IntToBin(Value: Longint; Digits, Spaces: Integer): string;
4104: { IntToBin converts given value to a bin string representation with min number of digits specified. }
4105: function IntToRoman(Value: Longint): string;
4106: { IntToRoman converts the given value to a roman numeric string representation. }
4107: function RomanToInt(const S: string): Longint;
4108: { RomanToInt converts the given string to an integer value. If the string
4109:   doesn't contain a valid roman numeric value, the 0 value is returned. }
4110: procedure I64ToCardinals(I: Int64; var LowPart, HighPart: Cardinal);
4111: procedure CardinalsToI64(var I: Int64; const LowPart, HighPart: Cardinal);
4112: ********************************* JvFileUtil;*********************************
4113: procedure CopyFileJ(const FileName, DestName: string; ProgressControl: TControl);
4114: procedure CopyFileEx(const FileName,DestName:string;OverwriteReadOnly,ShellDialog:Boolean;ProgressControl:
     TControl);
4115: procedure MoveFile(const FileName, DestName: TFileName);
4116: procedure MoveFileEx(const FileName, DestName: TFileName; ShellDialog: Boolean);
4117: {$IFDEF COMPILER4_UP}
4118: function GetFileSize(const FileName: string): Int64;
4119: {$ELSE}
4120: function GetFileSize(const FileName: string): Longint;
4121: {$ENDIF}
4122: function FileDateTime(const FileName: string): TDateTime;
4123: function HasAttr(const FileName: string; Attr: Integer): Boolean;
4124: function DeleteFiles(const FileMask: string): Boolean;
4125: function DeleteFilesEx(const FileMasks: array of string): Boolean;
4126: function ClearDir(const Path: string; Delete: Boolean): Boolean;
4127: function NormalDir(const DirName: string): string;
4128: function RemoveBackSlash(const DirName: string): string;
4129: function ValidFileName(const FileName: string): Boolean;
4130: function DirExists(Name: string): Boolean;
4131: procedure ForceDirectories(Dir: string);
4132: function FileLock(Handle: Integer; Offset, LockSize: Longint): Integer;
4133:   {$IFDEF COMPILER4_UP} overload; {$ENDIF}
4134: {$IFDEF COMPILER4_UP}
4135: function FileLock(Handle: Integer; Offset, LockSize: Int64): Integer; overload;
4136: {$ENDIF}
4137: function FileUnlock(Handle: Integer; Offset, LockSize: Longint): Integer;
4138: {$IFDEF COMPILER4_UP} overload; {$ENDIF}
4139: {$IFDEF COMPILER4_UP}
4140: function FileUnlock(Handle: Integer; Offset, LockSize: Int64): Integer; overload;
4141: {$ENDIF}
4142: function GetTempDir: string;
4143: function GetWindowsDir: string;
4144: function GetSystemDir: string;
4145: function BrowseDirectory(var AFolderName:string; const DlgText:string; AHelpContext:THelpContext): Boolean;
4146: {$IFDEF WIN32}
4147: function BrowseComputer(var ComputerName:string; const DlgText:string; AHelpContext:THelpContext): Boolean;
4148: function ShortToLongFileName(const ShortName: string): string;
4149: function ShortToLongPath(const ShortName: string): string;
4150: function LongToShortFileName(const LongName: string): string;
4151: function LongToShortPath(const LongName: string): string;
4152: procedure CreateFileLink(const FileName, DisplayName: string; Folder: Integer);
4153: procedure DeleteFileLink(const DisplayName: string; Folder: Integer);
4154: {$ENDIF WIN32}
4155: {$IFNDEF COMPILER3_UP}
4156: function IsPathDelimiter(const S: string; Index: Integer): Boolean;
4157: {$ENDIF}
4158: Function CreateCalculatorForm( AOwner : TComponent; AHelpContext : THelpContext) : TJvCalculatorForm
4159: Function CreatePopupCalculator( AOwner : TComponent; ABiDiMode : TBiDiMode) : TWinControl
4160: Function CreatePopupCalculator( AOwner : TComponent) : TWinControl
4161: Procedure SetupPopupCalculator( PopupCalc : TWinControl; APrecision : Byte; ABeepOnError : Boolean)
4162:
4163: //*************************procedure SIRegister_VarHlpr(CL: TPSPascalCompiler);
4164:  Procedure VariantClear( var V : Variant)
4165:  Procedure VariantArrayRedim( var V : Variant; High : Integer)
4166:  Procedure VariantCast( const src : Variant; var dst : Variant; vt : Integer)
4167:  Procedure VariantCpy( const src : Variant; var dst : Variant)
4168:  Procedure VariantAdd( const src : Variant; var dst : Variant)
4169:  Procedure VariantSub( const src : Variant; var dst : Variant)
4170:  Procedure VariantMul( const src : Variant; var dst : Variant)
4171:  Procedure VariantDiv( const src : Variant; var dst : Variant)
4172:  Procedure VariantMod( const src : Variant; var dst : Variant)
4173:  Procedure VariantAnd( const src : Variant; var dst : Variant)
4174:  Procedure VariantOr( const src : Variant; var dst : Variant)
4175:  Procedure VariantXor( const src : Variant; var dst : Variant)
4176:  Procedure VariantShl( const src : Variant; var dst : Variant)
4177:  Procedure VariantShr( const src : Variant; var dst : Variant)
4178:  Function VariantAdd2( const V1 : Variant; const V2 : Variant) : Variant
4179:  Function VariantSub2( const V1 : Variant; const V2 : Variant) : Variant
4180:  Function VariantMul2( const V1 : Variant; const V2 : Variant) : Variant
4181:  Function VariantDiv2( const V1 : Variant; const V2 : Variant) : Variant
4182:  Function VariantMod2( const V1 : Variant; const V2 : Variant) : Variant
4183:  Function VariantAnd2( const V1 : Variant; const V2 : Variant) : Variant
4184:  Function VariantOr2( const V1 : Variant; const V2 : Variant) : Variant
4185:  Function VariantXor2( const V1 : Variant; const V2 : Variant) : Variant
4186:  Function VariantShl2( const V1 : Variant; const V2 : Variant) : Variant
```

```
4187:  Function VariantShr2( const V1 : Variant; const V2 : Variant) : Variant
4188:  Function VariantNot( const V1 : Variant) : Variant
4189:  Function VariantNeg( const V1 : Variant) : Variant
4190:  Function VariantGetElement( const V : Variant; i1 : integer) : Variant;
4191:  Function VariantGetElement1( const V : Variant; i1, i2 : integer) : Variant;
4192:  Function VariantGetElement2( const V : Variant; i1, i2, i3 : integer) : Variant;
4193:  Function VariantGetElement3( const V : Variant; i1, i2, i3, i4 : integer) : Variant;
4194:  Function VariantGetElement4( const V : Variant; i1, i2, i3, i4, i5 : integer) : Variant;
4195:  Procedure VariantPutElement( var V : Variant; const data : Variant; i1 : integer);
4196:  Procedure VariantPutElement1( var V : Variant; const data : Variant; i1, i2 : integer);
4197:  Procedure VariantPutElement2( var V : Variant; const data : Variant; i1, i2, i3 : integer);
4198:  Procedure VariantPutElement3( var V : Variant; const data : Variant; i1, i2, i3, i4 : integer);
4199:  Procedure VariantPutElement4( var V : Variant; const data : Variant; i1, i2, i3, i4, i5 : integer);
4200: end;
4201:
4202: ************************************unit uPSI_JvgUtils;************************************
4203: function IsEven(I: Integer): Boolean;
4204: function InchesToPixels(DC: HDC; Value: Single; IsHorizontal: Boolean): Integer;
4205: function CentimetersToPixels(DC: HDC; Value: Single; IsHorizontal: Boolean): Integer;
4206: procedure SwapInt(var I1, I2: Integer);
4207: function Spaces(Count: Integer): string;
4208: function DupStr(const Str: string; Count: Integer): string;
4209: function DupChar(C: Char; Count: Integer): string;
4210: procedure Msg(const AMsg: string);
4211: function RectW(R: TRect): Integer;
4212: function RectH(R: TRect): Integer;
4213: function IncColor(AColor: Longint; AOffset: Byte): Longint;
4214: function DecColor(AColor: Longint; AOffset: Byte): Longint;
4215: function IsItAFilledBitmap(Bmp: TBitmap): Boolean;
4216: procedure DrawTextInRectWithAlign(DC: HDC; R: TRect; const Text: string;
4217:   HAlign: TglHorAlign; VAlign: TglVertAlign; Style: TglTextStyle; Fnt: TFont; Flags: UINT);
4218: procedure DrawTextInRect(DC: HDC; R:TRect; const Text:string;Style:TglTextStyle;Fnt:TFont;Flags: UINT);
4219: procedure ExtTextOutExt(DC: HDC; X, Y: Integer; R: TRect; const Text: string;
4220:   Style: TglTextStyle; ADelineated, ASupress3D: Boolean; FontColor, DelinColor,HighlightColor,ShadowColor:
      TColor; Illumination: TJvgIllumination; Gradient: TJvgGradient; Font: TFont);
4221: procedure DrawBox(DC:HDC; var R:TRect; Style:TglBoxStyle;BackgrColor: Longint; ATransparent: Boolean);
4222: function DrawBoxEx(DC: HDC; ARect: TRect; Borders: TglSides;
4223:   BevelInner, BevelOuter: TPanelBevel; Bold:Boolean; BackgrColor: Longint;ATransparent: Boolean): TRect;
4224: procedure GradientBox(DC: HDC; R: TRect; Gradient: TJvgGradient;PenStyle, PenWidth: Integer);
4225: procedure ChangeBitmapColor(Bitmap: TBitmap; FromColor, ToColor: TColor);
4226: procedure DrawBitmapExt(DC: HDC; { DC - background & result}
4227:   SourceBitmap: TBitmap; R: TRect; X, Y: Integer; //...X,Y _in_ rect!
4228:   BitmapOption: TglWallpaperOption; DrawState: TglDrawState;
4229:   ATransparent: Boolean; TransparentColor: TColor; DisabledMaskColor: TColor);
4230: procedure CreateBitmapExt(DC: HDC; { DC - background & result}
4231:   SourceBitmap: TBitmap; R: TRect; X, Y: Integer; //...X,Y _in_ rect!
4232:   BitmapOption: TglWallpaperOption; DrawState: TglDrawState;
4233:   ATransparent: Boolean; TransparentColor: TColor; DisabledMaskColor: TColor);
4234: procedure BringParentWindowToTop(Wnd: TWinControl);
4235: function GetParentForm(Control: TControl): TForm;
4236: procedure GetWindowImageFrom(Control:TWinControl;X,Y:Integer;ADrawSelf,ADrawChildWindows:Boolean;DC:HDC)
4237: procedure GetWindowImage(Control: TWinControl; ADrawSelf, ADrawChildWindows: Boolean; DC: HDC);
4238: procedure GetParentImageRect(Control: TControl; Rect: TRect; DC: HDC);
4239: function CreateRotatedFont(F: TFont; Escapement: Integer): HFONT;
4240: function FindMainWindow(const AWndClass, AWndTitle: string): THandle;
4241: procedure CalcShadowAndHighlightColors(BaseColor: TColor; Colors: TJvgLabelColors);
4242: function CalcMathString(AExpression: string): Single;
4243: function IIF(AExpression: Boolean; IfTrue, IfFalse: Variant): Variant; overload;
4244: function IIF(AExpression: Boolean; const IfTrue, IfFalse: string): string; overload;
4245: function GetTransparentColor(Bitmap: TBitmap; AutoTrColor: TglAutoTransparentColor): TColor;
4246: procedure TypeStringOnKeyboard(const S: string);
4247: function NextStringGridCell( Grid: TStringGrid ): Boolean;
4248: procedure DrawTextExtAligned(Canvas:TCanvas;const
      Text:string;R:TRect;Alignment:TglAlignment;WordWrap:Boolean);
4249: procedure LoadComponentFromTextFile(Component: TComponent; const FileName: string);
4250: procedure SaveComponentToTextFile(Component: TComponent; const FileName: string);
4251: function ComponentToString(Component: TComponent): string;
4252: procedure StringToComponent(Component: TComponent; const Value: string);
4253: function PlayWaveResource(const ResName: string): Boolean;
4254: function UserName: string;
4255: function ComputerName: string;
4256: function CreateIniFileName: string;
4257: function ExpandString(const Str: string; Len: Integer): string;
4258: function Transliterate(const Str: string; RusToLat: Boolean): string;
4259: function IsSmallFonts: Boolean;
4260: function SystemColorDepth: Integer;
4261: function GetFileTypeJ(const FileName: string): TglFileType;
4262: Function GetFileType( hFile : THandle) : DWORD');
4263: function FindControlAtPt(Control: TWinControl; Pt: TPoint; MinClass: TClass): TControl;
4264: function StrPosExt(const Str1, Str2: PChar; Str2Len: DWORD): PChar;
4265:
4266: { ************************************Utility routines of unit classes}
4267: function LineStart(Buffer, BufPos: PChar): PChar
4268: function ExtractStrings(Separators, WhiteSpace: TSysCharSet; Content: PChar;'+
4269:   'Strings: TStrings): Integer
4270:  Function TestStreamFormat( Stream : TStream) : TStreamOriginalFormat
4271:  Procedure RegisterClass( AClass : TPersistentClass)
4272:  Procedure RegisterClasses( AClasses : array of TPersistentClass)
4273:  Procedure RegisterClassAlias( AClass : TPersistentClass; const Alias : string)
```

```
4274:  Procedure UnRegisterClass( AClass : TPersistentClass)
4275:  Procedure UnRegisterClasses( AClasses : array of TPersistentClass)
4276:  Procedure UnRegisterModuleClasses( Module : HMODULE)
4277:  Function FindGlobalComponent( const Name : string) : TComponent
4278:  Function IsUniqueGlobalComponentName( const Name : string) : Boolean
4279:  Function InitInheritedComponent( Instance : TComponent; RootAncestor : TClass) : Boolean
4280:  Function InitComponentRes( const ResName : string; Instance : TComponent) : Boolean
4281:  Function ReadComponentRes( const ResName : string; Instance : TComponent) : TComponent
4282:  Function ReadComponentResEx( HInstance : THandle; const ResName : string) : TComponent
4283:  Function ReadComponentResFile( const FileName : string; Instance : TComponent) : TComponent
4284:  Procedure WriteComponentResFile( const FileName : string; Instance : TComponent)
4285:  Procedure GlobalFixupReferences
4286:  Procedure GetFixupReferenceNames( Root : TComponent; Names : TStrings)
4287:  Procedure GetFixupInstanceNames(Root: TComponent; const ReferenceRootName string; Names : TStrings)
4288:  Procedure RedirectFixupReferences( Root : TComponent; const OldRootName, NewRootName : string)
4289:  Procedure RemoveFixupReferences( Root : TComponent; const RootName : string)
4290:  Procedure RemoveFixups( Instance : TPersistent)
4291:  Function FindNestedComponent( Root : TComponent; const NamePath : string) : TComponent
4292:  Procedure BeginGlobalLoading
4293:  Procedure NotifyGlobalLoading
4294:  Procedure EndGlobalLoading
4295:  Function GetUltimateOwner1( ACollection : TCollection) : TPersistent;
4296:  Function GetUltimateOwner( APersistent : TPersistent) : TPersistent;
4297:  // AddTypeS('TWndMethod', 'Procedure (var Message : TMessage)
4298:  //Function MakeObjectInstance( Method : TWndMethod) : Pointer
4299:  Procedure FreeObjectInstance( ObjectInstance : Pointer)
4300: // Function AllocateHWnd( Method : TWndMethod) : HWND
4301:  Procedure DeallocateHWnd( Wnd : HWND)
4302:  Function AncestorIsValid( Ancestor : TPersistent; Root, RootAncestor : TComponent) : Boolean
4303: ************************************unit uPSI_SqlTimSt and DB;**********************************
4304: Procedure VarSQLTimeStampCreate4( var aDest : Variant; const ASQLTimeStamp : TSQLTimeStamp);
4305: Function VarSQLTimeStampCreate3: Variant;
4306: Function VarSQLTimeStampCreate2( const AValue : string) : Variant;
4307: Function VarSQLTimeStampCreate1( const AValue : TDateTime) : Variant;
4308: Function VarSQLTimeStampCreate( const ASQLTimeStamp : TSQLTimeStamp) : Variant;
4309: Function VarSQLTimeStamp : TVarType
4310: Function VarIsSQLTimeStamp( const aValue : Variant) : Boolean;
4311: Function LocalToUTC( var TZInfo : TTimeZone; var Value : TSQLTimeStamp) : TSQLTimeStamp //beta
4312: Function UTCToLocal( var TZInfo : TTimeZone; var Value : TSQLTimeStamp) : TSQLTimeStamp //beta
4313: Function VarToSQLTimeStamp( const aValue : Variant) : TSQLTimeStamp
4314: Function SQLTimeStampToStr( const Format : string; DateTime : TSQLTimeStamp) : string
4315: Function SQLDayOfWeek( const DateTime : TSQLTimeStamp) : integer
4316: Function DateTimeToSQLTimeStamp( const DateTime : TDateTime) : TSQLTimeStamp
4317: Function SQLTimeStampToDateTime( const DateTime : TSQLTimeStamp) : TDateTime
4318: Function TryStrToSQLTimeStamp( const S : string; var TimeStamp : TSQLTimeStamp) : Boolean
4319: Function StrToSQLTimeStamp( const S : string) : TSQLTimeStamp
4320: Procedure CheckSqlTimeStamp( const ASQLTimeStamp : TSQLTimeStamp)
4321: Function ExtractFieldName( const Fields : string; var Pos : Integer) : string;
4322: Function ExtractFieldName( const Fields : WideString; var Pos : Integer) : WideString;
4323:  //'Procedure RegisterFields( const FieldClasses : array of TFieldClass)
4324: Procedure DatabaseError( const Message : WideString; Component : TComponent)
4325: Procedure DatabaseErrorFmt(const Message:WIdeString; const Args:array of const;Component:TComponent)
4326: Procedure DisposeMem( var Buffer, Size : Integer)
4327: Function BuffersEqual( Buf1, Buf2 : Pointer; Size : Integer) : Boolean
4328: Function GetFieldProperty(DataSet:TDataSet; Control:TComponent; const FieldName: WideString): TField
4329: Function VarTypeToDataType( VarType : Integer) : TFieldType
4330: ******************************************unit JvStrings;*************************************
4331: {template functions}
4332: function ReplaceFirst(const SourceStr, FindStr, ReplaceStr: string): string;
4333: function ReplaceLast(const SourceStr, FindStr, ReplaceStr: string): string;
4334: function InsertLastBlock(var SourceStr: string; BlockStr: string): Boolean;
4335: function RemoveMasterBlocks(const SourceStr: string): string;
4336: function RemoveFields(const SourceStr: string): string;
4337: {http functions}
4338: function URLEncode(const Value: AnsiString): AnsiString; // Converts string To A URLEncoded string
4339: function URLDecode(const Value: AnsiString): AnsiString; // Converts string From A URLEncoded string
4340: {set functions}
4341: procedure SplitSet(AText: string; AList: TStringList);
4342: function JoinSet(AList: TStringList): string;
4343: function FirstOfSet(const AText: string): string;
4344: function LastOfSet(const AText: string): string;
4345: function CountOfSet(const AText: string): Integer;
4346: function SetRotateRight(const AText: string): string;
4347: function SetRotateLeft(const AText: string): string;
4348: function SetPick(const AText: string; AIndex: Integer): string;
4349: function SetSort(const AText: string): string;
4350: function SetUnion(const Set1, Set2: string): string;
4351: function SetIntersect(const Set1, Set2: string): string;
4352: function SetExclude(const Set1, Set2: string): string;
4353: {replace any <,> etc by &lt; &gt;}
4354: function XMLSafe(const AText: string): string;
4355: {simple hash, Result can be used in Encrypt}
4356: function Hash(const AText: string): Integer;
4357: { Base64 encode and decode a string }
4358: function B64Encode(const S: AnsiString): AnsiString;
4359: function B64Decode(const S: AnsiString): AnsiString;
4360: {Basic encryption from a Borland Example}
4361: function Encrypt(const InString: AnsiString; StartKey, MultKey, AddKey: Integer): AnsiString;
4362: function Decrypt(const InString: AnsiString; StartKey, MultKey, AddKey: Integer): AnsiString;
```

```
4363: {Using Encrypt and Decrypt in combination with B64Encode and B64Decode}
4364: function EncryptB64(const InString: AnsiString; StartKey, MultKey, AddKey: Integer): AnsiString;
4365: function DecryptB64(const InString: AnsiString; StartKey, MultKey, AddKey: Integer): AnsiString;
4366: procedure CSVToTags(Src, Dst: TStringList);
4367: // converts a csv list to a tagged string list
4368: procedure TagsToCSV(Src, Dst: TStringList);
4369: // converts a tagged string list to a csv list
4370: // only fieldnames from the first record are scanned ib the other records
4371: procedure ListSelect(Src, Dst: TStringList; const AKey, AValue: string);
4372: {selects akey=avalue from Src and returns recordset in Dst}
4373: procedure ListFilter(Src: TStringList; const AKey, AValue: string);
4374: {filters Src for akey=avalue}
4375: procedure ListOrderBy(Src: TStringList; const AKey: string; Numeric: Boolean);
4376: {orders a tagged Src list by akey}
4377: function PosStr(const FindString, SourceString: string;
4378:   StartPos: Integer = 1): Integer;
4379: { PosStr searches the first occurrence of a substring FindString in a string
4380:   given by SourceString with case sensitivity (upper and lower case characters
4381:   are differed). This function returns the index value of the first character
4382:   of a specified substring from which it occurs in a given string starting with
4383:   StartPos character index. If a specified substring is not found Q_PosStr
4384:   returns zero. author of algorithm is Peter Morris (UK) (Faststrings unit from www.torry.ru). }
4385: function PosStrLast(const FindString, SourceString: string): Integer;
4386: {finds the last occurance}
4387: function LastPosChar(const FindChar: Char; SourceString: string): Integer;
4388: function PosText(const FindString, SourceString: string; StartPos: Integer = 1): Integer;
4389: { PosText searches the first occurrence of a substring FindString in a string
4390:   given by SourceString without case sensitivity (upper and lower case characters are not differed). This
      function returns the index value of the first character of a specified substring from which it occurs in a
      given string starting with Start
4391: function PosTextLast(const FindString, SourceString: string): Integer;
4392: {finds the last occurance}
4393: function NameValuesToXML(const AText: string): string;
4394: {$IFDEF MSWINDOWS}
4395: procedure LoadResourceFile(AFile: string; MemStream: TMemoryStream);
4396: {$ENDIF MSWINDOWS}
4397: procedure DirFiles(const ADir, AMask: string; AFileList: TStringList);
4398: procedure RecurseDirFiles(const ADir: string; var AFileList: TStringList);
4399: procedure RecurseDirProgs(const ADir: string; var AFileList: TStringList);
4400: procedure SaveString(const AFile, AText: string);
4401: Procedure SaveStringasFile( const AFile, AText : string)
4402: function LoadStringJ(const AFile: string): string;
4403: Function LoadStringofFile( const AFile : string) : string
4404: Procedure SaveStringtoFile( const AFile, AText : string)
4405: Function LoadStringfromFile( const AFile : string) : string
4406: function HexToColor(const AText: string): TColor;
4407: function UppercaseHTMLTags(const AText: string): string;
4408: function LowercaseHTMLTags(const AText: string): string;
4409: procedure GetHTMLAnchors(const AFile: string; AList: TStringList);
4410: function RelativePath(const ASrc, ADst: string): string;
4411: function GetToken(var Start: Integer; const SourceText: string): string;
4412: function PosNonSpace(Start: Integer; const SourceText: string): Integer;
4413: function PosEscaped(Start: Integer; const SourceText, FindText: string; EscapeChar: Char): Integer;
4414: function DeleteEscaped(const SourceText: string; EscapeChar: Char): string;
4415: function BeginOfAttribute(Start: Integer; const SourceText: string): Integer;
4416: // parses the beginning of an attribute: space + alpha character
4417: function ParseAttribute(var Start:Integer; const SourceText:string; var AName,AValue:string): Boolean;
4418: //parses a name="value" attrib from Start; returns 0 when not found or else the position behind attribute
4419: procedure ParseAttributes(const SourceText: string; Attributes: TStrings);
4420: // parses all name=value attributes to the attributes TStringList
4421: function HasStrValue(const AText, AName: string; var AValue: string): Boolean;
4422: // checks if a name="value" pair exists and returns any value
4423: function GetStrValue(const AText, AName, ADefault: string): string;
4424: // retrieves string value from a line like:
4425: //  name="jan verhoeven" email="jan1 dott verhoeven att wxs dott nl"
4426: // returns ADefault when not found
4427: function GetHTMLColorValue(const AText, AName: string; ADefault: TColor): TColor;
4428: // same for a color
4429: function GetIntValue(const AText, AName: string; ADefault: Integer): Integer;
4430: // same for an Integer
4431: function GetFloatValue(const AText, AName: string; ADefault: Extended): Extended;
4432: // same for a float
4433: function GetBoolValue(const AText, AName: string): Boolean;
4434: // same for Boolean but without default
4435: function GetValue(const AText, AName: string): string;
4436: //retrieves string value from a line like: name="jan verhoeven" email="jan1 verhoeven att wxs dott nl"
4437: procedure SetValue(var AText: string; const AName, AValue: string);
4438: // sets a string value in a line
4439: procedure DeleteValue(var AText: string; const AName: string);
4440: // deletes a AName="value" pair from AText
4441: procedure GetNames(AText: string; AList: TStringList);
4442: // get a list of names from a string with names="value" pairs
4443: function GetHTMLColor(AColor: TColor): string;
4444: // converts a color value to the HTML hex value
4445: function BackPosStr(Start: Integer; const FindString, SourceString: string): Integer;
4446: // finds a string backward case sensitive
4447: function BackPosText(Start: Integer; const FindString, SourceString: string): Integer;
4448: // finds a string backward case insensitive
4449: function PosRangeStr(Start: Integer; const HeadString, TailString, SourceString: string;
```

```
4450:   var RangeBegin: Integer; var RangeEnd: Integer): Boolean;
4451: // finds a text range, e.g. <TD>....</TD> case sensitive
4452: function PosRangeText(Start: Integer; const HeadString, TailString, SourceString: string;
4453:   var RangeBegin: Integer; var RangeEnd: Integer): Boolean;
4454: // finds a text range, e.g. <TD>....</td> case insensitive
4455: function BackPosRangeStr(Start: Integer; const HeadString, TailString, SourceString: string;
4456:   var RangeBegin: Integer; var RangeEnd: Integer): Boolean;
4457: // finds a text range backward, e.g. <TD>....</TD> case sensitive
4458: function BackPosRangeText(Start: Integer; const HeadString, TailString, SourceString: string;
4459:   var RangeBegin: Integer; var RangeEnd: Integer): Boolean;
4460: // finds a text range backward, e.g. <TD>....</td> case insensitive
4461: function PosTag(Start: Integer; SourceString: string; var RangeBegin: Integer;
4462:   var RangeEnd: Integer): Boolean;
4463: // finds a HTML or XML tag:  <....>
4464: function InnerTag(Start: Integer; const HeadString, TailString, SourceString: string;
4465:   var RangeBegin: Integer; var RangeEnd: Integer): Boolean;
4466: // finds the innertext between opening and closing tags
4467: function Easter(NYear: Integer): TDateTime;
4468: // returns the easter date of a year.
4469: function GetWeekNumber(Today: TDateTime): string;
4470: //gets a datecode. Returns year and weeknumber in format: YYWW
4471: function ParseNumber(const S: string): Integer;
4472: // parse number returns the last position, starting from 1
4473: function ParseDate(const S: string): Integer;
4474: // parse a SQL style data string from positions 1,
4475: // starts and ends with #
4476:
4477: ****************************************unit JvJCLUtils;****************************************
4478:
4479: function VarIsInt(Value: Variant): Boolean;
4480:  // VarIsInt returns VarIsOrdinal-[varBoolean]
4481: { PosIdx returns the index of the first appearance of SubStr in Str. The search starts at index "Index". }
4482: function PosIdx(const SubStr, S: string; Index: Integer = 0): Integer;
4483: function PosIdxW(const SubStr, S: WideString; Index: Integer = 0): Integer;
4484: function PosLastCharIdx(Ch: Char; const S: string; Index: Integer = 0): Integer;
4485: { GetWordOnPos returns Word from string, S, on the cursor position, P}
4486: function GetWordOnPos(const S: string; const P: Integer): string;
4487: function GetWordOnPosW(const S: WideString; const P: Integer): WideString;
4488: function GetWordOnPos2(const S: string; P: Integer; var iBeg, iEnd: Integer): string;
4489: function GetWordOnPos2W(const S: WideString; P: Integer; var iBeg, iEnd: Integer): WideString;
4490: { GetWordOnPosEx working like GetWordOnPos function, but
4491:   also returns Word position in iBeg, iEnd variables }
4492: function GetWordOnPosEx(const S: string; const P: Integer; var iBeg, iEnd: Integer): string;
4493: function GetWordOnPosExW(const S: WideString; const P: Integer; var iBeg, iEnd: Integer): WideString;
4494: function GetNextWordPosEx(const Text: string; StartIndex: Integer; var iBeg, iEnd: Integer): string;
4495: function GetNextWordPosExW(const Text:WideString;StartIndex:Integer; var iBeg,iEnd:Integer):WideString;
4496: procedure GetEndPosCaret(const Text: string; CaretX, CaretY: Integer; var X, Y: Integer);
4497: { GetEndPosCaret returns the caret position of the last char. For the position
4498:   after the last char of Text you must add 1 to the returned X value. }
4499: procedure GetEndPosCaretW(const Text: WideString;CaretX,CaretY:Integer;var X,Y:Integer);
4500: { GetEndPosCaret returns the caret position of the last char. For the position
4501:   after the last char of Text you must add 1 to the returned X value. }
4502: { SubStrBySeparator returns substring from string, S, separated with Separator string}
4503: function SubStrBySeparator(const S:string;const Index:Integer;const
      Separator:string;StartIndex:Int=1):string;
4504: function SubStrBySeparatorW(const S:WideString;const Index:Int;const
      Separator:WideString;StartIndex:Int:WideString;
4505: { SubStrEnd same to previous function but Index numerated from the end of string }
4506: function SubStrEnd(const S: string; const Index: Integer; const Separator: string): string;
4507: { SubWord returns next Word from string, P, and offsets Pointer to the end of Word, P2 }
4508: function SubWord(P: PChar; var P2: PChar): string;
4509: function CurrencyByWord(Value: Currency): string;
4510: { GetLineByPos returns the Line number, there the symbol Pos is pointed. Lines separated with #13 symbol }
4511: function GetLineByPos(const S: string; const Pos: Integer): Integer;
4512: { GetXYByPos is same as GetLineByPos, but returns X position in line as well}
4513: procedure GetXYByPos(const S: string; const Pos: Integer; var X, Y: Integer);
4514: procedure GetXYByPosW(const S: WideString; const Pos: Integer; var X, Y: Integer);
4515: { ReplaceString searches for all substrings, OldPattern,
4516:   in a string, S, and replaces them with NewPattern }
4517: function ReplaceString(S: string; const OldPattern,NewPattern: string; StartIndex:Integer = 1):string;
4518: function ReplaceStringW(S: WideString; const OldPattern,NewPattern:
      WideString;StartIndex:Integer=1):WideString;
4519: { ConcatSep concatenate S1 and S2 strings with Separator. if S = '' then separator not included }
4520: function ConcatSep(const S1, S2, Separator: string): string; {$IFDEF SUPPORTS_INLINE} inline; {$ENDIF
      SUPPORTS_INLINE}
4521: { ConcatLeftSep is same to previous function, but   strings concatenate right to left }
4522: function ConcatLeftSep(const S1, S2, Separator: string): string; {$IFDEF SUPPORTS_INLINE} inline; {$ENDIF
      SUPPORTS_INLINE}
4523:
4524: { Next 4 function for russian chars transliterating.
4525:   This functions are needed because Oem2Ansi and Ansi2Oem functions sometimes suck }
4526: procedure Dos2Win(var S: AnsiString);
4527: procedure Win2Dos(var S: AnsiString);
4528: function Dos2WinRes(const S: AnsiString): AnsiString; inline; {$ENDIF SUPPORTS_INLINE}
4529: function Win2DosRes(const S: AnsiString): AnsiString; inline; {$ENDIF SUPPORTS_INLINE}
4530: function Win2Koi(const S: AnsiString): AnsiString;
4531: { FillString fills the string Buffer with Count Chars }
4532: procedure FillString(var Buffer: string; Count: Integer; const Value: Char); overload;
4533: procedure FillString(var Buffer: string; StartIndex, Count: Integer; const Value: Char); overload;
```

```
4534: { MoveString copies Count Chars from Source to Dest }
4535: procedure MoveString(const Source: string; var Dest: string; Count: Integer); {$IFDEF SUPPORTS_INLINE}
      inline; {$ENDIF SUPPORTS_INLINE} overload;
4536: procedure MoveString(const Source: string; SrcStartIdx: Integer; var Dest: string;
4537:   DstStartIdx: Integer;Count: Integer);{$IFDEF SUPPORTS_INLINE} inline; {$ENDIF SUPPORTS_INLINE} overload;
4538: { FillWideChar fills Buffer with Count WideChars (2 Bytes) }
4539: procedure FillWideChar(var Buffer; Count: Integer; const Value: WideChar);
4540: { MoveWideChar copies Count WideChars from Source to Dest }
4541: procedure MoveWideChar(const Source; var Dest;Count:Integer);{$IFDEF SUPPORTS_INLINE}inline;{$ENDIF
      SUPPORTS_INLINE}
4542: { FillNativeChar fills Buffer with Count NativeChars }
4543: procedure FillNativeChar(var Buffer; Count: Integer; const Value: Char); // D2009 internal error {$IFDEF
      SUPPORTS_INLINE} inline; {$ENDIF SUPPORTS_INLINE}
4544: { MoveWideChar copies Count WideChars from Source to Dest }
4545: procedure MoveNativeChar(const Source; var Dest; Count: Integer); // D2009 internal error {$IFDEF
      SUPPORTS_INLINE} inline; {$ENDIF SUPPORTS_INLINE}
4546: { IsSubString() compares the sub string to the string. Indices are 1th based. }
4547: function IsSubString(const S: string; StartIndex: Integer; const SubStr: string): Boolean;
4548: { Spaces returns string consists on N space chars }
4549: function Spaces(const N: Integer): string;
4550: { AddSpaces adds spaces to string S, if its Length is smaller than N }
4551: function AddSpaces(const S: string; const N: Integer): string;
4552: function SpacesW(const N: Integer): WideString;
4553: function AddSpacesW(const S: WideString; const N: Integer): WideString;
4554: { function LastDateRUS for russian users only }
4555: { returns date relative to current date: 'âåà äíÿ íàçàä' }
4556: function LastDateRUS(const Dat: TDateTime): string;
4557: { CurrencyToStr format Currency, Cur, using ffCurrency float format}
4558: function CurrencyToStr(const Cur: Currency): string;
4559: { HasChar returns True, if Char, Ch, contains in string, S }
4560: function HasChar(const Ch: Char; const S: string): Boolean;
4561: function HasCharW(const Ch: WideChar; const S: WideString): Boolean; inline; {$ENDIF SUPPORTS_INLINE}
4562: function HasAnyChar(const Chars: string; const S: string): Boolean;
4563: {$IFNDEF COMPILER12_UP}
4564: function CharInSet(const Ch: AnsiChar;const SetOfChar:TSysCharSet):Boolean;inline;{$ENDIF SUPPORTS_INLINE}
4565: {$ENDIF ~COMPILER12_UP}
4566: function CharInSetW(const Ch: WideChar;const SetOfChar: TSysCharSet):Boolean;inline; {$ENDIF
      SUPPORTS_INLINE}
4567: function CountOfChar(const Ch: Char; const S: string): Integer;
4568: function DefStr(const S: string; Default: string): string; {$IFDEF SUPPORTS_INLINE} inline; {$ENDIF
      SUPPORTS_INLINE}
4569: { StrLICompW2 is a faster replacement for JclUnicode.StrLICompW }
4570: function StrLICompW2(S1, S2: PWideChar; MaxLen: Integer): Integer;
4571: function StrPosW(S, SubStr: PWideChar): PWideChar;
4572: function StrLenW(S: PWideChar): Integer;
4573: function TrimW(const S: WideString):WideString;{$IFDEF SUPPORTS_INLINE} inline;{$ENDIF SUPPORTS_INLINE}
4574: function TrimLeftW(const S: WideString): WideString; {$IFDEF SUPPORTS_INLINE} inline; {$ENDIF
      SUPPORTS_INLINE}
4575: function TrimRightW(const S: WideString): WideString; inline; {$ENDIF SUPPORTS_INLINE}
4576: TPixelFormat', '( pfDevice, pf1bit, pf4bit, pf8bit, pf24bit )
4577: TMappingMethod', '( mmHistogram, mmQuantize, mmTrunc784, mmTrunc666, mmTripel, mmGrayscale )
4578:  Function GetBitmapPixelFormat( Bitmap : TBitmap) : TPixelFormat
4579: Function GetPaletteBitmapFormat( Bitmap : TBitmap) : TPixelFormat
4580: Procedure SetBitmapPixelFormat( Bitmap: TBitmap; PixelFormat: TPixelFormat; Method: TMappingMethod)
4581: Function BitmapToMemoryStream(Bitmap:TBitmap;PixelFormat:TPixelFormat;Method:TMappingMethod):TMemoryStream;
4582: Procedure GrayscaleBitmap( Bitmap : TBitmap)
4583: Function BitmapToMemory( Bitmap : TBitmap; Colors : Integer) : TStream
4584: Procedure SaveBitmapToFile( const Filename : string; Bitmap : TBitmap; Colors : Integer)
4585: Function ScreenPixelFormat : TPixelFormat
4586: Function ScreenColorCount : Integer
4587: Procedure TileImage( Canvas : TCanvas; Rect : TRect; Image : TGraphic)
4588: Function ZoomImage( ImageW, ImageH, MaxW, MaxH : Integer; Stretch : Boolean) : TPoint
4589: //  SIRegister_TJvGradient(CL);
4590:
4591: {************************************* files routines}
4592: procedure SetDelimitedText(List: TStrings; const Text: string; Delimiter: Char);
4593: const
4594:   {$IFDEF MSWINDOWS}
4595:   DefaultCaseSensitivity = False;
4596:   {$ENDIF MSWINDOWS}
4597:   {$IFDEF UNIX}
4598:   DefaultCaseSensitivity = True;
4599:   {$ENDIF UNIX}
4600: { GenTempFileName returns temporary file name on
4601:   drive, there FileName is placed }
4602: function GenTempFileName(FileName: string): string;
4603: { GenTempFileNameExt same to previous function, but
4604:   returning filename has given extension, FileExt }
4605: function GenTempFileNameExt(FileName: string; const FileExt: string): string;
4606: { ClearDir clears folder Dir }
4607: function ClearDir(const Dir: string): Boolean;
4608: { DeleteDir clears and than delete folder Dir }
4609: function DeleteDir(const Dir: string): Boolean;
4610: { FileEquMask returns True if file, FileName, is compatible with given dos file mask, Mask }
4611: function FileEquMask(FileName, Mask: TFileName; CaseSensitive: Boolean=DefaultCaseSensitivity): Boolean;
4612: { FileEquMasks returns True if file, FileName, is compatible with given Masks.
4613:   Masks must be separated with SepPath (MSW: ';' / UNIX: ':') }
4614: function FileEquMasks(FileName, Masks: TFileName;
4615:   CaseSensitive: Boolean = DefaultCaseSensitivity): Boolean;
```

```
4616: function DeleteFiles(const Folder: TFileName; const Masks: string): Boolean;
4617: {$IFDEF MSWINDOWS}
4618: { LZFileExpand expand file, FileSource,
4619:   into FileDest. Given file must be compressed, using MS Compress program }
4620: function LZFileExpand(const FileSource, FileDest: string): Boolean;
4621: {$ENDIF MSWINDOWS}
4622: { FileGetInfo fills SearchRec record for specified file attributes}
4623: function FileGetInfo(FileName: TFileName; var SearchRec: TSearchRec): Boolean;
4624: { HasSubFolder returns True, if folder APath contains other folders }
4625: function HasSubFolder(APath: TFileName): Boolean;
4626: { IsEmptyFolder returns True, if there are no files or
4627:   folders in given folder, APath}
4628: function IsEmptyFolder(APath: TFileName): Boolean;
4629: { AddSlash returns string with added slash Char to Dir parameter, if needed }
4630: function AddSlash(const Dir: TFileName): string; {$IFDEF SUPPORTS_INLINE} inline; {$ENDIF SUPPORTS_INLINE}
4631: { AddPath returns FileName with Path, if FileName not contain any path }
4632: function AddPath(const FileName, Path: TFileName): TFileName;
4633: function AddPaths(const PathList, Path: string): string;
4634: function ParentPath(const Path: TFileName): TFileName;
4635: function FindInPath(const FileName, PathList: string): TFileName;
4636: { DeleteReadOnlyFile clears R/O file attribute and delete file }
4637: function DeleteReadOnlyFile(const FileName: TFileName): Boolean;
4638: { HasParam returns True, if program running with specified parameter, Param }
4639: function HasParam(const Param: string): Boolean;
4640: function HasSwitch(const Param: string): Boolean;
4641: function Switch(const Param: string): string;
4642: { ExePath returns ExtractFilePath(ParamStr(0)) }
4643: function ExePath: TFileName; {$IFDEF SUPPORTS_INLINE} inline; {$ENDIF SUPPORTS_INLINE}
4644: function CopyDir(const SourceDir, DestDir: TFileName): Boolean;
4645: //function FileTimeToDateTime(const FT: TFileTime): TDateTime;
4646: procedure FileTimeToDosDateTimeDWord(const FT: TFileTime; out Dft: DWORD);
4647: function MakeValidFileName(const FileName: TFileName; ReplaceBadChar: Char): TFileName;
4648: {**** Graphic routines }
4649: { IsTTFontSelected returns True, if True Type font is selected in specified device context }
4650: function IsTTFontSelected(const DC: HDC): Boolean;
4651: function KeyPressed(VK: Integer): Boolean;
4652: Function isKeypressed: boolean;  //true if key on memo2 (shell output) is pressed
4653: { TrueInflateRect inflates rect in other method, than InflateRect API function }
4654: function TrueInflateRect(const R: TRect; const I: Integer): TRect;
4655: {**** Color routines }
4656: procedure RGBToHSV(R, G, B: Integer; var H, S, V: Integer);
4657: function RGBToBGR(Value: Cardinal): Cardinal;
4658: //function ColorToPrettyName(Value: TColor): string;
4659: //function PrettyNameToColor(const Value: string): TColor;
4660: {**** other routines }
4661: procedure SwapInt(var Int1, Int2: Integer); {$IFDEF SUPPORTS_INLINE} inline; {$ENDIF SUPPORTS_INLINE}
4662: function IntPower(Base, Exponent: Integer): Integer;
4663: function ChangeTopException(E: TObject): TObject; // Linux version writes error message to ErrOutput
4664: function StrToBool(const S: string): Boolean;
4665: function Var2Type(V: Variant; const DestVarType: Integer): Variant;
4666: function VarToInt(V: Variant): Integer;
4667: function VarToFloat(V: Variant): Double;
4668: { following functions are not documented because they not work properly sometimes, so do not use them }
4669: // (rom) ReplaceStrings1, GetSubStr removed
4670: function GetLongFileName(const FileName: string): string;
4671: function FileNewExt(const FileName, NewExt: TFileName): TFileName;
4672: function GetParameter: string;
4673: function GetComputerID: string;
4674: function GetComputerName: string;
4675: {**** string routines }
4676: { ReplaceAllStrings searches for all substrings, Words,
4677:   in a string, S, and replaces them with Frases with the same Index. }
4678: function ReplaceAllStrings(const S: string; Words, Frases: TStrings): string;
4679: { ReplaceStrings searches the Word in a string, S, on PosBeg position,
4680:   in the list, Words, and if founds, replaces this Word with string from another list,Frases, with the
     same Index, and then update NewSelStart variable }
4681: function ReplaceStrings(const S:string;PosBeg,Len:Int;Words,Frases:TStrings;var NewSelStart:Int):string;
4682: { CountOfLines calculates the lines count in a string, S,
4683:   each line must be separated from another with CrLf sequence }
4684: function CountOfLines(const S: string): Integer;
4685: { DeleteLines deletes all lines from strings which in the words,  words.
4686:   The word of will be deleted from strings. }
4687: procedure DeleteOfLines(Ss: TStrings; const Words: array of string);
4688: { DeleteEmptyLines deletes all empty lines from strings, Ss.
4689:   Lines contained only spaces also deletes. }
4690: procedure DeleteEmptyLines(Ss: TStrings);
4691: { SQLAddWhere addes or modifies existing where-statement, where,
4692:   to the strings, SQL. Note: If strings SQL allready contains where-statement,
4693:   it must be started on the begining of any line }
4694: procedure SQLAddWhere(SQL: TStrings; const Where: string);
4695: {**** files routines - }
4696: {$IFDEF MSWINDOWS}
4697: { ResSaveToFile save resource named as Name with Typ type into file FileName.
4698:   Resource can be compressed using MS Compress program}
4699: function ResSaveToFile(const Typ,Name:string; const Compressed: Boolean; const FileName: string): Boolean;
4700: function ResSaveToFileEx(Instance:HINST;Typ,Name:PChar;const Compressed:Boolean;const FileName:string):
    Boolean;
4701: function ResSaveToString(Instance: HINST; const Typ, Name: string; var S: string): Boolean;
4702: {$ENDIF MSWINDOWS}
```

```
4703: { IniReadSection read section, Section, from ini-file,
4704:   IniFileName, into strings, Ss.This function reads ALL strings from specified section.
4705:   Note: TIninFile.ReadSection function reads only strings with '=' symbol.}
4706: function IniReadSection(const IniFileName: TFileName; const Section: string; Ss: TStrings): Boolean;
4707: { LoadTextFile load text file, FileName, into string }
4708: function LoadTextFile(const FileName: TFileName): string;
4709: procedure SaveTextFile(const FileName: TFileName; const Source: string);
4710: { ReadFolder reads files list from disk folder,Folder,that are equal to mask, Mask,into strings, FileList}
4711: function ReadFolder(const Folder, Mask: TFileName; FileList: TStrings): Integer;
4712: function ReadFolders(const Folder: TFileName; FolderList: TStrings): Integer;
4713: { RATextOut same with TCanvas.TextOut procedure, but can clipping drawing with rectangle, RClip. }
4714: procedure RATextOut(Canvas: TCanvas; const R, RClip: TRect; const S: string);
4715: { RATextOutEx same with RATextOut function, but can calculate needed height for correct output }
4716: function RATextOutEx(Canvas:TCanvas;const R,RClip:TRect; const S:string;const CalcHeight:Boolean):Integer;
4717: { RATextCalcHeight calculate needed height for
4718:   correct output, using RATextOut or RATextOutEx functions }
4719: function RATextCalcHeight(Canvas: TCanvas; const R: TRect; const S: string): Integer;
4720: { Cinema draws some visual effect }
4721: procedure Cinema(Canvas: TCanvas; rS {Source}, rD {Dest}: TRect);
4722: { Roughed fills rect with special 3D pattern }
4723: procedure Roughed(ACanvas: TCanvas; const ARect: TRect; const AVert: Boolean);
4724: { BitmapFromBitmap creates new small bitmap from part of source bitmap, SrcBitmap, with specified width
     and height, AWidth, AHeight and placed on a specified Index, Index in the  source bitmap }
4725: function BitmapFromBitmap(SrcBitmap: TBitmap; const AWidth, AHeight, Index: Integer): TBitmap;
4726: { TextWidth calculate text with for writing using standard desktop font }
4727: function TextWidth(const AStr: string): Integer;
4728: { TextHeight calculate text height for writing using standard desktop font }
4729: function TextHeight(const AStr: string): Integer;
4730: procedure SetChildPropOrd(Owner: TComponent; const PropName: string; Value: Longint);
4731: procedure Error(const Msg: string);
4732: procedure ItemHtDrawEx(Canvas: TCanvas; Rect: TRect; const State: TOwnerDrawState; const Text: string;
4733:   const HideSelColor: Boolean; var PlainItem: string; var Width: Integer; CalcWidth: Boolean);
4734: {example Text parameter:'Item 1<b>bold</b><i>italic ITALIC <c:Red>red<c:Green>green<c:blue>blue</i>' }
4735: function ItemHtDraw(Canvas: TCanvas; Rect: TRect;
4736:   const State: TOwnerDrawState; const Text: string; const HideSelColor: Boolean): string;
4737: function ItemHtWidth(Canvas: TCanvas; Rect: TRect;
4738:   const State: TOwnerDrawState; const Text: string; const HideSelColor: Boolean): Integer;
4739: function ItemHtPlain(const Text: string): string;
4740: { ClearList - clears list of TObject }
4741: procedure ClearList(List: TList);
4742: procedure MemStreamToClipBoard(MemStream: TMemoryStream; const Format: Word);
4743: procedure ClipBoardToMemStream(MemStream: TMemoryStream; const Format: Word);
4744: { RTTI support }
4745: function GetPropType(Obj: TObject; const PropName: string): TTypeKind;
4746: function GetPropStr(Obj: TObject; const PropName: string): string;
4747: function GetPropOrd(Obj: TObject; const PropName: string): Integer;
4748: function GetPropMethod(Obj: TObject; const PropName: string): TMethod;
4749: procedure PrepareIniSection(Ss: TStrings);
4750: { following functions are not documented because they are don't work properly, so don't use them }
4751: // (rom) from JvBandWindows to make it obsolete
4752: function PointL(const X, Y: Longint): TPointL; {$IFDEF SUPPORTS_INLINE} inline; {$ENDIF SUPPORTS_INLINE}
4753: // (rom) from JvBandUtils to make it obsolete
4754: function iif(const Test: Boolean; const ATrue, AFalse: Variant): Variant;
4755: procedure CopyIconToClipboard(Icon: TIcon; BackColor: TColor);
4756: function CreateIconFromClipboard: TIcon;
4757: { begin JvIconClipboardUtils } { Icon clipboard routines }
4758: function CF_ICON: Word;
4759: procedure AssignClipboardIcon(Icon: TIcon);
4760: { Real-size icons support routines (32-bit only) }
4761: procedure GetIconSize(Icon: HICON; var W, H: Integer);
4762: function CreateRealSizeIcon(Icon: TIcon): HICON;
4763: procedure DrawRealSizeIcon(Canvas: TCanvas; Icon: TIcon; X, Y: Integer);
4764: {end JvIconClipboardUtils }
4765: function CreateScreenCompatibleDC: HDC;
4766: function InvalidateRect(hWnd: HWND; const lpRect: TRect; bErase: BOOL): BOOL; overload; {$IFDEF
     SUPPORTS_INLINE} inline; {$ENDIF}
4767: function InvalidateRect(hWnd: HWND; lpRect: PRect; bErase: BOOL): BOOL; overload;
4768: { begin JvRLE } // (rom) changed API for inclusion in JCL
4769: procedure RleCompressTo(InStream, OutStream: TStream);
4770: procedure RleDecompressTo(InStream, OutStream: TStream);
4771: procedure RleCompress(Stream: TStream);
4772: procedure RleDecompress(Stream: TStream);
4773: { end JvRLE } { begin JvDateUtil }
4774: function CurrentYear: Word; {$IFDEF SUPPORTS_INLINE} inline; {$ENDIF SUPPORTS_INLINE}
4775: function IsLeapYear(AYear: Integer): Boolean;
4776: function DaysInAMonth(const AYear, AMonth: Word): Word;
4777: function DaysPerMonth(AYear, AMonth: Integer): Integer;
4778: function FirstDayOfPrevMonth: TDateTime;
4779: function LastDayOfPrevMonth: TDateTime;
4780: function FirstDayOfNextMonth: TDateTime;
4781: function ExtractDay(ADate: TDateTime): Word;
4782: function ExtractMonth(ADate: TDateTime): Word;
4783: function ExtractYear(ADate: TDateTime): Word;
4784: function IncDate(ADate: TDateTime; Days, Months, Years: Integer): TDateTime;
4785: function IncDay(ADate: TDateTime;Delta:Integer):TDateTime; inline; {$ENDIF SUPPORTS_INLINE}
4786: function IncMonth(ADate: TDateTime; Delta: Integer): TDateTime;
4787: function IncYear(ADate: TDateTime; Delta: Integer): TDateTime;
4788: function ValidDate(ADate: TDateTime): Boolean;
4789: procedure DateDiff(Date1, Date2: TDateTime; var Days, Months, Years: Word);
```

```
4790: function MonthsBetween(Date1, Date2: TDateTime): Double;
4791: function DaysInPeriod(Date1, Date2: TDateTime): Longint;
4792: { Count days between Date1 and Date2 + 1, so if Date1 = Date2 result = 1 }
4793: function DaysBetween(Date1, Date2: TDateTime): Longint;
4794: { The same as previous but if Date2 < Date1 result = 0 }
4795: function IncTime(ATime: TDateTime; Hours, Minutes, Seconds, MSecs: Integer): TDateTime;
4796: function IncHour(ATime: TDateTime; Delta: Integer): TDateTime;
4797: function IncMinute(ATime: TDateTime; Delta: Integer): TDateTime;
4798: function IncSecond(ATime: TDateTime; Delta: Integer): TDateTime;
4799: function IncMSec(ATime: TDateTime; Delta: Integer): TDateTime;
4800: function CutTime(ADate: TDateTime): TDateTime;  { Set time to 00:00:00:00 }
4801: { String to date conversions }
4802: function GetDateOrder(const DateFormat: string): TDateOrder;
4803: function MonthFromName(const S: string; MaxLen: Byte): Byte;
4804: function StrToDateDef(const S: string; Default: TDateTime): TDateTime;
4805: function StrToDateFmt(const DateFormat, S: string): TDateTime;
4806: function StrToDateFmtDef(const DateFormat, S: string; Default: TDateTime): TDateTime;
4807: //function DefDateFormat(AFourDigitYear: Boolean): string;
4808: //function DefDateMask(BlanksChar: Char; AFourDigitYear: Boolean): string;
4809: function FormatLongDate(Value: TDateTime): string;
4810: function FormatLongDateTime(Value: TDateTime): string;
4811: { end JvDateUtil }
4812: function BufToBinStr(Buf: Pointer; BufSize: Integer): string;
4813: function BinStrToBuf(Value: string; Buf: Pointer; BufSize: Integer): Integer;
4814: { begin JvStrUtils } { ** Common string handling routines ** }
4815: {$IFDEF UNIX}
4816: function iconversion(InP: PAnsiChar; OutP: Pointer; InBytes, OutBytes: Cardinal;
4817:   const ToCode, FromCode: AnsiString): Boolean;
4818: function iconvString(const S, ToCode, FromCode: AnsiString): string;
4819: function iconvWideString(const S: WideString; const ToCode, FromCode: AnsiString): WideString;
4820: function OemStrToAnsi(const S: AnsiString): AnsiString;
4821: function AnsiStrToOem(const S: AnsiString): AnsiString;
4822: {$ENDIF UNIX}
4823: function StrToOem(const AnsiStr: AnsiString): AnsiString;
4824: { StrToOem translates a string from the Windows character set into the OEM character set. }
4825: function OemToAnsiStr(const OemStr: AnsiString): AnsiString;
4826: { OemToAnsiStr translates a string from the OEM character set into the Windows character set. }
4827: function IsEmptyStr(const S: string; const EmptyChars: TSysCharSet): Boolean;
4828: { EmptyStr returns True if the given string contains only character from the EmptyChars. }
4829: function ReplaceStr(const S, Srch, Replace: string): string;
4830: { Returns string with every occurrence of Srch string replaced with Replace string. }
4831: function DelSpace(const S: string): string;
4832: { DelSpace return a string with all white spaces removed. }
4833: function DelChars(const S: string; Chr: Char): string;
4834: { DelChars return a string with all Chr characters removed. }
4835: function DelBSpace(const S: string): string;
4836: { DelBSpace trims leading spaces from the given string. }
4837: function DelESpace(const S: string): string;
4838: { DelESpace trims trailing spaces from the given string. }
4839: function DelRSpace(const S: string): string;
4840: { DelRSpace trims leading and trailing spaces from the given string. }
4841: function DelSpace1(const S: string): string;
4842: { DelSpace1 return a string with all non-single white spaces removed. }
4843: function Tab2Space(const S: string; Numb: Byte): string;
4844: { Tab2Space converts any tabulation character in the given string to the
4845:   Numb spaces characters. }
4846: function NPos(const C: string; S: string; N: Integer): Integer;
4847: { NPos searches for a N-th position of substring C in a given string. }
4848: function MakeStr(C: Char; N: Integer): string; overload;
4849: {$IFNDEF COMPILER12_UP}
4850: function MakeStr(C: WideChar; N: Integer): WideString; overload;
4851: {$ENDIF !COMPILER12_UP}
4852: function MS(C: Char; N: Integer): string; {$IFDEF SUPPORTS_INLINE} inline; {$ENDIF SUPPORTS_INLINE}
4853: { MakeStr return a string of length N filled with character C. }
4854: function AddChar(C: Char; const S: string; N: Integer): string;
4855: { AddChar return a string left-padded to length N with characters C. }
4856: function AddCharR(C: Char; const S: string; N: Integer): string;
4857: { AddCharR return a string right-padded to length N with characters C. }
4858: function LeftStr(const S: string; N: Integer): string;
4859: { LeftStr return a string right-padded to length N with blanks. }
4860: function RightStr(const S: string; N: Integer): string;
4861: { RightStr return a string left-padded to length N with blanks. }
4862: function CenterStr(const S: string; Len: Integer): string;
4863: { CenterStr centers the characters in the string based upon the Len specified. }
4864: function CompStr(const S1, S2: string): Integer; {$IFDEF SUPPORTS_INLINE} inline; {$ENDIF SUPPORTS_INLINE}
4865: { CompStr compares S1 to S2, with case-sensitivity. The return value is
4866:   -1 if S1 < S2, 0 if S1 = S2, or 1 if S1 > S2. }
4867: function CompText(const S1, S2: string):Integer; {$IFDEF SUPPORTS_INLINE} inline; {$ENDIF SUPPORTS_INLINE}
4868: { CompText compares S1 to S2, without case-sensitivity. The return value is the same as for CompStr. }
4869: function Copy2Symb(const S: string; Symb: Char): string;
4870: { Copy2Symb returns a substring of a string S from begining to first character Symb. }
4871: function Copy2SymbDel(var S: string; Symb: Char): string;
4872: { Copy2SymbDel returns a substring of a string S from begining to first
4873:   character Symb and removes this substring from S. }
4874: function Copy2Space(const S: string): string;
4875: { Copy2Symb returns a substring of a string S from begining to first white space. }
4876: function Copy2SpaceDel(var S: string): string;
4877: { Copy2SpaceDel returns a substring of a string S from begining to first
4878:   white space and removes this substring from S. }
```

```
4879: function AnsiProperCase(const S: string; const WordDelims: TSysCharSet): string;
4880: { Returns string, with the first letter of each word in uppercase,
4881:   all other letters in lowercase. Words are delimited by WordDelims. }
4882: function WordCount(const S: string; const WordDelims: TSysCharSet): Integer;
4883: { WordCount given a set of word delimiters, returns number of words in S. }
4884: function WordPosition(const N: Integer; const S: string; const WordDelims: TSysCharSet): Integer;
4885: { Given a set of word delimiters, returns start position of N'th word in S. }
4886: function ExtractWord(N: Integer; const S: string; const WordDelims: TSysCharSet): string;
4887: function ExtractWordPos(N: Integer;const S: string;const WordDelims:TSysCharSet;var Pos: Integer): string;
4888: function ExtractDelimited(N: Integer; const S: string;const Delims: TSysCharSet): string;
4889: { ExtractWord, ExtractWordPos and ExtractDelimited given a set of word
4890:   delimiters, return the N'th word in S. }
4891: function ExtractSubstr(const S: string; var Pos: Integer;const Delims: TSysCharSet): string;
4892: { ExtractSubstr given a set of word delimiters, returns the substring from S,
4893:   that started from position Pos. }
4894: function IsWordPresent(const W, S: string; const WordDelims: TSysCharSet): Boolean;
4895: { IsWordPresent given a set of word delimiters, returns True if word W is present in string S. }
4896: function QuotedString(const S: string; Quote: Char): string;
4897: { QuotedString returns the given string as a quoted string, using the provided Quote character. }
4898: function ExtractQuotedString(const S: string; Quote: Char): string;
4899: { ExtractQuotedString removes the Quote characters from the beginning and
4900:   end of a quoted string, and reduces pairs of Quote characters within quoted string to single character.}
4901: function FindPart(const HelpWilds, InputStr: string): Integer;
4902: { FindPart compares a string with '?' and another, returns the position of HelpWilds in InputStr. }
4903: function IsWild(InputStr, Wilds: string; IgnoreCase: Boolean): Boolean;
4904: { IsWild compares InputString with WildCard string and returns True if corresponds. }
4905: function XorString(const Key, Src: ShortString): ShortString;
4906: function XorEncode(const Key, Source: string): string;
4907: function XorDecode(const Key, Source: string): string;
4908: { ** Command line routines ** }
4909: function GetCmdLineArg(const Switch: string; ASwitchChars: TSysCharSet): string;
4910: { ** Numeric string handling routines ** }
4911: function Numb2USA(const S: string): string;
4912: { Numb2USA converts numeric string S to USA-format. }
4913: function Dec2Hex(N: Longint; A: Byte): string; {$IFDEF SUPPORTS_INLINE} inline; {$ENDIF SUPPORTS_INLINE}
4914: { Dec2Hex converts the given value to a hexadecimal string representation
4915:   with the minimum number of digits (A) specified. }
4916: function Hex2Dec(const S: string): Longint;
4917: { Hex2Dec converts the given hexadecimal string to the corresponding integer value. }
4918: function Dec2Numb(N: Int64; A, B: Byte): string;
4919: { Dec2Numb converts the given value to a string representation with the
4920:   base equal to B and with the minimum number of digits (A) specified. }
4921: function Numb2Dec(S: string; B: Byte): Int64;
4922: { Numb2Dec converts the given B-based numeric string to the corresponding
4923:   integer value. }
4924: function IntToBin(Value: Longint; Digits, Spaces: Integer): string;
4925: { IntToBin converts the given value to a binary string representation
4926:   with the minimum number of digits specified. }
4927: function IntToRoman(Value: Longint): string;
4928: { IntToRoman converts the given value to a roman numeric string representation. }
4929: function RomanToInt(const S: string): Longint;
4930: { RomanToInt converts the given string to an integer value. If the string
4931:   doesn't contain a valid roman numeric value, the 0 value is returned. }
4932: function FindNotBlankCharPos(const S: string): Integer;
4933: function FindNotBlankCharPosW(const S: WideString): Integer;
4934: function AnsiChangeCase(const S: string): string;
4935: function WideChangeCase(const S: string): string;
4936: function StartsText(const SubStr, S: string): Boolean;
4937: function EndsText(const SubStr, S: string): Boolean;
4938: function DequotedStr(const S: string; QuoteChar: Char = ''''): string;
4939: function AnsiDequotedStr(const S: string; AQuote: Char): string; //follow Delphi 2009's "Ansi" prefix
4940: {end JvStrUtils}
4941: {$IFDEF UNIX}
4942: function GetTempFileName(const Prefix: AnsiString): AnsiString;
4943: {$ENDIF UNIX}
4944: { begin JvFileUtil }
4945: function FileDateTime(const FileName: string): TDateTime;
4946: function HasAttr(const FileName: string; Attr: Integer): Boolean;
4947: function DeleteFilesEx(const FileMasks: array of string): Boolean;
4948: function NormalDir(const DirName: string): string;
4949: function RemoveBackSlash(const DirName: string): string; // only for Windows/DOS Paths
4950: function ValidFileName(const FileName: string): Boolean;
4951: {$IFDEF MSWINDOWS}
4952: function FileLock(Handle: Integer; Offset, LockSize: Longint): Integer; overload;
4953: function FileLock(Handle: Integer; Offset, LockSize: Int64): Integer; overload;
4954: function FileUnlock(Handle: Integer; Offset, LockSize: Longint): Integer; overload;
4955: function FileUnlock(Handle: Integer; Offset, LockSize: Int64): Integer; overload;
4956: {$ENDIF MSWINDOWS}
4957: function GetWindowsDir: string;
4958: function GetSystemDir: string;
4959: function ShortToLongFileName(const ShortName: string): string;
4960: function LongToShortFileName(const LongName: string): string;
4961: function ShortToLongPath(const ShortName: string): string;
4962: function LongToShortPath(const LongName: string): string;
4963: {$IFDEF MSWINDOWS}
4964: procedure CreateFileLink(const FileName, DisplayName: string; Folder: Integer);
4965: procedure DeleteFileLink(const DisplayName: string; Folder: Integer);
4966: {$ENDIF MSWINDOWS}
4967: { end JvFileUtil }
```

```
4968: // Works like PtInRect but includes all edges in comparision
4969: function PtInRectInclusive(R: TRect; Pt: TPoint): Boolean;
4970: // Works like PtInRect but excludes all edges from comparision
4971: function PtInRectExclusive(R: TRect; Pt: TPoint): Boolean;
4972: function FourDigitYear: Boolean; {$IFDEF SUPPORTS_DEPRECATED} deprecated; {$ENDIF}
4973: function IsFourDigitYear: Boolean;
4974: { moved from JvJVCLUTils }
4975: //Open an object with the shell (url or something like that)
4976: function OpenObject(const Value: string): Boolean; overload;
4977: function OpenObject(Value: PChar): Boolean; overload;
4978: {$IFDEF MSWINDOWS}
4979: //Raise the last Exception
4980: procedure RaiseLastWin32; overload;
4981: procedure RaiseLastWin32(const Text: string); overload;
4982: //Raise the last Exception with a small comment from your part { GetFileVersion returns the most
      significant 32 bits of a file's binary version number. Typically, this includes the major and minor
      version placed together in one 32-bit Integer. I
4983: function GetFileVersion(const AFileName: string): Cardinal;
4984: {$EXTERNALSYM GetFileVersion}
4985: //Get version of Shell.dll
4986: function GetShellVersion: Cardinal;
4987: {$EXTERNALSYM GetShellVersion}
4988: // CD functions  on HW
4989: procedure OpenCdDrive;
4990: procedure CloseCdDrive;
4991: // returns True if Drive is accessible
4992: function DiskInDrive(Drive: Char): Boolean;
4993: {$ENDIF MSWINDOWS}
4994: //Same as linux function ;)
4995: procedure PError(const Text: string);
4996: // execute a program without waiting
4997: procedure Exec(const FileName, Parameters, Directory: string);
4998: // execute a program and wait for it to finish
4999: function ExecuteAndWait(CmdLine:string;const WorkingDirectory:string;Visibility:Integer=SW_SHOW): Int;
5000: // returns True if this is the first instance of the program that is running
5001: function FirstInstance(const ATitle: string): Boolean;
5002: // restores a window based on it's classname and Caption. Either can be left empty
5003: // to widen the search
5004: procedure RestoreOtherInstance(const MainFormClassName, MainFormCaption: string);
5005: // manipulate the traybar and start button
5006: procedure HideTraybar;
5007: procedure ShowTraybar;
5008: procedure ShowStartButton(Visible: Boolean = True);
5009: // (rom) SC_MONITORPOWER is documented as Win 95 only(rom) better do some testing set monitor functions
5010: procedure MonitorOn;
5011: procedure MonitorOff;
5012: procedure LowPower;
5013: // send a key to the window named AppName
5014: function SendKey(const AppName: string; Key: Char): Boolean;
5015: {$IFDEF MSWINDOWS}
5016: // returns a list of all win currently visible, the Objects property is filled with their window handle
5017: procedure GetVisibleWindows(List: TStrings);
5018: Function GetVisibleWindowsF( List : TStrings):TStrings');
5019: // associates an extension to a specific program
5020: procedure AssociateExtension(const IconPath, ProgramName, Path, Extension: string);
5021: procedure AddToRecentDocs(const FileName: string);
5022: function GetRecentDocs: TStringList;
5023: {$ENDIF MSWINDOWS}
5024: function CharIsMoney(const Ch: Char): Boolean;
5025: //function StrToCurrDef(const Str: string; Def: Currency): Currency;
5026: function IntToExtended(I: Integer): Extended;
5027: { GetChangedText works out the new text given the current cursor pos & the key pressed
5028:   It is not very useful in other contexts, but in this unit as it is needed in both MemoEx and TypedEdit }
5029: function GetChangedText(const Text: string; SelStart, SelLength: Integer; Key: Char): string;
5030: function MakeYear4Digit(Year, Pivot: Integer): Integer;
5031: //function StrIsInteger(const S: string): Boolean;
5032: function StrIsFloatMoney(const Ps: string): Boolean;
5033: function StrIsDateTime(const Ps: string): Boolean;
5034: function PreformatDateString(Ps: string): string;
5035: function BooleanToInteger(const B: Boolean): Integer;
5036: function StringToBoolean(const Ps: string): Boolean;
5037: function SafeStrToDateTime(const Ps: string): TDateTime;
5038: function SafeStrToDate(const Ps: string): TDateTime;
5039: function SafeStrToTime(const Ps: string): TDateTime;
5040: function StrDelete(const psSub, psMain: string): string;
5041:   { returns the fractional value of pcValue}
5042: function TimeOnly(pcValue: TDateTime): TTime;
5043: { returns the integral value of pcValue }
5044: function DateOnly(pcValue: TDateTime): TDate;
5045: type TdtKind = (dtkDateOnly, dtkTimeOnly, dtkDateTime);
5046: const { TDateTime value used to signify Null value}
5047:   NullEquivalentDate: TDateTime = 0.0;
5048: function DateIsNull(const pdtValue: TDateTime; const pdtKind: TdtKind): Boolean;
5049: // Replacement for Win32Check to avoid platform specific warnings in D6
5050: function OSCheck(RetVal: Boolean): Boolean;
5051: { Shortens a fully qualified Path name so that it can be drawn with a specified length limit.
5052:   Same as FileCtrl.MinimizeName in functionality (but not implementation). Included here to
5053:   not be forced to use FileCtrl unnecessarily }
5054: function MinimizeFileName(const FileName: string; Canvas: TCanvas; MaxLen: Integer): string;
```

```
5055: function MinimizeText(const Text: string; Canvas: TCanvas; MaxWidth: Integer): string;
5056: { MinimizeString trunactes long string, S, and appends'...'symbols,if Length of S is more than MaxLen }
5057: function MinimizeString(const S: string; const MaxLen: Integer): string;
5058: procedure RunDll32Internal(Wnd:THandle; const DLLName,FuncName,CmdLine:string;CmdShow:Integer=
      SW_SHOWDEFAULT);
5059: { GetDLLVersion loads DLLName, gets a pointer to DLLVersion function and calls it, returning major and
      minor version values from the function. Returns False if DLL not loaded or if GetDLLVersion couldn't be
      found.}
5060: function GetDLLVersion(const DLLName: string; var pdwMajor, pdwMinor: Integer): Boolean;
5061: {$ENDIF MSWINDOWS}
5062: procedure ResourceNotFound(ResID: PChar);
5063: function EmptyRect: TRect;
5064: function RectWidth(R: TRect): Integer;
5065: function RectHeight(R: TRect): Integer;
5066: function CompareRect(const R1, R2: TRect): Boolean;
5067: procedure RectNormalize(var R: TRect);
5068: function RectIsSquare(const R: TRect): Boolean;
5069: function RectSquare(var ARect: TRect; AMaxSize: Integer = -1): Boolean;
5070: //If AMaxSize = -1 ,then auto calc Square's max size
5071: {$IFDEF MSWINDOWS}
5072: procedure FreeUnusedOle;
5073: function GetWindowsVersion: string;
5074: function LoadDLL(const LibName: string): THandle;
5075: function RegisterServer(const ModuleName: string): Boolean;
5076: function UnregisterServer(const ModuleName: string): Boolean;
5077: {$ENDIF MSWINDOWS}
5078: { String routines }
5079: function GetEnvVar(const VarName: string): string;
5080: function AnsiUpperFirstChar(const S: string): string; //follow Delphi 2009's example with "Ansi" prefix
5081: function StringToPChar(var S: string): PChar;
5082: function StrPAlloc(const S: string): PChar;
5083: procedure SplitCommandLine(const CmdLine: string; var ExeName, Params: string);
5084: function DropT(const S: string): string;
5085: { Memory routines }
5086: function AllocMemo(Size: Longint): Pointer;
5087: function ReallocMemo(fpBlock: Pointer; Size: Longint): Pointer;
5088: procedure FreeMemo(var fpBlock: Pointer);
5089: function GetMemoSize(fpBlock: Pointer): Longint;
5090: function CompareMem(fpBlock1, fpBlock2: Pointer; Size: Cardinal): Boolean;
5091: { Manipulate huge pointers routines }
5092: procedure HugeInc(var HugePtr: Pointer; Amount: Longint);
5093: procedure HugeDec(var HugePtr: Pointer; Amount: Longint);
5094: function HugeOffset(HugePtr: Pointer; Amount: Longint): Pointer;
5095: procedure HugeMove(Base: Pointer; Dst, Src, Size: Longint);
5096: procedure HMemCpy(DstPtr, SrcPtr: Pointer; Amount: Longint);
5097: function WindowClassName(Wnd: THandle): string;
5098: procedure SwitchToWindow(Wnd: THandle; Restore: Boolean);
5099: procedure ActivateWindow(Wnd: THandle);
5100: procedure ShowWinNoAnimate(Handle: THandle; CmdShow: Integer);
5101: procedure KillMessage(Wnd: THandle; Msg: Cardinal);
5102: { SetWindowTop put window to top without recreating window }
5103: procedure SetWindowTop(const Handle: THandle; const Top: Boolean);
5104: procedure CenterWindow(Wnd: THandle);
5105: function MakeVariant(const Values: array of Variant): Variant;
5106: { Convert dialog units to pixels and backwards }
5107: {$IFDEF MSWINDOWS}
5108: function DialogUnitsToPixelsX(DlgUnits: Word): Word;
5109: function DialogUnitsToPixelsY(DlgUnits: Word): Word;
5110: function PixelsToDialogUnitsX(PixUnits: Word): Word;
5111: function PixelsToDialogUnitsY(PixUnits: Word): Word;
5112: {$ENDIF MSWINDOWS}
5113: function GetUniqueFileNameInDir(const Path, FileNameMask: string): string;
5114: {$IFDEF BCB}
5115: function FindPrevInstance(const MainFormClass: ShortString;const ATitle: string): THandle;
5116: function ActivatePrevInstance(const MainFormClass: ShortString;const ATitle: string): Boolean;
5117: {$ELSE}
5118: function FindPrevInstance(const MainFormClass, ATitle: string): THandle;
5119: function ActivatePrevInstance(const MainFormClass, ATitle: string): Boolean;
5120: {$ENDIF BCB}
5121: {$IFDEF MSWINDOWS}
5122: { BrowseForFolderNative displays Browse For Folder dialog }
5123: function BrowseForFolderNative(const Handle: THandle; const Title: string; var Folder: string): Boolean;
5124: {$ENDIF MSWINDOWS}
5125: procedure AntiAlias(Clip: TBitmap);
5126: procedure AntiAliasRect(Clip: TBitmap; XOrigin, YOrigin,XFinal, YFinal: Integer);
5127: procedure CopyRectDIBits(ACanvas: TCanvas; const DestRect: TRect;
5128:   ABitmap: TBitmap; const SourceRect: TRect);
5129: function IsTrueType(const FontName: string): Boolean;
5130: // Removes all non-numeric characters from AValue and returns the resulting string
5131: function TextToValText(const AValue: string): string;
5132: Function ExecRegExpr( const ARegExpr, AInputStr : RegExprString) : boolean
5133: Procedure SplitRegExpr( const ARegExpr, AInputStr : RegExprString; APieces : TStrings)
5134: Function ReplaceRegExpr(const ARegExpr,AInputStr,
      AReplaceStr:RegExprString;AUseSubstitution:bool):RegExprString;
5135: Function QuoteRegExprMetaChars( const AStr : RegExprString) : RegExprString
5136: Function RegExprSubExpressions(const ARegExpr:string; ASubExprs:TStrings; AExtendedSyntax : boolean) :
5137:
5138: ****************************************************unit uPSI_JvTFUtils;
5139:  Function JExtractYear( ADate : TDateTime) : Word
```

```
5140:  Function JExtractMonth( ADate : TDateTime) : Word
5141:  Function JExtractDay( ADate : TDateTime) : Word
5142:  Function ExtractHours( ATime : TDateTime) : Word
5143:  Function ExtractMins( ATime : TDateTime) : Word
5144:  Function ExtractSecs( ATime : TDateTime) : Word
5145:  Function ExtractMSecs( ATime : TDateTime) : Word
5146:  Function FirstOfMonth( ADate : TDateTime) : TDateTime
5147:  Function GetDayOfNthDOW( Year, Month, DOW, N : Word) : Word
5148:  Function GetWeeksInMonth( Year, Month : Word; StartOfWeek : Integer) : Word
5149:  Procedure IncBorlDOW( var BorlDOW : Integer; N : Integer)
5150:  Procedure IncDOW( var DOW : TTFDayOfWeek; N : Integer)
5151:  Procedure IncDays( var ADate : TDateTime; N : Integer)
5152:  Procedure IncWeeks( var ADate : TDateTime; N : Integer)
5153:  Procedure IncMonths( var ADate : TDateTime; N : Integer)
5154:  Procedure IncYears( var ADate : TDateTime; N : Integer)
5155:  Function EndOfMonth( ADate : TDateTime) : TDateTime
5156:  Function IsFirstOfMonth( ADate : TDateTime) : Boolean
5157:  Function IsEndOfMonth( ADate : TDateTime) : Boolean
5158:  Procedure EnsureMonth( Month : Word)
5159:  Procedure EnsureDOW( DOW : Word)
5160:  Function EqualDates( D1, D2 : TDateTime) : Boolean
5161:  Function Lesser( N1, N2 : Integer) : Integer
5162:  Function Greater( N1, N2 : Integer) : Integer
5163:  Function GetDivLength( TotalLength, DivCount, DivNum : Integer) : Integer
5164:  Function GetDivNum( TotalLength, DivCount, X : Integer) : Integer
5165:  Function GetDivStart( TotalLength, DivCount, DivNum : Integer) : Integer
5166:  Function DOWToBorl( ADOW : TTFDayOfWeek) : Integer
5167:  Function BorlToDOW( BorlDOW : Integer) : TTFDayOfWeek
5168:  Function DateToDOW( ADate : TDateTime) : TTFDayOfWeek
5169:  Procedure CalcTextPos( HostRect : TRect; var TextLeft, TextTop:Integer; var TextBounds : TRect;
      AFont:TFont;AAngle: Integer; HAlign : TAlignment; VAlign : TJvTFVAlignment; ATxt : string)
5170:  Procedure DrawAngleText( ACanvas : TCanvas; HostRect : TRect; var TextBounds : TRect; AAngle : Integer;
      HAlign : TAlignment; VAlign : TJvTFVAlignment; ATxt : string)
5171:  Function JRectWidth( ARect : TRect) : Integer
5172:  Function JRectHeight( ARect : TRect) : Integer
5173:  Function JEmptyRect : TRect
5174:  Function IsClassByName( Obj : TObject; ClassName : string) : Boolean
5175:
5176: procedure SIRegister_MSysUtils(CL: TPSPascalCompiler);
5177: begin
5178:  Procedure HideTaskBarButton( hWindow : HWND)
5179:  Function msLoadStr( ID : Integer) : String
5180:  Function msFormat( fmt : String; params : array of const) : String
5181:  Function msFileExists( const FileName : String) : Boolean
5182:  Function msIntToStr( Int : Int64) : String
5183:  Function msStrPas( const Str : PChar) : String
5184:  Function msRenameFile( const OldName, NewName : String) : Boolean
5185:  Function CutFileName( s : String) : String
5186:  Function GetVersionInfo( var VersionString : String) : DWORD
5187:  Function FormatTime( t : Cardinal) : String
5188:  Function msCreateDir( const Dir : string) : Boolean
5189:  Function SetAutoRun( NeedAutoRun : Boolean; AppName : String) : Boolean
5190:  Function SetTreeViewStyle( const hTV : HWND; dwNewStyle : dword) : DWORD
5191:  Function msStrLen( Str : PChar) : Integer
5192:  Function msDirectoryExists( const Directory : String) : Boolean
5193:  Function GetFolder( hWnd : hWnd; RootDir : Integer; Caption : String) : String
5194:  Function SetBlendWindow( hWnd : HWND; AlphaBlend : Byte) : LongBool
5195:  Function EditWindowProc( hWnd : HWND; Msg : UINT; wParam : WPARAM; lParam : LPARAM) : LRESULT
5196:  Procedure SetEditWndProc( hWnd : HWND; ptr : TObject)
5197:  Function GetTextFromFile( Filename : String) : string
5198:  Function IsTopMost( hWnd : HWND) : Bool // 'LWA_ALPHA','LongWord').SetUInt( $00000002);
5199:  Function msStrToIntDef( const s : String; const i : Integer) : Integer
5200:  Function msStrToInt( s : String) : Integer
5201:  Function GetItemText( hDlg : THandle; ID : DWORD) : String
5202: end;
5203:
5204: procedure SIRegister_ESBMaths2(CL: TPSPascalCompiler);
5205: begin
5206:   //TDynFloatArray', 'array of Extended
5207:   TDynLWordArray', 'array of LongWord
5208:   TDynLIntArray', 'array of LongInt
5209:   TDynFloatMatrix', 'array of TDynFloatArray
5210:   TDynLWordMatrix', 'array of TDynLWordArray
5211:   TDynLIntMatrix', 'array of TDynLIntArray
5212:  Function SquareAll( const X : TDynFloatArray) : TDynFloatArray
5213:  Function InverseAll( const X : TDynFloatArray) : TDynFloatArray
5214:  Function LnAll( const X : TDynFloatArray) : TDynFloatArray
5215:  Function Log10All( const X : TDynFloatArray) : TDynFloatArray
5216:  Function LinearTransform( const X : TDynFloatArray; Offset, Scale : Extended) : TDynFloatArray
5217:  Function AddVectors( const X, Y : TDynFloatArray) : TDynFloatArray
5218:  Function SubVectors( const X, Y : TDynFloatArray) : TDynFloatArray
5219:  Function MultVectors( const X, Y : TDynFloatArray) : TDynFloatArray
5220:  Function DotProduct( const X, Y : TDynFloatArray) : Extended
5221:  Function MNorm( const X : TDynFloatArray) : Extended
5222:  Function MatrixIsRectangular( const X : TDynFloatMatrix) : Boolean
5223:  Procedure MatrixDimensions(const X:TDynFloatMatrix;var Rows,Columns:LongWord;var Rectangular:Boolean;
5224:  Function MatrixIsSquare( const X : TDynFloatMatrix) : Boolean
5225:  Function MatricesSameDimensions( const X, Y : TDynFloatMatrix) : Boolean
5226:  Function AddMatrices( const X, Y : TDynFloatMatrix) : TDynFloatMatrix
```

```
5227:  Procedure AddToMatrix( var X : TDynFloatMatrix; const Y : TDynFloatMatrix)
5228:  Function SubtractMatrices( const X, Y : TDynFloatMatrix) : TDynFloatMatrix
5229:  Procedure SubtractFromMatrix( var X : TDynFloatMatrix; const Y : TDynFloatMatrix)
5230:  Function MultiplyMatrixByConst( const X : TDynFloatMatrix; const K : Extended) : TDynFloatMatrix
5231:  Procedure MultiplyMatrixByConst2( var X : TDynFloatMatrix; const K : Extended);
5232:  Function MultiplyMatrices( const X, Y : TDynFloatMatrix) : TDynFloatMatrix;
5233:  Function TransposeMatrix( const X : TDynFloatMatrix) : TDynFloatMatrix;
5234:  Function GrandMean( const X : TDynFloatMatrix; var N : LongWord) : Extended
5235: end;
5236:
5237: procedure SIRegister_ESBMaths(CL: TPSPascalCompiler);
5238: begin
5239:  'ESBMinSingle','Single').setExtended( 1.5e-45);
5240:  'ESBMaxSingle','Single').setExtended( 3.4e+38);
5241:  'ESBMinDouble','Double').setExtended( 5.0e-324);
5242:  'ESBMaxDouble','Double').setExtended( 1.7e+308);
5243:  'ESBMinExtended','Extended').setExtended( 3.6e-4951);
5244:  'ESBMaxExtended','Extended').setExtended( 1.1e+4932);
5245:  'ESBMinCurrency','Currency').SetExtended( - 922337203685477.5807);
5246:  'ESBMaxCurrency','Currency').SetExtended( 922337203685477.5807);
5247:  'ESBSqrt2','Extended').setExtended( 1.4142135623730950488);
5248:  'ESBSqrt3','Extended').setExtended( 1.7320508075688772935);
5249:  'ESBSqrt5','Extended').setExtended( 2.2360679774997896964);
5250:  'ESBSqrt10','Extended').setExtended( 3.1622776601683793320);
5251:  'ESBSqrtPi','Extended').setExtended( 1.77245385090551602729);
5252:  'ESBCbrt2','Extended').setExtended( 1.2599210498948731648);
5253:  'ESBCbrt3','Extended').setExtended( 1.4422495703074083823);
5254:  'ESBCbrt10','Extended').setExtended( 2.1544346900318837219);
5255:  'ESBCbrt100','Extended').setExtended( 4.6415888336127788924);
5256:  'ESBCbrtPi','Extended').setExtended( 1.4645918875615232630);
5257:  'ESBInvSqrt2','Extended').setExtended( 0.70710678118654752440);
5258:  'ESBInvSqrt3','Extended').setExtended( 0.57735026918962576451);
5259:  'ESBInvSqrt5','Extended').setExtended( 0.44721359549995793928);
5260:  'ESBInvSqrtPi','Extended').setExtended( 0.56418958354775628695);
5261:  'ESBInvCbrtPi','Extended').setExtended( 0.68278406325529568147);
5262:  'ESBe','Extended').setExtended( 2.7182818284590452354);
5263:  'ESBe2','Extended').setExtended( 7.3890560989306502272);
5264:  'ESBePi','Extended').setExtended( 23.140692632779269006);
5265:  'ESBePiOn2','Extended').setExtended( 4.8104773809653516555);
5266:  'ESBePiOn4','Extended').setExtended( 2.1932800507380154566);
5267:  'ESBLn2','Extended').setExtended( 0.69314718055994530942);
5268:  'ESBLn10','Extended').setExtended( 2.3025850929940456840 2);
5269:  'ESBLnPi','Extended').setExtended( 1.14472988584940017414);
5270:  'ESBLog10Base2','Extended').setExtended( 3.3219280948873623478);
5271:  'ESBLog2Base10','Extended').setExtended( 0.30102999566398119521);
5272:  'ESBLog3Base10','Extended').setExtended( 0.47712125471966243730);
5273:  'ESBLogPiBase10','Extended').setExtended( 0.4971498726941339);
5274:  'ESBLogEBase10','Extended').setExtended( 0.43429448190325182765);
5275:  'ESBPi','Extended').setExtended( 3.1415926535897932385);
5276:  'ESBInvPi','Extended').setExtended( 3.1830988618379067154e-1);
5277:  'ESBTwoPi','Extended').setExtended( 6.2831853071795864769);
5278:  'ESBThreePi','Extended').setExtended( 9.4247779607693797153);
5279:  'ESBPi2','Extended').setExtended( 9.8696044010893586188);
5280:  'ESBPiToE','Extended').setExtended( 22.459157718361045473);
5281:  'ESBPiOn2','Extended').setExtended( 1.5707963267948966192);
5282:  'ESBPiOn3','Extended').setExtended( 1.0471975511965977462);
5283:  'ESBPiOn4','Extended').setExtended( 0.7853981633974483096);
5284:  'ESBThreePiOn2','Extended').setExtended( 4.7123889803846898577);
5285:  'ESBFourPiOn3','Extended').setExtended( 4.1887902047863909846);
5286:  'ESBTwoToPower63','Extended').setExtended( 9223372036854775808.0);
5287:  'ESBOneRadian','Extended').setExtended( 57.295779513082320877);
5288:  'ESBOneDegree','Extended').setExtended( 1.7453292519943295769E-2);
5289:  'ESBOneMinute','Extended').setExtended( 2.9088820866572159615E-4);
5290:  'ESBOneSecond','Extended').setExtended( 4.8481368110953599359E-6);
5291:  'ESBGamma','Extended').setExtended( 0.57721566490153286061);
5292:  'ESBLnRt2Pi','Extended').setExtended( 9.189385332046727E-1);
5293:   //LongWord', 'Cardinal
5294:   TBitList', 'Word
5295:  Function UMul( const Num1, Num2 : LongWord) : LongWord
5296:  Function UMulDiv2p32( const Num1, Num2 : LongWord) : LongWord
5297:  Function UMulDiv( const Num1, Num2, Divisor : LongWord) : LongWord
5298:  Function UMulMod( const Num1, Num2, Modulus : LongWord) : LongWord
5299:  Function SameFloat( const X1, X2 : Extended) : Boolean
5300:  Function FloatIsZero( const X : Extended) : Boolean
5301:  Function FloatIsPositive( const X : Extended) : Boolean
5302:  Function FloatIsNegative( const X : Extended) : Boolean
5303:  Procedure IncLim( var B : Byte; const Limit : Byte)
5304:  Procedure IncLimSI( var B : ShortInt; const Limit : ShortInt)
5305:  Procedure IncLimW( var B : Word; const Limit : Word)
5306:  Procedure IncLimI( var B : Integer; const Limit : Integer)
5307:  Procedure IncLimL( var B : LongInt; const Limit : LongInt)
5308:  Procedure DecLim( var B : Byte; const Limit : Byte)
5309:  Procedure DecLimSI( var B : ShortInt; const Limit : ShortInt)
5310:  Procedure DecLimW( var B : Word; const Limit : Word)
5311:  Procedure DecLimI( var B : Integer; const Limit : Integer)
5312:  Procedure DecLimL( var B : LongInt; const Limit : LongInt)
5313:  Function MaxB( const B1, B2 : Byte) : Byte
5314:  Function MinB( const B1, B2 : Byte) : Byte
5315:  Function MaxSI( const B1, B2 : ShortInt) : ShortInt
```

```
5316:  Function MinSI( const B1, B2 : ShortInt) : ShortInt
5317:  Function MaxW( const B1, B2 : Word) : Word
5318:  Function MinW( const B1, B2 : Word) : Word
5319:  Function esbMaxI( const B1, B2 : Integer) : Integer
5320:  Function esbMinI( const B1, B2 : Integer) : Integer
5321:  Function MaxL( const B1, B2 : LongInt) : LongInt
5322:  Function MinL( const B1, B2 : LongInt) : LongInt
5323:  Procedure SwapB( var B1, B2 : Byte)
5324:  Procedure SwapSI( var B1, B2 : ShortInt)
5325:  Procedure SwapW( var B1, B2 : Word)
5326:  Procedure SwapI( var B1, B2 : SmallInt)
5327:  Procedure SwapL( var B1, B2 : LongInt)
5328:  Procedure SwapI32( var B1, B2 : Integer)
5329:  Procedure SwapC( var B1, B2 : LongWord)
5330:  Procedure SwapInt64( var X, Y : Int64)
5331:  Function esbSign( const B : LongInt) : ShortInt
5332:  Function Max4Word( const X1, X2, X3, X4 : Word) : Word
5333:  Function Min4Word( const X1, X2, X3, X4 : Word) : Word
5334:  Function Max3Word( const X1, X2, X3 : Word) : Word
5335:  Function Min3Word( const X1, X2, X3 : Word) : Word
5336:  Function MaxBArray( const B : array of Byte) : Byte
5337:  Function MaxWArray( const B : array of Word) : Word
5338:  Function MaxSIArray( const B : array of ShortInt) : ShortInt
5339:  Function MaxIArray( const B : array of Integer) : Integer
5340:  Function MaxLArray( const B : array of LongInt) : LongInt
5341:  Function MinBArray( const B : array of Byte) : Byte
5342:  Function MinWArray( const B : array of Word) : Word
5343:  Function MinSIArray( const B : array of ShortInt) : ShortInt
5344:  Function MinIArray( const B : array of Integer) : Integer
5345:  Function MinLArray( const B : array of LongInt) : LongInt
5346:  Function SumBArray( const B : array of Byte) : Byte
5347:  Function SumBArray2( const B : array of Byte) : Word
5348:  Function SumSIArray( const B : array of ShortInt) : ShortInt
5349:  Function SumSIArray2( const B : array of ShortInt) : Integer
5350:  Function SumWArray( const B : array of Word) : Word
5351:  Function SumWArray2( const B : array of Word) : LongInt
5352:  Function SumIArray( const B : array of Integer) : Integer
5353:  Function SumLArray( const B : array of LongInt) : LongInt
5354:  Function SumLWArray( const B : array of LongWord) : LongWord
5355:  Function ESBDigits( const X : LongWord) : Byte
5356:  Function BitsHighest( const X : LongWord) : Integer
5357:  Function ESBBitsNeeded( const X : LongWord) : Integer
5358:  Function esbGCD( const X, Y : LongWord) : LongWord
5359:  Function esbLCM( const X, Y : LongInt) : Int64
5360:  //Function esbLCM( const X, Y : LongInt) : LongInt
5361:  Function RelativePrime( const X, Y : LongWord) : Boolean
5362:  Function Get87ControlWord : TBitList
5363:  Procedure Set87ControlWord( const CWord : TBitList)
5364:  Procedure SwapExt( var X, Y : Extended)
5365:  Procedure SwapDbl( var X, Y : Double)
5366:  Procedure SwapSing( var X, Y : Single)
5367:  Function esbSgn( const X : Extended) : ShortInt
5368:  Function Distance( const X1, Y1, X2, Y2 : Extended) : Extended
5369:  Function ExtMod( const X, Y : Extended) : Extended
5370:  Function ExtRem( const X, Y : Extended) : Extended
5371:  Function CompMOD( const X, Y : Comp) : Comp
5372:  Procedure Polar2XY( const Rho, Theta : Extended; var X, Y : Extended)
5373:  Procedure XY2Polar( const X, Y : Extended; var Rho, Theta : Extended)
5374:  Function DMS2Extended( const Degs, Mins, Secs : Extended) : Extended
5375:  Procedure Extended2DMS( const X : Extended; var Degs, Mins, Secs : Extended)
5376:  Function MaxExt( const X, Y : Extended) : Extended
5377:  Function MinExt( const X, Y : Extended) : Extended
5378:  Function MaxEArray( const B : array of Extended) : Extended
5379:  Function MinEArray( const B : array of Extended) : Extended
5380:  Function MaxSArray( const B : array of Single) : Single
5381:  Function MinSArray( const B : array of Single) : Single
5382:  Function MaxCArray( const B : array of Comp) : Comp
5383:  Function MinCArray( const B : array of Comp) : Comp
5384:  Function SumSArray( const B : array of Single) : Single
5385:  Function SumEArray( const B : array of Extended) : Extended
5386:  Function SumSqEArray( const B : array of Extended) : Extended
5387:  Function SumSqDiffEArray( const B : array of Extended; Diff : Extended) : Extended
5388:  Function SumXYEArray( const X, Y : array of Extended) : Extended
5389:  Function SumCArray( const B : array of Comp) : Comp
5390:  Function FactorialX( A : LongWord) : Extended
5391:  Function PermutationX( N, R : LongWord) : Extended
5392:  Function esbBinomialCoeff( N, R : LongWord) : Extended
5393:  Function IsPositiveEArray( const X : array of Extended) : Boolean
5394:  Function esbGeometricMean( const X : array of Extended) : Extended
5395:  Function esbHarmonicMean( const X : array of Extended) : Extended
5396:  Function ESBMean( const X : array of Extended) : Extended
5397:  Function esbSampleVariance( const X : array of Extended) : Extended
5398:  Function esbPopulationVariance( const X : array of Extended) : Extended
5399:  Procedure esbSampleVarianceAndMean( const X : array of Extended; var Variance, Mean : Extended)
5400:  Procedure esbPopulationVarianceAndMean( const X : array of Extended; var Variance, Mean : Extended)
5401:  Function GetMedian( const SortedX : array of Extended) : Extended
5402:  Function GetMode( const SortedX : array of Extended; var Mode : Extended) : Boolean
5403:  Procedure GetQuartiles( const SortedX : array of Extended; var Q1, Q3 : Extended)
5404:  Function ESBMagnitude( const X : Extended) : Integer
```

```
5405:  Function ESBTan( Angle : Extended) : Extended
5406:  Function ESBCot( Angle : Extended) : Extended
5407:  Function ESBCosec( const Angle : Extended) : Extended
5408:  Function ESBSec( const Angle : Extended) : Extended
5409:  Function ESBArcTan( X, Y : Extended) : Extended
5410:  Procedure ESBSinCos( Angle : Extended; var SinX, CosX : Extended)
5411:  Function ESBArcCos( const X : Extended) : Extended
5412:  Function ESBArcSin( const X : Extended) : Extended
5413:  Function ESBArcSec( const X : Extended) : Extended
5414:  Function ESBArcCosec( const X : Extended) : Extended
5415:  Function ESBLog10( const X : Extended) : Extended
5416:  Function ESBLog2( const X : Extended) : Extended
5417:  Function ESBLogBase( const X, Base : Extended) : Extended
5418:  Function Pow2( const X : Extended) : Extended
5419:  Function IntPow( const Base : Extended; const Exponent : LongWord) : Extended
5420:  Function ESBIntPower( const X : Extended; const N : LongInt) : Extended
5421:  Function XtoY( const X, Y : Extended) : Extended
5422:  Function esbTenToY( const Y : Extended) : Extended
5423:  Function esbTwoToY( const Y : Extended) : Extended
5424:  Function LogXtoBaseY( const X, Y : Extended) : Extended
5425:  Function esbISqrt( const I : LongWord) : Longword
5426:  Function ILog2( const I : LongWord) : LongWord
5427:  Function IGreatestPowerOf2( const N : LongWord) : LongWord
5428:  Function ESBArCosh( X : Extended) : Extended
5429:  Function ESBArSinh( X : Extended) : Extended
5430:  Function ESBArTanh( X : Extended) : Extended
5431:  Function ESBCosh( X : Extended) : Extended
5432:  Function ESBSinh( X : Extended) : Extended
5433:  Function ESBTanh( X : Extended) : Extended
5434:  Function InverseGamma( const X : Extended) : Extended
5435:  Function esbGamma( const X : Extended) : Extended
5436:  Function esbLnGamma( const X : Extended) : Extended
5437:  Function esbBeta( const X, Y : Extended) : Extended
5438:  Function IncompleteBeta( X : Extended; P, Q : Extended) : Extended
5439: end;
5440:
5441: ******************************Integer Huge Cardinal Utils**************************
5442: Function Add_uint64_WithCarry( x, y : uint64; var Carry : Boolean) : uint64
5443: Function Add_uint32_WithCarry( x, y : uint32; var Carry : Boolean) : uint32
5444: Function Subtract_uint64_WithBorrow( x, y : uint64; var Borrow : Boolean) : uint64
5445: Function Subtract_uint32_WithBorrow( x, y : uint32; var Borrow : Boolean) : uint32
5446: Function BitCount_8( Value : byte) : integer
5447: Function BitCount_16( Value : uint16) : integer
5448: Function BitCount_32( Value : uint32) : integer
5449: Function BitCount_64( Value : uint64) : integer
5450: Function CountSetBits_64( Value : uint64) : integer TPrimalityTestNoticeProc',
5451:  Procedure ( CountPrimalityTests : integer)
5452:  Function gcd( a, b : THugeCardinal) : THugeCardinal
5453:  Function lcm( a, b : THugeCardinal) : THugeCardinal
5454:  Function isCoPrime( a, b : THugeCardinal) : boolean
5455:  Function isProbablyPrime(p: THugeCardinal;OnProgress: TProgress; var wasAborted: boolean): boolean
5456:  Function hasSmallFactor( p : THugeCardinal) : boolean
5457:  //Function GeneratePrime( NumBits : integer; OnProgress : TProgress; OnPrimalityTest:
      TPrimalityTestNoticeProc; PassCount: integer; Pool1:TMemoryStreamPool;var Prime: THugeCardinal; var
      NumbersTested: integer) : boolean
5458:  Function Inverse( Prime, Modulus : THugeCardinal) : THugeCardinal
5459:  Const('StandardExponent','LongInt'( 65537);
5460: //Procedure Compute_RSA_Fundamentals_2Factors(RequiredBitLengthOfN:integer;Fixed_e:uint64;var N,e,d,
      Totient:TProgress;OnPrimalityTest:TPrimalityTestNoticeProc;GeneratePrimePassCount:int;Pool1:TMemoryStreamPo
      Numbers
5461:  Function Validate_RSA_Fundamentals( var N, e, d, Totient : THugeCardinal) : boolean')
5462:
5463: procedure SIRegister_xrtl_math_Integer(CL: TPSPascalCompiler);
5464: begin
5465:   AddTypeS('TXRTLInteger', 'array of Integer
5466:   AddClassN(FindClass('TOBJECT'),'EXRTLMathException
5467:   (FindClass('TOBJECT'),'EXRTLExtendInvalidArgument
5468:   AddClassN(FindClass('TOBJECT'),'EXRTLDivisionByZero
5469:   AddClassN(FindClass('TOBJECT'),'EXRTLExpInvalidArgument
5470:   AddClassN(FindClass('TOBJECT'),'EXRTLInvalidRadix
5471:   AddClassN(FindClass('TOBJECT'),'EXRTLInvalidRadixDigit
5472:   AddClassN(FindClass('TOBJECT'),'EXRTLRootInvalidArgument
5473:   'BitsPerByte','LongInt'( 8);
5474:   BitsPerDigit','LongInt'( 32);
5475:   SignBitMask','LongWord( $80000000);
5476:  Function XRTLAdjustBits( const ABits : Integer) : Integer
5477:  Function XRTLLength( const AInteger : TXRTLInteger) : Integer
5478:  Function XRTLDataBits( const AInteger : TXRTLInteger) : Integer
5479:  Procedure XRTLBitPosition( const BitIndex : Integer; var Index, Mask : Integer)
5480:  Procedure XRTLBitSet( var AInteger : TXRTLInteger; const BitIndex : Integer)
5481:  Procedure XRTLBitReset( var AInteger : TXRTLInteger; const BitIndex : Integer)
5482:  Function XRTLBitGet( const AInteger : TXRTLInteger; const BitIndex : Integer) : Integer
5483:  Function XRTLBitGetBool( const AInteger : TXRTLInteger; const BitIndex : Integer) : Boolean
5484:  Function XRTLExtend(const AInteger:TXRTLInteger;ADataBits:Integer;Sign:Int;var AResult:TXRTLInteger):Int;
5485:  Function XRTLZeroExtend(const AInteger:TXRTLInteger;ADataBits:Integer; var AResult:TXRTLInteger):Integer;
5486:  Function XRTLSignExtend(const AInteger:TXRTLInteger; ADataBits:Integer;var AResult:TXRTLInteger):Integer;
5487:  Function XRTLSignStrip(const AInteger:TXRTLInteger;var AResult:TXRTLInteger;const AMinDataBits:Int):Int;
5488:  Procedure XRTLNot( const AInteger : TXRTLInteger; var AResult : TXRTLInteger)
5489:  Procedure XRTLOr( const AInteger1, AInteger2 : TXRTLInteger; var AResult : TXRTLInteger)
```

```
5490:  Procedure XRTLAnd( const AInteger1, AInteger2 : TXRTLInteger; var AResult : TXRTLInteger)
5491:  Procedure XRTLXor( const AInteger1, AInteger2 : TXRTLInteger; var AResult : TXRTLInteger)
5492:  Function XRTLSign( const AInteger : TXRTLInteger) : Integer
5493:  Procedure XRTLZero( var AInteger : TXRTLInteger)
5494:  Procedure XRTLOne( var AInteger : TXRTLInteger)
5495:  Procedure XRTLMOne( var AInteger : TXRTLInteger)
5496:  Procedure XRTLTwo( var AInteger : TXRTLInteger)
5497:  Function XRTLNeg( const AInteger : TXRTLInteger; var AResult : TXRTLInteger) : Integer
5498:  Function XRTLAbs( const AInteger : TXRTLInteger; var AResult : TXRTLInteger) : Integer
5499:  Procedure XRTLFullSum( const A, B, C : Integer; var Sum, Carry : Integer)
5500:  Function XRTLAdd( const AInteger1, AInteger2 : TXRTLInteger; var AResult : TXRTLInteger) : Integer;
5501:  Function XRTLAdd1(const AInteger1:TXRTLInteger;const AInteger2:Int64;var AResult:TXRTLInteger):Integer;
5502:  Function XRTLSub( const AInteger1, AInteger2 : TXRTLInteger; var AResult : TXRTLInteger) : Integer;
5503:  Function XRTLSub1( const AInteger1:TXRTLInteger;const AInteger2:Int64;var AResult:TXRTLInteger):Integer;
5504:  Function XRTLCompare( const AInteger1, AInteger2 : TXRTLInteger) : Integer;
5505:  Function XRTLCompare1( const AInteger1 : TXRTLInteger; const AInteger2 : Int64) : Integer;
5506:  Function XRTLUMul( const AInteger1, AInteger2 : TXRTLInteger; var AResult : TXRTLInteger) : Integer
5507:  Function XRTLMulAdd(const AInteger1,AInteger2,AInteger3:TXRTLInteger; var AResult:TXRTLInteger):Integer
5508:  Function XRTLMul( const AInteger1, AInteger2 : TXRTLInteger; var AResult : TXRTLInteger) : Integer
5509:  Procedure XRTLDivMod( const AInteger1, AInteger2 : TXRTLInteger; var QResult, RResult : TXRTLInteger)
5510:  Procedure XRTLSqr( const AInteger : TXRTLInteger; var AResult : TXRTLInteger)
5511:  Procedure XRTLSqrt( const AInteger : TXRTLInteger; var AResult : TXRTLInteger)
5512:  Procedure XRTLRoot( const AInteger1, AInteger2 : TXRTLInteger; var AResult : TXRTLInteger)
5513:  Procedure XRTLRootApprox(const AInteger1,AInteger2:TXRTLInteger;var ALowApproxResult,
      AHighApproxResult:TXRTLInteger)
5514:  Procedure XRTLURootApprox(const AInteger1,AInteger2:TXRTLInteger;var ALowApproxResult,
      AHighApproxResult:TXRTLInteger);
5515:  Procedure XRTLExp( const AInteger1, AInteger2 : TXRTLInteger; var AResult : TXRTLInteger)
5516:  Procedure XRTLExpMod( const AInteger1, AInteger2, AInteger3 : TXRTLInteger;var AResult: TXRTLInteger)
5517:  Procedure XRTLSLBL(const AInteger: TXRTLInteger; const BitCount:Integer; var AResult: TXRTLInteger)
5518:  Procedure XRTLSABL(const AInteger: TXRTLInteger; const BitCount:Integer; var AResult: TXRTLInteger)
5519:  Procedure XRTLRCBL(const AInteger: TXRTLInteger; const BitCount:Integer; var AResult: TXRTLInteger)
5520:  Procedure XRTLSLDL(const AInteger:TXRTLInteger;const DigitCount:Integer; var AResult:TXRTLInteger)
5521:  Procedure XRTLSADL(const AInteger: TXRTLInteger; const DigitCount:Integer;var AResult: TXRTLInteger)
5522:  Procedure XRTLRCDL(const AInteger:TXRTLInteger; const DigitCount:Integer; var AResult: TXRTLInteger)
5523:  Procedure XRTLSLBR(const AInteger: TXRTLInteger; const BitCount:Integer; var AResult: TXRTLInteger)
5524:  Procedure XRTLSABR(const AInteger: TXRTLInteger; const BitCount:Integer; var AResult: TXRTLInteger)
5525:  Procedure XRTLRCBR(const AInteger: TXRTLInteger; const BitCount:Integer; var AResult: TXRTLInteger)
5526:  Procedure XRTLSLDR(const AInteger:TXRTLInteger; const DigitCount:Integer; var AResult: TXRTLInteger)
5527:  Procedure XRTLSADR(const AInteger: TXRTLInteger; const DigitCount:Integer;var AResult: TXRTLInteger)
5528:  Procedure XRTLRCDR(const AInteger: TXRTLInteger;const DigitCount:Integer;var AResult: TXRTLInteger)
5529:  Function XRTLToHex( const AInteger : TXRTLInteger; Digits : Integer) : string
5530:  Function XRTLToBin( const AInteger : TXRTLInteger; Digits : Integer) : string
5531:  Function XRTLToString( const AInteger : TXRTLInteger; Radix : Integer; Digits : Integer) : string
5532:  Procedure XRTLFromHex( const Value : string; var AResult : TXRTLInteger)
5533:  Procedure XRTLFromBin( const Value : string; var AResult : TXRTLInteger)
5534:  Procedure XRTLFromString( const Value : string; var AResult : TXRTLInteger; Radix : Integer)
5535:  Procedure XRTLAssign( const AInteger : TXRTLInteger; var AResult : TXRTLInteger);
5536:  Procedure XRTLAssign1( const Value : Integer; var AResult : TXRTLInteger);
5537:  Procedure XRTLAssign2( const Value : Int64; var AResult : TXRTLInteger);
5538:  Procedure XRTLAppend( const ALow, AHigh : TXRTLInteger; var AResult : TXRTLInteger)
5539:  Procedure XRTLSplit(const AInteger: TXRTLInteger; var ALow,AHigh: TXRTLInteger;LowDigits: Integer)
5540:  Function XRTLGetMSBitIndex( const AInteger : TXRTLInteger) : Integer
5541:  Procedure XRTLMinMax(const AInteger1, AInteger2 : TXRTLInteger;var AMinResult,AMaxResult: TXRTLInteger)
5542:  Procedure XRTLMin( const AInteger1, AInteger2 : TXRTLInteger; var AResult : TXRTLInteger);
5543:  Procedure XRTLMin1(const AInteger1: TXRTLInteger;const AInteger2:Integer;var AResult : TXRTLInteger);
5544:  Procedure XRTLMax( const AInteger1, AInteger2 : TXRTLInteger; var AResult : TXRTLInteger);
5545:  Procedure XRTLMax1(const AInteger1:TXRTLInteger; const AInteger2:Integer; var AResult:TXRTLInteger);
5546:  Procedure XRTLGCD( const AInteger1, AInteger2 : TXRTLInteger; var AResult : TXRTLInteger)
5547:  Procedure XRTLSwap( var AInteger1, AInteger2 : TXRTLInteger)
5548:  Procedure XRTLFactorial( const AInteger : TXRTLInteger; var AResult : TXRTLInteger)
5549:  Procedure XRTLFactorialMod( const AInteger1, AInteger2 : TXRTLInteger; var AResult : TXRTLInteger)
5550: end;
5551:
5552: procedure SIRegister_JvXPCoreUtils(CL: TPSPascalCompiler);
5553: begin
5554:  Function JvXPMethodsEqual( const Method1, Method2 : TMethod) : Boolean
5555:  Procedure JvXPDrawLine( const ACanvas : TCanvas; const X1, Y1, X2, Y2 : Integer)
5556:  Procedure JvXPCreateGradientRect( const AWidth, AHeight : Integer; const StartColor, EndColor : TColor;
      const Colors:TJvXPGradientColors;const Style:TJvXPGradientStyle;const Dithered:Boolean;var Bitmap:TBitmap);
5557:  Procedure JvXPAdjustBoundRect(const BorderWidth:Byte; const ShowBoundLines:Boolean; const
      BoundLines:TJvXPBoundLines; var Rect : TRect)
5558:  Procedure JvXPDrawBoundLines(const ACan:TCanvas;const BoundLns:TJvXPBoundLins;const
      AColor:TColor;Rect:TRect;
5559:  Procedure JvXPConvertToGray2( Bitmap : TBitmap)
5560:  Procedure JvXPRenderText( const AParent : TControl; const ACanvas : TCanvas; ACaption : TCaption; const
      AFont : TFont; const AEnabled, AShowAccelChar : Boolean; var ARect : TRect; AFlags : Integer)
5561:  Procedure JvXPFrame3D(const ACanvas:TCanvas;const Rect:TRect; TopColor,BottomColor:TColor;const
      Swapped:Bool;
5562:  Procedure JvXPColorizeBitmap( Bitmap : TBitmap; const AColor : TColor)
5563:  Procedure JvXPSetDrawFlags(const AAlignment: TAlignment;const AWordWrap: Boolean; var Flags : Integer)
5564:  Procedure JvXPPlaceText( const AParent: TControl; const ACanvas : TCanvas; const AText : TCaption; const
      AFont : TFont; const AEnabled,AShowAccelChar:Boolean;const AAlignment:TAlignment;const
      AWordWrap:Boolean;var Rect:TRect)
5565: end;
5566:
5567:
5568: procedure SIRegister_uwinstr(CL: TPSPascalCompiler);
5569: begin
```

```
5570:  Function StrDec( S : String) : String
5571:  Function uIsNumeric( var S : String; var X : Float) : Boolean
5572:  Function ReadNumFromEdit( Edit : TEdit) : Float
5573:  Procedure WriteNumToFile( var F : Text; X : Float)
5574: end;
5575:
5576: procedure SIRegister_utexplot(CL: TPSPascalCompiler);
5577: begin
5578:  Function TeX_InitGraphics( FileName : String; PgWidth, PgHeight : Integer; Header : Boolean) : Boolean
5579:  Procedure TeX_SetWindow( X1, X2, Y1, Y2 : Integer; GraphBorder : Boolean)
5580:  Procedure TeX_LeaveGraphics( Footer : Boolean)
5581:  Procedure TeX_SetOxScale( Scale : TScale; OxMin, OxMax, OxStep : Float)
5582:  Procedure TeX_SetOyScale( Scale : TScale; OyMin, OyMax, OyStep : Float)
5583:  Procedure TeX_SetGraphTitle( Title : String)
5584:  Procedure TeX_SetOxTitle( Title : String)
5585:  Procedure TeX_SetOyTitle( Title : String)
5586:  Procedure TeX_PlotOxAxis
5587:  Procedure TeX_PlotOyAxis
5588:  Procedure TeX_PlotGrid( Grid : TGrid)
5589:  Procedure TeX_WriteGraphTitle
5590:  Function TeX_SetMaxCurv( NCurv : Byte) : Boolean
5591:  Procedure TeX_SetPointParam( CurvIndex, Symbol, Size : Integer)
5592:  Procedure TeX_SetLineParam( CurvIndex, Style : Integer; Width : Float; Smooth : Boolean)
5593:  Procedure TeX_SetCurvLegend( CurvIndex : Integer; Legend : String)
5594:  Procedure TeX_SetCurvStep( CurvIndex, Step : Integer)
5595:  Procedure TeX_PlotCurve( X, Y : TVector; Lb, Ub, CurvIndex : Integer)
5596:  Procedure TeX_PlotCurveWithErrorBars( X, Y, S : TVector; Ns, Lb, Ub, CurvIndex : Integer)
5597:  Procedure TeX_PlotFunc( Func : TFunc; X1, X2 : Float; Npt : Integer; CurvIndex : Integer)
5598:  Procedure TeX_WriteLegend( NCurv : Integer; ShowPoints, ShowLines : Boolean)
5599:  Procedure TeX_ConRec( Nx, Ny, Nc : Integer; X, Y, Z : TVector; F : TMatrix)
5600:  Function Xcm( X : Float) : Float
5601:  Function Ycm( Y : Float) : Float
5602: end;
5603:
5604: *---------------------------------------------------------------------------*)
5605: procedure SIRegister_VarRecUtils(CL: TPSPascalCompiler);
5606: begin
5607:   TConstArray', 'array of TVarRec
5608:  Function CopyVarRec( const Item : TVarRec) : TVarRec
5609:  Function CreateConstArray( const Elements : array of const) : TConstArray
5610:  Procedure FinalizeVarRec( var Item : TVarRec)
5611:  Procedure FinalizeConstArray( var Arr : TConstArray)
5612: end;
5613:
5614: procedure SIRegister_StStrS(CL: TPSPascalCompiler);
5615: begin
5616:  Function HexBS( B : Byte) : ShortString
5617:  Function HexWS( W : Word) : ShortString
5618:  Function HexLS( L : LongInt) : ShortString
5619:  Function HexPtrS( P : Pointer) : ShortString
5620:  Function BinaryBS( B : Byte) : ShortString
5621:  Function BinaryWS( W : Word) : ShortString
5622:  Function BinaryLS( L : LongInt) : ShortString
5623:  Function OctalBS( B : Byte) : ShortString
5624:  Function OctalWS( W : Word) : ShortString
5625:  Function OctalLS( L : LongInt) : ShortString
5626:  Function Str2Int16S( const S : ShortString; var I : SmallInt) : Boolean
5627:  Function Str2WordS( const S : ShortString; var I : Word) : Boolean
5628:  Function Str2LongS( const S : ShortString; var I : LongInt) : Boolean
5629:  Function Str2RealS( const S : ShortString; var R : Double) : Boolean
5630:  Function Str2RealS( const S : ShortString; var R : Real) : Boolean
5631:  Function Str2ExtS( const S : ShortString; var R : Extended) : Boolean
5632:  Function Long2StrS( L : LongInt) : ShortString
5633:  Function Real2StrS( R : Double; Width : Byte; Places : ShortInt) : ShortString
5634:  Function Ext2StrS( R : Extended; Width : Byte; Places : ShortInt) : ShortString
5635:  Function ValPrepS( const S : ShortString) : ShortString
5636:  Function CharStrS( C : AnsiChar; Len : Cardinal) : ShortString
5637:  Function PadChS( const S : ShortString; C : AnsiChar; Len : Cardinal) : ShortString
5638:  Function PadS( const S : ShortString; Len : Cardinal) : ShortString
5639:  Function LeftPadChS( const S : ShortString; C : AnsiChar; Len : Cardinal) : ShortString
5640:  Function LeftPadS( const S : ShortString; Len : Cardinal) : ShortString
5641:  Function TrimLeadS( const S : ShortString) : ShortString
5642:  Function TrimTrailS( const S : ShortString) : ShortString
5643:  Function TrimS( const S : ShortString) : ShortString
5644:  Function TrimSpacesS( const S : ShortString) : ShortString
5645:  Function CenterChS( const S : ShortString; C : AnsiChar; Len : Cardinal) : ShortString
5646:  Function CenterS( const S : ShortString; Len : Cardinal) : ShortString
5647:  Function EntabS( const S : ShortString; TabSize : Byte) : ShortString
5648:  Function DetabS( const S : ShortString; TabSize : Byte) : ShortString
5649:  Function ScrambleS( const S, Key : ShortString) : ShortString
5650:  Function SubstituteS( const S, FromStr, ToStr : ShortString) : ShortString
5651:  Function FilterS( const S, Filters : ShortString) : ShortString
5652:  Function CharExistsS( const S : ShortString; C : AnsiChar) : Boolean
5653:  Function CharCountS( const S : ShortString; C : AnsiChar) : Byte
5654:  Function WordCountS( const S, WordDelims : ShortString) : Cardinal
5655:  Function WordPositionS( N : Cardinal; const S, WordDelims : ShortString; var Pos : Cardinal) : Boolean
5656:  Function ExtractWordS( N : Cardinal; const S, WordDelims : ShortString) : ShortString
5657:  Function AsciiCountS( const S, WordDelims : ShortString; Quote : AnsiChar) : Cardinal
5658:  Function AsciiPositionS(N:Cardinal;const S,WordDelims:ShortString;Quote:AnsiChar;var Pos:Cardinal):Boolean
```

```
5659:  Function ExtractAsciiS(N:Cardinal;const S,WordDelims:ShortString;Quote:AnsiChar): ShortString
5660:  Procedure WordWrapS(const InSt: ShortString; var OutSt,Overlap: ShortString;
       Margin:Cardinal;PadToMargin:Boolean)
5661:  Function CompStringS( const S1, S2 : ShortString) : Integer
5662:  Function CompUCStringS( const S1, S2 : ShortString) : Integer
5663:  Function SoundexS( const S : ShortString) : ShortString
5664:  Function MakeLetterSetS( const S : ShortString) : Longint
5665:  Procedure BMMakeTableS( const MatchString : ShortString; var BT : BTable)
5666:  Function BMSearchS(var Buffer,BufLength:Card;var BT:BTable;const MatchString:ShortString;var
       Pos:Cardinal):Bool;
5667:  Function BMSearchUCS(var Buffer,BufLength:Card;var BT:BTable;const MatchStr:ShortString;var
       Pos:Cardinal):Bool;
5668:  Function DefaultExtensionS( const Name, Ext : ShortString) : ShortString
5669:  Function ForceExtensionS( const Name, Ext : ShortString) : ShortString
5670:  Function JustFilenameS( const PathName : ShortString) : ShortString
5671:  Function JustNameS( const PathName : ShortString) : ShortString
5672:  Function JustExtensionS( const Name : ShortString) : ShortString
5673:  Function JustPathnameS( const PathName : ShortString) : ShortString
5674:  Function AddBackSlashS( const DirName : ShortString) : ShortString
5675:  Function CleanPathNameS( const PathName : ShortString) : ShortString
5676:  Function HasExtensionS( const Name : ShortString; var DotPos : Cardinal) : Boolean
5677:  Function CommaizeS( L : LongInt) : ShortString
5678:  Function CommaizeChS( L : Longint; Ch : AnsiChar) : ShortString
5679:  Function FloatFormS(const Mask:ShortString;R:TstFloat;const LtCurr,RtCurr:SString;Sep,
       DecPt:Char):ShortString;
5680:  Function LongIntFormS(const Mask:ShortString;L:LongInt;const LtCurr,
       RtCurr:ShortString;Sep:AnsiChar):ShortString;
5681:  Function StrChPosS( const P : ShortString; C : AnsiChar; var Pos : Cardinal) : Boolean
5682:  Function StrStPosS( const P, S : ShortString; var Pos : Cardinal) : Boolean
5683:  Function StrStCopyS( const S : ShortString; Pos, Count : Cardinal) : ShortString
5684:  Function StrChInsertS( const S : ShortString; C : AnsiChar; Pos : Cardinal) : ShortString
5685:  Function StrStInsertS( const S1, S2 : ShortString; Pos : Cardinal) : ShortString
5686:  Function StrChDeleteS( const S : ShortString; Pos : Cardinal) : ShortString
5687:  Function StrStDeleteS( const S : ShortString; Pos, Count : Cardinal) : ShortString
5688:  Function ContainsOnlyS( const S, Chars : ShortString; var BadPos : Cardinal) : Boolean
5689:  Function ContainsOtherThanS( const S, Chars : ShortString; var BadPos : Cardinal) : Boolean
5690:  Function CopyLeftS( const S : ShortString; Len : Cardinal) : ShortString
5691:  Function CopyMidS( const S : ShortString; First, Len : Cardinal) : ShortString
5692:  Function CopyRightS( const S : ShortString; First : Cardinal) : ShortString
5693:  Function CopyRightAbsS( const S : ShortString; NumChars : Cardinal) : ShortString
5694:  Function CopyFromNthWordS(const S,WordDelims:string;const AWord:String;N:Card;var
       SubString:ShortString):Bool;
5695:  Function DeleteFromNthWordS(const S,WordDelims:String;AWord:ShortString;N:Card;var
       SubStr:ShortString):Bool;
5696:  Function CopyFromToWordS(const S,WordDelims,Word1,Word2:ShortString;N1,N2:Card;var
       SubString:ShortString):Bool;
5697:  Function DeleteFromToWordS(const S,WordDelims,Wrd1,Wrd2:ShortString;N1,N2:Card;var
       SubString:ShortString):Bool;
5698:  Function CopyWithinS( const S, Delimiter : ShortString; Strip : Boolean) : ShortString
5699:  Function DeleteWithinS( const S, Delimiter : ShortString) : ShortString
5700:  Function ExtractTokensS(const S,
       Delims:ShortString;QuoteChar:AnsiChar;AllowNulls:Boolean;Tokens:TStrings):Cardinal
5701:  Function IsChAlphaS( C : Char) : Boolean
5702:  Function IsChNumericS( C : Char; const Numbers : ShortString) : Boolean
5703:  Function IsChAlphaNumericS( C : Char; const Numbers : ShortString) : Boolean
5704:  Function IsStrAlphaS( const S : Shortstring) : Boolean
5705:  Function IsStrNumericS( const S, Numbers : ShortString) : Boolean
5706:  Function IsStrAlphaNumericS( const S, Numbers : ShortString) : Boolean
5707:  Function LastWordS( const S, WordDelims, AWord : ShortString; var Position : Cardinal) : Boolean
5708:  Function LastWordAbsS( const S, WordDelims : ShortString; var Position : Cardinal) : Boolean
5709:  Function LastStringS( const S, AString : ShortString; var Position : Cardinal) : Boolean
5710:  Function LeftTrimCharsS( const S, Chars : ShortString) : ShortString
5711:  Function KeepCharsS( const S, Chars : ShortString) : ShortString
5712:  Function RepeatStringS(const RepeatString:ShortString;var Repetitions: Cardinal; MaxLen :
       Cardinal):ShortString;
5713:  Function ReplaceStringS(const S,OldStr,NewStr:ShortString;N:Cardinal;var
       Replacements:Cardinal):ShortString;
5714:  Function ReplaceStringAllS(const S,OldString,NewString:ShortString;var Replacements:Cardinal):ShortString;
5715:  Function ReplaceWordS(const S,WordDelims,OldWord,NewW:SString;N:Cardinal;var
       Replacements:Cardinal):ShortString
5716:  Function ReplaceWordAllS(const S,WordDelims,OldWord,NewWord:ShortString;var
       Replacements:Cardinal):ShortString
5717:  Function RightTrimCharsS( const S, Chars : ShortString) : ShortString
5718:  Function StrWithinS(const S,SearchStr: ShortString;Start:Cardinal;var Position:Cardinal):boolean
5719:  Function TrimCharsS( const S, Chars : ShortString) : ShortString
5720:  Function WordPosS(const S,WordDelims,AWord:ShortString;N:Cardinal; var Position: Cardinal):Boolean
5721: end;
5722:
5723:
5724: *******unit uPSI_StUtils; from Systools4*************************************************************
5725: Function SignL( L : LongInt) : Integer
5726: Function SignF( F : Extended) : Integer
5727: Function MinWord( A, B : Word) : Word
5728: Function MidWord( W1, W2, W3 : Word) : Word
5729: Function MaxWord( A, B : Word) : Word
5730: Function MinLong( A, B : LongInt) : LongInt
5731: Function MidLong( L1, L2, L3 : LongInt) : LongInt
5732: Function MaxLong( A, B : LongInt) : LongInt
5733: Function MinFloat( F1, F2 : Extended) : Extended
```

```
5734: Function MidFloat( F1, F2, F3 : Extended) : Extended
5735: Function MaxFloat( F1, F2 : Extended) : Extended
5736: Function MakeInteger16( H, L : Byte) : SmallInt
5737: Function MakeWordS( H, L : Byte) : Word
5738: Function SwapNibble( B : Byte) : Byte
5739: Function SwapWord( L : LongInt) : LongInt
5740: Procedure SetFlag( var Flags : Word; FlagMask : Word)
5741: Procedure ClearFlag( var Flags : Word; FlagMask : Word)
5742: Function FlagIsSet( Flags, FlagMask : Word) : Boolean
5743: Procedure SetByteFlag( var Flags : Byte; FlagMask : Byte)
5744: Procedure ClearByteFlag( var Flags : Byte; FlagMask : Byte)
5745: Function ByteFlagIsSet( Flags, FlagMask : Byte) : Boolean
5746: Procedure SetLongFlag( var Flags : LongInt; FlagMask : LongInt)
5747: Procedure ClearLongFlag( var Flags : LongInt; FlagMask : LongInt)
5748: Function LongFlagIsSet( Flags, FlagMask : LongInt) : Boolean
5749: Procedure ExchangeBytes( var I, J : Byte)
5750: Procedure ExchangeWords( var I, J : Word)
5751: Procedure ExchangeLongInts( var I, J : LongInt)
5752: Procedure ExchangeStructs( var I, J, Size : Cardinal)
5753: Procedure FillWord( var Dest, Count : Cardinal; Filler : Word)
5754: Procedure FillStruct( var Dest, Count : Cardinal; var Filler, FillerSize : Cardinal)
5755: Function AddWordToPtr( P : ___Pointer; W : Word) : ___Pointer
5756: //*****************uPSI_StFIN;************************************************************
5757: Function AccruedInterestMaturity(Issue,Maturity:TStDate;Rate,Par:Extended;Basis: TStBasis): Extended
5758: Function AccruedInterestPeriodic(Issue,Settlement,Maturity:TStDate;Rate,
      Par:Extended;Frequency:TStFrequency; Basis : TStBasis) : Extended
5759: Function BondDuration( Settlement,Maturity:TStDate;Rate,
      Yield:Ext;Frequency:TStFrequency;Basis:TStBasis):Extended;
5760: Function BondPrice(Settlement,Maturity:TStDate;Rate,Yield,Redempt:Ext;Freq:TStFrequency;Basis:TStBasis):
      Extended
5761: Function CumulativeInterest( Rate : Extended; NPeriods : Integer; PV : Extended; StartPeriod, EndPeriod :
      Integer; Frequency : TStFrequency; Timing : TStPaymentTime) : Extended
5762: Function CumulativePrincipal( Rate : Extended; NPeriods : Integer; PV : Extended; StartPeriod, EndPeriod :
      Integer; Frequency : TStFrequency; Timing : TStPaymentTime) : Extended
5763: Function DayCount( Day1, Day2 : TStDate; Basis : TStBasis) : LongInt
5764: Function DecliningBalance( Cost, Salvage : Extended; Life, Period, Month : Integer) : Extended
5765: Function DiscountRate(Settlement,Maturity:TStDate; Price,Redemption:Extended;Basis:TStBasis): Extended;
5766: Function DollarToDecimal( FracDollar : Extended; Fraction : Integer) : Extended
5767: Function DollarToDecimalText( DecDollar : Extended) : string
5768: Function DollarToFraction( DecDollar : Extended; Fraction : Integer) : Extended
5769: Function DollarToFractionStr( FracDollar : Extended; Fraction : Integer) : string
5770: Function EffectiveInterestRate( NominalRate : Extended; Frequency : TStFrequency) : Extended
5771: Function FutureValueS(Rate:Extended;NPeriods:Int;Pmt,
      PV:Extended;Freq:TStFreq;Timing:TStPaymentTime):Extended;
5772: Function FutureValueSchedule( Principal : Extended; const Schedule : array of Double) : Extended
5773: Function FutureValueSchedule16( Principal : Extended; const Schedule, NRates : Integer) : Extended
5774: Function InterestRateS(NPeriods:Int;Pmt,PV,
      FV:Extended;Freq:TStFrequency;Timing:TStPaymentTime;Guess:Extended):Extend;
5775: Function InternalRateOfReturn( const Values : array of Double; Guess : Extended) : Extended
5776: Function InternalRateOfReturn16( const Values, NValues : Integer; Guess : Extended) : Extended
5777: Function IsCardValid( const S : string) : Boolean
5778: Function ModifiedDuration(Settlement,Maturity:TStDate;Rate,
      Yield:Extended;Freq:TStFrequency;Basis:TStBasis):Extended;
5779: Function ModifiedIRR(const Values: array of Double; FinanceRate,ReinvestRate: Extended) : Extended
5780: Function ModifiedIRR16(const Values,NValues:Integer; FinanceRate,ReinvestRate: Extended) : Extended
5781: Function NetPresentValueS( Rate : Extended; const Values : array of Double) : Extended
5782: Function NetPresentValue16( Rate : Extended; const Values, NValues : Integer) : Extended
5783: Function NominalInterestRate( EffectRate : Extended; Frequency : TStFrequency) : Extended
5784: Function NonperiodicIRR(const Values:array of Double;const Dates:array of TStDate;Guess:Extended):Extended;
5785: Function NonperiodicNPV(Rate:Extended;const Values: array of Double;const Dates:array of TStDate):Extended;
5786: Function Payment( Rate : Extended; NPeriods : Integer; PV, FV : Extended; Frequency : TStFrequency; Timing
      : TStPaymentTime): Extended
5787: Function Periods(Rate:Extended;Pmt,PV,FV:Extended;Frequency:TStFrequency;Timing:TStPaymentTime):Integer;
5788: Function PresentValueS( Rate: Extended; NPeriods: Integer; Pmt, FV: Extended; Frequency: TStFrequency;
      Timing: TStPaymentTime): Extended
5789: Function ReceivedAtMaturity(Settlement,Maturity:TStDate;Invest,Discount:Extended;Basis:TStBasis):Extended;
5790: Function RoundToDecimal( Value : Extended; Places : Integer; Bankers : Boolean) : Extended
5791: Function TBillEquivYield( Settlement, Maturity : TStDate; Discount : Extended) : Extended
5792: Function TBillPrice( Settlement, Maturity : TStDate; Discount : Extended) : Extended
5793: Function TBillYield( Settlement, Maturity : TStDate; Price : Extended) : Extended
5794: Function VariableDecliningBalance( Cost, Salvage : Extended; Life : Integer; StartPeriod, EndPeriod,
      Factor : Extended; NoSwitch : boolean) : Extended
5795: Function YieldDiscounted(Settlement,Maturity:TStDate;Price,Redemption:Extended;Basis:TStBasis):Extended;
5796: Function YieldPeriodic(Settlement,Maturity:TStDate;Rate,Price,
      Redemption:Extended;Freq:TStFrequency;Basis:TStBasis):Extended
5797: Function YieldMaturity(Issue,Settlement,Maturity:TStDate;Rate,Price:Extended;Basis:TStBasis):Extended;
5798:
5799: //*****************************************unit uPSI_StAstroP;
5800: Procedure PlanetsPos( JD : Double; var PA : TStPlanetsArray)
5801: //*****unit unit uPSI_StStat; Statistic Package of SysTools***************************************
5802: Function AveDev( const Data : array of Double) : Double
5803: Function AveDev16( const Data, NData : Integer) : Double
5804: Function Confidence( Alpha, StandardDev : Double; Size : LongInt) : Double
5805: Function Correlation( const Data1, Data2 : array of Double) : Double
5806: Function Correlation16( const Data1, Data2, NData : Integer) : Double
5807: Function Covariance( const Data1, Data2 : array of Double) : Double
5808: Function Covariance16( const Data1, Data2, NData : Integer) : Double
5809: Function DevSq( const Data : array of Double) : Double
5810: Function DevSq16( const Data, NData : Integer) : Double
```

```
5811: Procedure Frequency(const Data:array of Double;const Bins:array of Double;var Counts: array of LongInt);
5812:  //Procedure Frequency16( const Data, NData : Integer; const Bins, NBins : Integer; var Counts)
5813: Function GeometricMeanS( const Data : array of Double) : Double
5814: Function GeometricMean16( const Data, NData : Integer) : Double
5815: Function HarmonicMeanS( const Data : array of Double) : Double
5816: Function HarmonicMean16( const Data, NData : Integer) : Double
5817: Function Largest( const Data : array of Double; K : Integer) : Double
5818: Function Largest16( const Data, NData : Integer; K : Integer) : Double
5819: Function MedianS( const Data : array of Double) : Double
5820: Function Median16( const Data, NData : Integer) : Double
5821: Function Mode( const Data : array of Double) : Double
5822: Function Mode16( const Data, NData : Integer) : Double
5823: Function Percentile( const Data : array of Double; K : Double) : Double
5824: Function Percentile16( const Data, NData : Integer; K : Double) : Double
5825: Function PercentRank( const Data : array of Double; X : Double) : Double
5826: Function PercentRank16( const Data, NData : Integer; X : Double) : Double
5827: Function Permutations( Number, NumberChosen : Integer) : Extended
5828: Function Combinations( Number, NumberChosen : Integer) : Extended
5829: Function FactorialS( N : Integer) : Extended
5830: Function Rank( Number : Double; const Data : array of Double; Ascending : Boolean) : Integer
5831: Function Rank16( Number : Double; const Data, NData : Integer; Ascending : Boolean) : Integer
5832: Function Smallest( const Data : array of Double; K : Integer) : Double
5833: Function Smallest16( const Data, NData : Integer; K : Integer) : Double
5834: Function TrimMean( const Data : array of Double; Percent : Double) : Double
5835: Function TrimMean16( const Data, NData : Integer; Percent : Double) : Double
5836:   AddTypeS('TStLinEst', 'record B0 : Double; B1 : double; seB0 : double; seB'
5837:    +'1 : Double; R2 : Double; sigma :Double; SSr: double; SSe: Double; F0 : Double; df : Integer;end
5838: Procedure LinEst(const KnownY:array of Double;const KnownX:array of Double;var
      LF:TStLinEst;ErrorStats:Bool;
5839: Procedure LogEst(const KnownY:array of Double;const KnownX:array of Double;var
      LF:TStLinEst;ErrorStats:Bool;
5840: Function Forecast(X: Double; const KnownY: array of Double; const KnownX: array of Double) : Double
5841: Function ForecastExponential(X:Double;const KnownY:array of Double;const KnownX:array of Double):Double;
5842: Function Intercept( const KnownY : array of Double; const KnownX : array of Double) : Double
5843: Function RSquared( const KnownY : array of Double; const KnownX : array of Double) : Double
5844: Function Slope( const KnownY : array of Double; const KnownX : array of Double) : Double
5845: Function StandardErrorY( const KnownY : array of Double; const KnownX : array of Double) : Double
5846: Function BetaDist( X, Alpha, Beta, A, B : Single) : Single
5847: Function BetaInv( Probability, Alpha, Beta, A, B : Single) : Single
5848: Function BinomDist( NumberS, Trials : Integer; ProbabilityS : Single; Cumulative : Boolean) : Single
5849: Function CritBinom( Trials : Integer; ProbabilityS, Alpha : Single) : Integer
5850: Function ChiDist( X : Single; DegreesFreedom : Integer) : Single
5851: Function ChiInv( Probability : Single; DegreesFreedom : Integer) : Single
5852: Function ExponDist( X, Lambda : Single; Cumulative : Boolean) : Single
5853: Function FDist( X : Single; DegreesFreedom1, DegreesFreedom2 : Integer) : Single
5854: Function FInv( Probability : Single; DegreesFreedom1, DegreesFreedom2 : Integer) : Single
5855: Function LogNormDist( X, Mean, StandardDev : Single) : Single
5856: Function LogInv( Probability, Mean, StandardDev : Single) : Single
5857: Function NormDist( X, Mean, StandardDev : Single; Cumulative : Boolean) : Single
5858: Function NormInv( Probability, Mean, StandardDev : Single) : Single
5859: Function NormSDist( Z : Single) : Single
5860: Function NormSInv( Probability : Single) : Single
5861: Function Poisson( X : Integer; Mean : Single; Cumulative : Boolean) : Single
5862: Function TDist( X : Single; DegreesFreedom : Integer; TwoTails : Boolean) : Single
5863: Function TInv( Probability : Single; DegreesFreedom : Integer) : Single
5864: Function Erfc( X : Single) : Single
5865: Function GammaLn( X : Single) : Single
5866: Function LargestSort( const Data : array of Double; K : Integer) : Double
5867: Function SmallestSort( const Data : array of double; K : Integer) : Double
5868:
5869: procedure SIRegister_TStSorter(CL: TPSPascalCompiler);
5870:  Function OptimumHeapToUse( RecLen : Cardinal; NumRecs : LongInt) : LongInt
5871:  Function MinimumHeapToUse( RecLen : Cardinal) : LongInt
5872:  Function MergeInfo( MaxHeap : LongInt; RecLen : Cardinal; NumRecs : LongInt) : TMergeInfo
5873:  Function DefaultMergeName( MergeNum : Integer) : string
5874:  Procedure ArraySort( var A, RecLen, NumRecs : Cardinal; Compare : TUntypedCompareFunc)
5875:
5876: procedure SIRegister_StAstro(CL: TPSPascalCompiler);
5877: Function AmountOfSunlight( LD : TStDate; Longitude, Latitude : Double) : TStTime
5878:  Function FixedRiseSet( LD : TStDate; RA, DC, Longitude, Latitude : Double) : TStRiseSetRec
5879:  Function SunPos( UT : TStDateTimeRec) : TStPosRec
5880:  Function SunPosPrim( UT : TStDateTimeRec) : TStSunXYZRec
5881:  Function SunRiseSet( LD : TStDate; Longitude, Latitude : Double) : TStRiseSetRec
5882:  Function Twilight( LD : TStDate; Longitude, Latitude : Double; TwiType:TStTwilight):TStRiseSetRec
5883:  Function LunarPhase( UT : TStDateTimeRec) : Double
5884:  Function MoonPos( UT : TStDateTimeRec) : TStMoonPosRec
5885:  Function MoonRiseSet( LD : TStDate; Longitude, Latitude : Double) : TStRiseSetRec
5886:  Function FirstQuarter( D : TStDate) : TStLunarRecord
5887:  Function FullMoon( D : TStDate) : TStLunarRecord
5888:  Function LastQuarter( D : TStDate) : TStLunarRecord
5889:  Function NewMoon( D : TStDate) : TStLunarRecord
5890:  Function NextFirstQuarter( D : TStDate) : TStDateTimeRec
5891:  Function NextFullMoon( D : TStDate) : TStDateTimeRec
5892:  Function NextLastQuarter( D : TStDate) : TStDateTimeRec
5893:  Function NextNewMoon( D : TStDate) : TStDateTimeRec
5894:  Function PrevFirstQuarter( D : TStDate) : TStDateTimeRec
5895:  Function PrevFullMoon( D : TStDate) : TStDateTimeRec
5896:  Function PrevLastQuarter( D : TStDate) : TStDateTimeRec
5897:  Function PrevNewMoon( D : TStDate) : TStDateTimeRec
```

```
5898:  Function SiderealTime( UT : TStDateTimeRec) : Double
5899:  Function Solstice( Y, Epoch : Integer; Summer : Boolean) : TStDateTimeRec
5900:  Function Equinox( Y, Epoch : Integer; Vernal : Boolean) : TStDateTimeRec
5901:  Function SEaster( Y, Epoch : Integer) : TStDate
5902:  Function DateTimeToAJD( D : TDateTime) : Double
5903:  Function HoursMin( RA : Double) : ShortString
5904:  Function DegsMin( DC : Double) : ShortString
5905:  Function AJDToDateTime( D : Double) : TDateTime
5906:
5907: Procedure SIRegister_StDate(CL: TPSPascalCompiler);
5908:  Function CurrentDate : TStDate
5909:  Function StValidDate( Day, Month, Year, Epoch : Integer) : Boolean
5910:  Function DMYtoStDate( Day, Month, Year, Epoch : Integer) : TStDate
5911:  Procedure StDateToDMY( Julian : TStDate; var Day, Month, Year : Integer)
5912:  Function StIncDate( Julian : TStDate; Days, Months, Years : Integer) : TStDate
5913:  Function IncDateTrunc( Julian : TStDate; Months, Years : Integer) : TStDate
5914:  Procedure StDateDiff( Date1, Date2 : TStDate; var Days, Months, Years : Integer)
5915:  Function BondDateDiff( Date1, Date2 : TStDate; DayBasis : TStBondDateType) : TStDate
5916:  Function WeekOfYear( Julian : TStDate) : Byte
5917:  Function AstJulianDate( Julian : TStDate) : Double
5918:  Function AstJulianDatetoStDate( AstJulian : Double; Truncate : Boolean) : TStDate
5919:  Function AstJulianDatePrim( Year, Month, Date : Integer; UT : TStTime) : Double
5920:  Function StDayOfWeek( Julian : TStDate) : TStDayType
5921:  Function DayOfWeekDMY( Day, Month, Year, Epoch : Integer) : TStDayType
5922:  Function StIsLeapYear( Year : Integer) : Boolean
5923:  Function StDaysInMonth( Month : Integer; Year, Epoch : Integer) : Integer
5924:  Function ResolveEpoch( Year, Epoch : Integer) : Integer
5925:  Function ValidTime( Hours, Minutes, Seconds : Integer) : Boolean
5926:  Procedure StTimeToHMS( T : TStTime; var Hours, Minutes, Seconds : Byte)
5927:  Function HMStoStTime( Hours, Minutes, Seconds : Byte) : TStTime
5928:  Function CurrentTime : TStTime
5929:  Procedure TimeDiff( Time1, Time2 : TStTime; var Hours, Minutes, Seconds : Byte)
5930:  Function StIncTime( T : TStTime; Hours, Minutes, Seconds : Byte) : TStTime
5931:  Function DecTime( T : TStTime; Hours, Minutes, Seconds : Byte) : TStTime
5932:  Function RoundToNearestHour( T : TStTime; Truncate : Boolean) : TStTime
5933:  Function RoundToNearestMinute( const T : TStTime; Truncate : Boolean) : TStTime
5934:  Procedure DateTimeDiff(const DT1:TStDateTimeRec;var DT2:TStDateTimeRec;var Days:LongInt;var Secs:LongInt
5935:  Procedure IncDateTime(const DT1:TStDateTimeRec;var DT2:TStDateTimeRec;Days:Integer;Secs:LongInt)
5936:  Function DateTimeToStDate( DT : TDateTime) : TStDate
5937:  Function DateTimeToStTime( DT : TDateTime) : TStTime
5938:  Function StDateToDateTime( D : TStDate) : TDateTime
5939:  Function StTimeToDateTime( T : TStTime) : TDateTime
5940:  Function Convert2ByteDate( TwoByteDate : Word) : TStDate
5941:  Function Convert4ByteDate( FourByteDate : TStDate) : Word
5942:
5943: Procedure SIRegister_StDateSt(CL: TPSPascalCompiler);
5944: Function DateStringHMStoAstJD( const Picture, DS : string; H, M, S, Epoch : integer) : Double
5945:  Function MonthToString( const Month : Integer) : string
5946:  Function DateStringToStDate( const Picture, S : string; Epoch : Integer) : TStDate
5947:  Function DateStringToDMY(const Picture,S:string; Epoch:Integer; var D, M, Y : Integer):Boolean
5948:  Function StDateToDateString( const Picture : string; const Julian : TStDate; Pack : Boolean):string
5949:  Function DayOfWeekToString( const WeekDay : TStDayType) : string
5950:  Function DMYtoDateString(const Picture:string;Day,Month,Year,Epoch:Integer;Pack:Boolean): string);
5951:  Function CurrentDateString( const Picture : string; Pack : Boolean) : string
5952:  Function CurrentTimeString( const Picture : string; Pack : Boolean) : string
5953:  Function TimeStringToHMS( const Picture, St : string; var H, M, S : Integer) : Boolean
5954:  Function TimeStringToStTime( const Picture, S : string) : TStTime
5955:  Function StTimeToAmPmString( const Picture : string; const T : TStTime; Pack : Boolean) : string
5956:  Function StTimeToTimeString( const Picture : string; const T : TStTime; Pack : Boolean) : string
5957:  Function DateStringIsBlank( const Picture, S : string) : Boolean
5958:  Function InternationalDate( ForceCentury : Boolean) : string
5959:  Function InternationalLongDate( ShortNames : Boolean; ExcludeDOW : Boolean) : string
5960:  Function InternationalTime( ShowSeconds : Boolean) : string
5961:  Procedure ResetInternationalInfo
5962:
5963: procedure SIRegister_StBase(CL: TPSPascalCompiler);
5964:  Function DestroyNode( Container : TStContainer; Node : TStNode; OtherData : Pointer) : Boolean
5965:  Function AnsiUpperCaseShort32( const S : string) : string
5966:  Function AnsiCompareTextShort32( const S1, S2 : string) : Integer
5967:  Function AnsiCompareStrShort32( const S1, S2 : string) : Integer
5968:  Function HugeCompressRLE( const InBuffer, InLen : Longint; var OutBuffer) : Longint
5969:  Function HugeDecompressRLE( const InBuffer, InLen : Longint; var OutBuffer,OutLen:LongInt): Longint
5970:  Procedure HugeFillChar( var Dest, Count : Longint; Value : Byte)
5971:  Procedure HugeFillStruc( var Dest, Count : Longint; const Value, ValSize : Cardinal)
5972:  Function Upcase( C : AnsiChar) : AnsiChar
5973:  Function LoCase( C : AnsiChar) : AnsiChar
5974:  Function CompareLetterSets( Set1, Set2 : LongInt) : Cardinal
5975:  Function CompStruct( const S1, S2, Size : Cardinal) : Integer
5976:  Function Search(const Buffer,BufLength:Cardinal;const Match,MatLength:Cardinal;var Pos:Cardinal):Bool;
5977:  Function StSearch(const Buffer,BufLength:Cardinal;const Match,MatLength:Cardinal;var Pos:Cardi):Boolean
5978:  Function SearchUC(const Buffer,BufLength:Cardinal;const Match,MatLength:Cardinal;var Pos:Cardi):Boolean
5979:  Function IsOrInheritsFrom( Root, Candidate : TClass) : boolean
5980:  Procedure RaiseContainerError( Code : longint)
5981:  Procedure RaiseContainerErrorFmt( Code : Longint; Data : array of const)
5982:  Function ProductOverflow( A, B : LongInt) : Boolean
5983:  Function StNewStr( S : string) : PShortString
5984:  Procedure StDisposeStr( PS : PShortString)
5985:  Procedure ValLongInt( S : ShortString; var LI : Longint; var ErrorCode : integer)
5986:  Procedure ValSmallint( const S : ShortString; var SI : smallint; var ErrorCode : integer)
```

```
5987:  Procedure ValWord( const S : ShortString; var Wd : word; var ErrorCode : integer)
5988:  Procedure RaiseStError( ExceptionClass : EStExceptionClass; Code : LongInt)
5989:  Procedure RaiseStWin32Error( ExceptionClass : EStExceptionClass; Code : LongInt)
5990:  Procedure RaiseStWin32ErrorEx( ExceptionClass : EStExceptionClass; Code : LongInt; Info : string)
5991:
5992: procedure SIRegister_usvd(CL: TPSPascalCompiler);
5993: begin
5994:  Procedure SV_Decomp( A : TMatrix; Lb, Ub1, Ub2 : Integer; S : TVector; V : TMatrix)
5995:  Procedure SV_SetZero( S : TVector; Lb, Ub : Integer; Tol : Float)
5996:  Procedure SV_Solve(U:TMatrix; S:TVector;V:TMatrix;B:TVector;Lb,Ub1,Ub2:Integer;X:TVector);
5997:  Procedure SV_Approx( U : TMatrix; S : TVector; V : TMatrix; Lb, Ub1, Ub2 : Integer; A : TMatrix)
5998:  Procedure RKF45(F:TDiffEqs;Neqn:Int;Y,Yp:TVector;var T:Float;Tout,RelErr,AbsErr:Float;var Flag:Int;
5999: end;
6000:
6001: //**********unit unit ; StMath Package of SysTools*****************************************
6002: Function IntPowerS( Base : Extended; Exponent : Integer) : Extended
6003: Function PowerS( Base, Exponent : Extended) : Extended
6004: Function StInvCos( X : Double) : Double
6005: Function StInvSin( Y : Double) : Double
6006: Function StInvTan2( X, Y : Double) : Double
6007: Function StTan( A : Double) : Double
6008: Procedure DumpException;  //unit StExpEng;
6009: Function HexifyBlock( var Buffer, BufferSize : Integer) : string
6010:
6011: //**********unit unit ; StCRC Package of SysTools*****************************************
6012: Function Adler32Prim( var Data, DataSize : Cardinal; CurCrc : LongInt) : LongInt
6013: Function Adler32OfStream( Stream : TStream; CurCrc : LongInt) : LongInt
6014: Function Adler32OfFile( FileName : AnsiString) : LongInt
6015: Function Crc16Prim( var Data, DataSize, CurCrc : Cardinal) : Cardinal
6016: Function Crc16OfStream( Stream : TStream; CurCrc : Cardinal) : Cardinal
6017: Function Crc16OfFile( FileName : AnsiString) : Cardinal
6018: Function Crc32Prim( var Data, DataSize : Cardinal; CurCrc : LongInt) : LongInt
6019: Function Crc32OfStream( Stream : TStream; CurCrc : LongInt) : LongInt
6020: Function Crc32OfFile( FileName : AnsiString) : LongInt
6021: Function InternetSumPrim( var Data, DataSize, CurCrc : Cardinal) : Cardinal
6022: Function InternetSumOfStream( Stream : TStream; CurCrc : Cardinal) : Cardinal
6023: Function InternetSumOfFile( FileName : AnsiString) : Cardinal
6024: Function Kermit16Prim( var Data, DataSize, CurCrc : Cardinal) : Cardinal
6025: Function Kermit16OfStream( Stream : TStream; CurCrc : Cardinal) : Cardinal
6026: Function Kermit16OfFile( FileName : AnsiString) : Cardinal
6027:
6028: //**********unit unit ; StBCD Package of SysTools*****************************************
6029: Function AddBcd( const B1, B2 : TbcdS) : TbcdS
6030: Function SubBcd( const B1, B2 : TbcdS) : TbcdS
6031: Function MulBcd( const B1, B2 : TbcdS) : TbcdS
6032: Function DivBcd( const B1, B2 : TbcdS) : TbcdS
6033: Function ModBcd( const B1, B2 : TbcdS) : TbcdS
6034: Function NegBcd( const B : TbcdS) : TbcdS
6035: Function AbsBcd( const B : TbcdS) : TbcdS
6036: Function FracBcd( const B : TbcdS) : TbcdS
6037: Function IntBcd( const B : TbcdS) : TbcdS
6038: Function RoundDigitsBcd( const B : TbcdS; Digits : Cardinal) : TbcdS
6039: Function RoundPlacesBcd( const B : TbcdS; Places : Cardinal) : TbcdS
6040: Function ValBcd( const S : string) : TbcdS
6041: Function LongBcd( L : LongInt) : TbcdS
6042: Function ExtBcd( E : Extended) : TbcdS
6043: Function ExpBcd( const B : TbcdS) : TbcdS
6044: Function LnBcd( const B : TbcdS) : TbcdS
6045: Function IntPowBcd( const B : TbcdS; E : LongInt) : TbcdS
6046: Function PowBcd( const B, E : TbcdS) : TbcdS
6047: Function SqrtBcd( const B : TbcdS) : TbcdS
6048: Function CmpBcd( const B1, B2 : TbcdS) : Integer
6049: Function EqDigitsBcd( const B1, B2 : TbcdS; Digits : Cardinal) : Boolean
6050: Function EqPlacesBcd( const B1, B2 : TbcdS; Digits : Cardinal) : Boolean
6051: Function IsIntBcd( const B : TbcdS) : Boolean
6052: Function TruncBcd( const B : TbcdS) : LongInt
6053: Function BcdExt( const B : TbcdS) : Extended
6054: Function RoundBcd( const B : TbcdS) : LongInt
6055: Function StrBcd( const B : TbcdS; Width, Places : Cardinal) : string
6056: Function StrExpBcd( const B : TbcdS; Width : Cardinal) : string
6057: Function FormatBcd( const Format : string; const B : TbcdS) : string
6058: Function StrGeneralBcd( const B : TbcdS) : string
6059: Function FloatFormBcd(const Mask:string;B:TbcdS;const LtCurr,RtCurr:string;Sep,DecPt:AnsiChar):string
6060: Procedure ConvertBcd( const SrcB, SrcSize : Byte; var DestB, DestSize : Byte)
6061:
6062: ////*******unit unit ; StTxtDat; TStTextDataRecordSet Package of SysTools**********************
6063: Procedure StParseLine( const Data : AnsiString; Schema : TStTextDataSchema; Result : TStrings)
6064: Function StFieldTypeToStr( FieldType : TStStSchemaFieldType) : AnsiString
6065: Function StStrToFieldType( const S : AnsiString) : TStStSchemaFieldType
6066: Function StDeEscape( const EscStr : AnsiString) : Char
6067: Function StDoEscape( Delim : Char) : AnsiString
6068: Function StTrimTrailingChars( const S : AnsiString; Trailer : Char) : AnsiString
6069: Function AnsiHashText( const S : string; Size : Integer) : Integer
6070: Function AnsiHashStr( const S : string; Size : Integer) : Integer
6071: Function AnsiELFHashText( const S : string; Size : Integer) : Integer
6072: Function AnsiELFHashStr( const S : string; Size : Integer) : Integer
6073:
6074: //**********unit unit ; StNetCon Package of SysTools*****************************************
6075:   with AddClassN(FindClass('TStComponent'),'TStNetConnection') do begin
```

```
6076:     Constructor Create( AOwner : TComponent)
6077:     Function Connect : DWord
6078:     Function Disconnect : DWord
6079:     RegisterProperty('Password', 'String', iptrw);
6080:     Property('UserName', 'String', iptrw);
6081:     Property('ConnectOptions', 'TStNetConnectOptionsSet', iptrw);
6082:     Property('DisconnectOptions', 'TStNetDisconnectOptionsSet', iptrw);
6083:     Property('LocalDevice', 'String', iptrw);
6084:     Property('ServerName', 'String', iptrw);
6085:     Property('ShareName', 'String', iptrw);
6086:     Property('OnConnect', 'TNotifyEvent', iptrw);
6087:     Property('OnConnectFail', 'TOnConnectFailEvent', iptrw);
6088:     Property('OnConnectCancel', 'TOnConnectCancelEvent', iptrw);
6089:     Property('OnDisconnect', 'TNotifyEvent', iptrw);
6090:     Property('OnDisconnectFail', 'TOnDisconnectFailEvent', iptrw);
6091:     Property('OnDisconnectCancel', 'TOnDisconnectCancelEvent', iptrw);
6092:   end;
6093: //***********Thread Functions Context of Win API --- more objects in SyncObjs.pas
6094: / /153 unit uPSI_SyncObjs, unit uPSIParallelJobs;
6095: Procedure InitializeCriticalSection( var lpCriticalSection : TRTLCriticalSection)
6096: Procedure EnterCriticalSection( var lpCriticalSection : TRTLCriticalSection)
6097: Procedure LeaveCriticalSection( var lpCriticalSection : TRTLCriticalSection)
6098: Function InitializeCriticalSectionAndSpinCount(var
      lpCriticalSection:TRTLCriticalSection;dwSpinCount:DWORD):BOOL;
6099: Function SetCriticalSectionSpinCount(var lpCriticalSection:TRTLCriticalSection;dwSpinCount:DWORD):DWORD;
6100: Function TryEnterCriticalSection( var lpCriticalSection : TRTLCriticalSection) : BOOL
6101: Procedure DeleteCriticalSection( var lpCriticalSection : TRTLCriticalSection)
6102: Function GetThreadContext( hThread : THandle; var lpContext : TContext) : BOOL
6103: Function SetThreadContext( hThread : THandle; const lpContext : TContext) : BOOL
6104: Function SuspendThread( hThread : THandle) : DWORD
6105: Function ResumeThread( hThread : THandle) : DWORD
6106: Function CreateThread2(ThreadFunc: TThreadFunction2; thrid: DWord) : THandle
6107: Function GetCurrentThread : THandle
6108: Procedure ExitThread( dwExitCode : DWORD)
6109: Function TerminateThread( hThread : THandle; dwExitCode : DWORD) : BOOL
6110: Function GetExitCodeThread( hThread : THandle; var lpExitCode : DWORD) : BOOL
6111: Procedure EndThread(ExitCode: Integer);
6112: Function WaitForSingleObject( hHandle : THandle; dwMilliseconds : DWORD) : DWORD
6113: Function MakeProcInstance( Proc : FARPROC; Instance : THandle) : FARPROC
6114: Procedure FreeProcInstance( Proc : FARPROC)
6115: Procedure FreeLibraryAndExitThread( hLibModule : HMODULE; dwExitCode : DWORD)
6116: Function DisableThreadLibraryCalls( hLibModule : HMODULE) : BOOL
6117: Procedure ParallelJob( ASelf : TObject; ATarget : Pointer; AParam : Pointer; ASafeSection : boolean);
6118: Procedure ParallelJob1( ATarget : Pointer; AParam : Pointer; ASafeSection : boolean);
6119: Procedure ParallelJob2(AJobGroup:TJobsGroup;ASelf:TObject;ATarget:Ptr;AParam:Pointer;ASafeSection:bool;
6120: Procedure ParallelJob3( AJobGroup:TJobsGroup;ATarget:Pointer;AParam:Pointer;ASafeSection: boolean);
6121: Function CreateParallelJob(ASelf:TObject;ATarget:Pointer;AParam:Ptr;ASafeSection:bool:TParallelJob;
6122: Function CreateParallelJob1(ATarget:Pointer; AParam:Pointer; ASafeSection : boolean) : TParallelJob;
6123: Function CurrentParallelJobInfo : TParallelJobInfo
6124: Function ObtainParallelJobInfo : TParallelJobInfo
6125: Procedure GetSystemInfo( var lpSystemInfo : TSystemInfo)');
6126: Function IsProcessorFeaturePresent( ProcessorFeature : DWORD) : BOOL');
6127: Function SetStdHandle( nStdHandle : DWORD; hHandle : THandle) : BOOL');
6128: Function DeviceIoControl( hDevice : THandle; dwIoControlCode : DWORD; lpInBuffer : TObject; nInBufferSize
      : DWORD; lpOutBuffer: TObject; nOutBufferSize: DWORD; var lpBytesReturned: DWORD; lpOverlapped :
      TOverlapped) : BOOL');
6129: Function SetFileTime( hFile : THandle; lpCreationTime, lpLastAccessTime, lpLastWriteTime : TFileTime) :
      BOOL');
6130: Function DuplicateHandle( hSourceProcessHandle, hSourceHandle, hTargetProcessHandle : THandle;
      lpTargetHandle : THandle; dwDesiredAccess : DWORD; bInheritHandle : BOOL; dwOptions : DWORD) : BOOL');
6131: Function GetHandleInformation( hObject : THandle; var lpdwFlags : DWORD) : BOOL');
6132: Function SetHandleInformation( hObject : THandle; dwMask : DWORD; dwFlags : DWORD) : BOOL');
6133:
6134: ************************************************unit uPSI_JclMime;
6135:  Function MimeEncodeString( const S : AnsiString) : AnsiString
6136:  Function MimeDecodeString( const S : AnsiString) : AnsiString
6137:  Procedure MimeEncodeStream( const InputStream : TStream; const OutputStream : TStream)
6138:  Procedure MimeDecodeStream( const InputStream : TStream; const OutputStream : TStream)
6139:  Function MimeEncodedSize( const I : Cardinal) : Cardinal
6140:  Function MimeDecodedSize( const I : Cardinal) : Cardinal
6141:  Procedure MimeEncode( var InputBuffer : string; const InputByteCount : Cardinal; var OutputBuffer)
6142:  Function MimeDecode(var InputBuffer:string;const InputBytesCount:Cardinal;var OutputBuffer):Cardinal;
6143:  Function MimeDecodePartial(var InputBuffer:string;const InputBytesCount:Cardinal;var
      OutputBuffer:string;var ByteBuffer : Cardinal; var ByteBufferSpace : Cardinal) : Cardinal
6144:  Function MimeDecodePartialEnd(var OutputBuf:string;const ByteBuf:Card;const ByteBufferSpace:Card):
      Cardinal;
6145:
6146: ************************************************unit uPSI_JclPrint;
6147:  Procedure DirectPrint( const Printer, Data : string)
6148:  Procedure SetPrinterPixelsPerInch
6149:  Function GetPrinterResolution : TPoint
6150:  Function CharFitsWithinDots( const Text : string; const Dots : Integer) : Integer
6151:  Procedure PrintMemo( const Memo : TMemo; const Rect : TRect)
6152:
6153:
6154: //************************************unit uPSI_ShLwApi;***********************************
6155:  Function StrChr( lpStart : PChar; wMatch : WORD) : PChar
6156:  Function StrChrI( lpStart : PChar; wMatch : WORD) : PChar
6157:  Function StrCmpN( lpStr1, lpStr2 : PChar; nChar : Integer) : Integer
```

```
6158:  Function StrCmpNI( lpStr1, lpStr2 : PChar; nChar : Integer) : Integer
6159:  Function StrCSpn( lpStr_, lpSet : PChar) : Integer
6160:  Function StrCSpnI( lpStr1, lpSet : PChar) : Integer
6161:  Function StrDup( lpSrch : PChar) : PChar
6162:  Function StrFormatByteSize( dw : DWORD; szBuf : PChar; uiBufSize : UINT) : PChar
6163:  Function StrFormatKBSize( qdw : Dword; szBuf : PChar; uiBufSize : UINT) : PChar
6164:  Function StrFromTimeInterval(pszOut: PChar; cchMax:UINT;dwTimeMS:DWORD; digits: Integer): Integer
6165:  Function StrIsIntlEqual( fCaseSens : BOOL; lpString1, lpString2 : PChar; nChar : Integer) : BOOL
6166: /Function StrNCat( psz1 : PChar; psz2 : PChar; cchMax : Integer) : PChar
6167:  Function StrPBrk( psz, pszSet : PChar) : PChar
6168:  Function StrRChr( lpStart, lpEnd : PChar; wMatch : WORD) : PChar
6169:  Function StrRChrI( lpStart, lpEnd : PChar; wMatch : WORD) : PChar
6170:  Function StrRStrI( lpSource, lpLast, lpSrch : PChar) : PChar
6171:  Function StrSpn( psz, pszSet : PChar) : Integer
6172:  Function StrStr( lpFirst, lpSrch : PChar) : PChar
6173:  Function StrStrI( lpFirst, lpSrch : PChar) : PChar
6174:  Function StrToInt( lpSrch : PChar) : Integer
6175:  Function StrToIntEx( pszString : PChar; dwFlags : DWORD; var piRet : Integer) : BOOL
6176:  Function StrTrim( psz : PChar; pszTrimChars : PChar) : BOOL
6177:  Function ChrCmpI( w1, w2 : WORD) : BOOL
6178:  Function ChrCmpIA( w1, w2 : WORD) : BOOL
6179:  Function ChrCmpIW( w1, w2 : WORD) : BOOL
6180:  Function StrIntlEqN( s1, s2 : PChar; nChar : Integer) : BOOL
6181:  Function StrIntlEqNI( s1, s2 : PChar; nChar : Integer) : BOOL
6182:  Function StrCatBuff( pszDest, pszSrc : PChar; cchDestBuffSize : Integer) : PChar
6183:  Function StrCpyNX( psz1 : PChar; psz2 : PChar; cchMax : Integer) : PChar
6184:  Function IntlStrEqWorker( fCaseSens : BOOL; lpString1, lpString2 : PChar; nChar : Integer) : BOOL
6185:  Function IntlStrEqN( s1, s2 : PChar; nChar : Integer) : BOOL
6186:  SZ_CONTENTTYPE_HTMLA','String 'text/html
6187:  SZ_CONTENTTYPE_HTMLW','String 'text/html
6188:  SZ_CONTENTTYPE_HTML','string SZ_CONTENTTYPE_HTMLA);
6189:  SZ_CONTENTTYPE_CDFA','String 'application/x-cdf
6190:  SZ_CONTENTTYPE_CDFW','String 'application/x-cdf
6191:  SZ_CONTENTTYPE_CDF','string SZ_CONTENTTYPE_CDFA);
6192:  Function PathIsHTMLFile( pszPath : PChar) : BOOL
6193:  STIF_DEFAULT','LongWord( $00000000);
6194:  STIF_SUPPORT_HEX','LongWord( $00000001);
6195:  Function StrNCmpI( lpStr1, lpStr2 : PChar; nChar : Integer) : Integer
6196:  Function StrNCpy( psz1, psz2 : PChar; cchMax : Integer) : PChar
6197:  Function StrCatN( psz1 : PChar; psz2 : PChar; cchMax : Integer) : PChar
6198:  Function PathAddBackslash( pszPath : PChar) : PChar
6199:  Function PathAddExtension( pszPath : PChar; pszExt : PChar) : BOOL
6200:  Function PathAppend( pszPath : PChar; pMore : PChar) : BOOL
6201:  Function PathBuildRoot( szRoot : PChar; iDrive : Integer) : PChar
6202:  Function PathCanonicalize( pszBuf : PChar; pszPath : PChar) : BOOL
6203:  Function PathCombine( szDest : PChar; lpszDir, lpszFile : PChar) : PChar
6204:  Function PathCompactPath( hDC : HDC; pszPath : PChar; dx : UINT) : BOOL
6205:  Function PathCompactPathEx( pszOut : PChar; pszSrc : PChar; cchMax : UINT; dwFlags:DWORD) : BOOL
6206:  Function PathCommonPrefix( pszFile1, pszFile2 : PChar; achPath : PChar) : Integer
6207:  Function PathFileExists( pszPath : PChar) : BOOL
6208:  Function PathFindExtension( pszPath : PChar) : PChar
6209:  Function PathFindFileName( pszPath : PChar) : PChar
6210:  Function PathFindNextComponent( pszPath : PChar) : PChar
6211:  Function PathFindOnPath( pszPath : PChar; var ppszOtherDirs : PChar) : BOOL
6212:  Function PathGetArgs( pszPath : PChar) : PChar
6213:  Function PathFindSuffixArray(pszPath: PChar; const apszSuffix: PChar; iArraySize: Integer): PChar
6214:  Function PathIsLFNFileSpec( lpName : PChar) : BOOL
6215:  Function PathGetCharType( ch : Char) : UINT
6216:  GCT_INVALID','LongWord( $0000);
6217:  GCT_LFNCHAR','LongWord( $0001);
6218:  GCT_SHORTCHAR','LongWord( $0002);
6219:  GCT_WILD','LongWord( $0004);
6220:  GCT_SEPARATOR','LongWord( $0008);
6221:  Function PathGetDriveNumber( pszPath : PChar) : Integer
6222:  Function PathIsDirectory( pszPath : PChar) : BOOL
6223:  Function PathIsDirectoryEmpty( pszPath : PChar) : BOOL
6224:  Function PathIsFileSpec( pszPath : PChar) : BOOL
6225:  Function PathIsPrefix( pszPrefix, pszPath : PChar) : BOOL
6226:  Function PathIsRelative( pszPath : PChar) : BOOL
6227:  Function PathIsRoot( pszPath : PChar) : BOOL
6228:  Function PathIsSameRoot( pszPath1, pszPath2 : PChar) : BOOL
6229:  Function PathIsUNC( pszPath : PChar) : BOOL
6230:  Function PathIsNetworkPath( pszPath : PChar) : BOOL
6231:  Function PathIsUNCServer( pszPath : PChar) : BOOL
6232:  Function PathIsUNCServerShare( pszPath : PChar) : BOOL
6233:  Function PathIsContentType( pszPath, pszContentType : PChar) : BOOL
6234:  Function PathIsURL( pszPath : PChar) : BOOL
6235:  Function PathMakePretty( pszPath : PChar) : BOOL
6236:  Function PathMatchSpec( pszFile, pszSpec : PChar) : BOOL
6237:  Function PathParseIconLocation( pszIconFile : PChar) : Integer
6238:  Procedure PathQuoteSpaces( lpsz : PChar)
6239:  Function PathRelativePathTo(pszPath:PChar;pszFrom:PChar;dwAttrFrom:DWORD;pszTo:PChar;dwAttrTo:DWORD):BOOL;
6240:  Procedure PathRemoveArgs( pszPath : PChar)
6241:  Function PathRemoveBackslash( pszPath : PChar) : PChar
6242:  Procedure PathRemoveBlanks( pszPath : PChar)
6243:  Procedure PathRemoveExtension( pszPath : PChar)
6244:  Function PathRemoveFileSpec( pszPath : PChar) : BOOL
6245:  Function PathRenameExtension( pszPath : PChar; pszExt : PChar) : BOOL
6246:  Function PathSearchAndQualify( pszPath : PChar; pszBuf : PChar; cchBuf : UINT) : BOOL
```

```
6247:  Procedure PathSetDlgItemPath( hDlg : HWND; id : Integer; pszPath : PChar)
6248:  Function PathSkipRoot( pszPath : PChar) : PChar
6249:  Procedure PathStripPath( pszPath : PChar)
6250:  Function PathStripToRoot( pszPath : PChar) : BOOL
6251:  Procedure PathUnquoteSpaces( lpsz : PChar)
6252:  Function PathMakeSystemFolder( pszPath : PChar) : BOOL
6253:  Function PathUnmakeSystemFolder( pszPath : PChar) : BOOL
6254:  Function PathIsSystemFolder( pszPath : PChar; dwAttrb : DWORD) : BOOL
6255:  Procedure PathUndecorate( pszPath : PChar)
6256:  Function PathUnExpandEnvStrings( pszPath : PChar; pszBuf : PChar; cchBuf : UINT) : BOOL
6257:  URL_SCHEME_INVALID','LongInt'( - 1);
6258:  URL_SCHEME_UNKNOWN','LongInt'( 0);
6259:  URL_SCHEME_FTP','LongInt'( 1);
6260:  URL_SCHEME_HTTP','LongInt'( 2);
6261:  URL_SCHEME_GOPHER','LongInt'( 3);
6262:  URL_SCHEME_MAILTO','LongInt'( 4);
6263:  URL_SCHEME_NEWS','LongInt'( 5);
6264:  URL_SCHEME_NNTP','LongInt'( 6);
6265:  URL_SCHEME_TELNET','LongInt'( 7);
6266:  URL_SCHEME_WAIS','LongInt'( 8);
6267:  URL_SCHEME_FILE','LongInt'( 9);
6268:  URL_SCHEME_MK','LongInt'( 10);
6269:  URL_SCHEME_HTTPS','LongInt'( 11);
6270:  URL_SCHEME_SHELL','LongInt'( 12);
6271:  URL_SCHEME_SNEWS','LongInt'( 13);
6272:  URL_SCHEME_LOCAL','LongInt'( 14);
6273:  URL_SCHEME_JAVASCRIPT','LongInt'( 15);
6274:  URL_SCHEME_VBSCRIPT','LongInt'( 16);
6275:  URL_SCHEME_ABOUT','LongInt'( 17);
6276:  URL_SCHEME_RES','LongInt'( 18);
6277:  URL_SCHEME_MAXVALUE','LongInt'( 19);
6278:  URL_SCHEME', 'Integer
6279:  URL_PART_NONE','LongInt'( 0);
6280:  URL_PART_SCHEME','LongInt'( 1);
6281:  URL_PART_HOSTNAME','LongInt'( 2);
6282:  URL_PART_USERNAME','LongInt'( 3);
6283:  URL_PART_PASSWORD','LongInt'( 4);
6284:  URL_PART_PORT','LongInt'( 5);
6285:  URL_PART_QUERY','LongInt'( 6);
6286:  URL_PART', 'DWORD
6287:  URLIS_URL','LongInt'( 0);
6288:  URLIS_OPAQUE','LongInt'( 1);
6289:  URLIS_NOHISTORY','LongInt'( 2);
6290:  URLIS_FILEURL','LongInt'( 3);
6291:  URLIS_APPLIABLE','LongInt'( 4);
6292:  URLIS_DIRECTORY','LongInt'( 5);
6293:  URLIS_HASQUERY','LongInt'( 6);
6294:  TUrlIs', 'DWORD
6295:  URL_UNESCAPE','LongWord( $10000000);
6296:  URL_ESCAPE_UNSAFE','LongWord( $20000000);
6297:  URL_PLUGGABLE_PROTOCOL','LongWord( $40000000);
6298:  URL_WININET_COMPATIBILITY','LongWord( DWORD ( $80000000 ));
6299:  URL_DONT_ESCAPE_EXTRA_INFO','LongWord( $02000000);
6300:  URL_ESCAPE_SPACES_ONLY','LongWord( $04000000);
6301:  URL_DONT_SIMPLIFY','LongWord( $08000000);
6302:  URL_NO_META','longword( URL_DONT_SIMPLIFY);
6303:  URL_UNESCAPE_INPLACE','LongWord( $00100000);
6304:  URL_CONVERT_IF_DOSPATH','LongWord( $00200000);
6305:  URL_UNESCAPE_HIGH_ANSI_ONLY','LongWord( $00400000);
6306:  URL_INTERNAL_PATH','LongWord( $00800000);
6307:  URL_FILE_USE_PATHURL','LongWord( $00010000);
6308:  URL_ESCAPE_PERCENT','LongWord( $00001000);
6309:  URL_ESCAPE_SEGMENT_ONLY','LongWord( $00002000);
6310:  URL_PARTFLAG_KEEPSCHEME','LongWord( $00000001);
6311:  URL_APPLY_DEFAULT','LongWord( $00000001);
6312:  URL_APPLY_GUESSSCHEME','LongWord( $00000002);
6313:  URL_APPLY_GUESSFILE','LongWord( $00000004);
6314:  URL_APPLY_FORCEAPPLY','LongWord( $00000008);
6315:  Function UrlCompare( psz1, psz2 : PChar; fIgnoreSlash : BOOL) : Integer
6316:  Function UrlCombine(pszBase,pszRelative:PChar;pszCombin:PChar;out pcchCombin:DWORD;dwFlags:DWORD):HRESULT;
6317:  Function UrlCanonicalize(pszUrl:PChar;pszCanonicalized:PChar;pcchCanonic:DWORD;dwFlags:DWORD):HRESULT;
6318:  Function UrlIsOpaque( pszURL : PChar) : BOOL
6319:  Function UrlIsNoHistory( pszURL : PChar) : BOOL
6320:  Function UrlIsFileUrl( pszURL : PChar) : BOOL
6321:  Function UrlIs( pszUrl : PChar; UrlIs : TUrlIs) : BOOL
6322:  Function UrlGetLocation( psz1 : PChar) : PChar
6323:  Function UrlUnescape( pszUrl, pszUnescaped : PChar;pcchUnescaped:DWORD; dwFlags : DWORD) : HRESULT
6324:  Function UrlEscape(pszUrl: PChar; pszEscaped: PChar; pcchEscaped:DWORD; dwFlags : DWORD) : HRESULT
6325:  Function UrlCreateFromPath(pszPath:PChar; pszUrl: PChar;pcchUrl: DWORD; dwFlags : DWORD) : HRESULT
6326:  Function PathCreateFromUrl(pszUrl:PChar; pszPath:PChar; pcchPath:DWORD; dwFlags : DWORD) : HRESULT
6327:  Function UrlHash( pszUrl : PChar; pbHash : BYTE; cbHash : DWORD) : HRESULT
6328:  Function UrlGetPart(pszIn: PChar; pszOut: PChar; pcchOut: DWORD; dwPart,dwFlags: DWORD) : HRESULT
6329:  Function UrlApplyScheme( pszIn : PChar; pszOut : PChar; pcchOut : DWORD; dwFlags : DWORD) : HRESULT
6330:  Function HashData( pbData : BYTE; cbData : DWORD; pbHash : BYTE; cbHash : DWORD) : HRESULT
6331:  Function UrlEscapeSpaces( pszUrl : PChar; pszEscaped : PChar; pcchEscaped : DWORD) : HRESULT
6332:  Function UrlUnescapeInPlace( pszUrl : PChar; dwFlags : DWORD) : HRESULT
6333:  Function SHDeleteEmptyKey( hKey : HKEY; pszSubKey : PChar) : DWORD
6334:  Function SHDeleteKey( hKey : HKEY; pszSubKey : PChar) : DWORD
6335:  Function SHDeleteValue( hKey : HKEY; pszSubKey, pszValue : PChar) : DWORD
```

```
6336:  Function SHEnumKeyEx( hKey : HKEY; dwIndex : DWORD; pszName : PChar; var pcchName : DWORD) : Longint
6337:  Function SHEnumValue( hKey : HKEY; dwIndex : DWORD; pszValueName:PChar; var
      pcchValueName:DWORD;pdwType:DWORD; pvData : ___Pointer; pcbData : DWORD) : Longint
6338:  Function SHQueryInfoKey(hKey:HKEY;pcSubKeys,pcchMaxSubKeyLen,pcVal,pcchMaxValueNameLen:DWORD):Longint;
6339:  Function SHCopyKey( hkeySrc : HKEY; szSrcSubKey : PChar; hkeyDest : HKEY; fReserved : DWORD) : DWORD
6340:  Function SHRegGetPath(hKey:HKEY; pcszSubKey,pcszValue: PChar; pszPath: PChar; dwFlags: DWORD): DWORD
6341:  Function SHRegSetPath( hKey:HKEY; pcszSubKey, pcszValue, pcszPath : PChar; dwFlags : DWORD): DWORD
6342:  SHREGDEL_DEFAULT','LongWord( $00000000);
6343:  SHREGDEL_HKCU','LongWord( $00000001);
6344:  SHREGDEL_HKLM','LongWord( $00000010);
6345:  SHREGDEL_BOTH','LongWord( $00000011);
6346:  SHREGENUM_DEFAULT','LongWord( $00000000);
6347:  SHREGENUM_HKCU','LongWord( $00000001);
6348:  SHREGENUM_HKLM','LongWord( $00000010);
6349:  SHREGENUM_BOTH','LongWord( $00000011);
6350:  SHREGSET_HKCU','LongWord( $00000001);
6351:  SHREGSET_FORCE_HKCU','LongWord( $00000002);
6352:  SHREGSET_HKLM','LongWord( $00000004);
6353:  SHREGSET_FORCE_HKLM','LongWord( $00000008);
6354:  TSHRegDelFlags', 'DWORD
6355:  TSHRegEnumFlags', 'DWORD
6356:  HUSKEY', 'THandle
6357:  ASSOCF_INIT_NOREMAPCLSID','LongWord( $00000001);
6358:  ASSOCF_INIT_BYEXENAME','LongWord( $00000002);
6359:  ASSOCF_OPEN_BYEXENAME','LongWord( $00000002);
6360:  ASSOCF_INIT_DEFAULTTOSTAR','LongWord( $00000004);
6361:  ASSOCF_INIT_DEFAULTTOFOLDER','LongWord( $00000008);
6362:  ASSOCF_NOUSERSETTINGS','LongWord( $00000010);
6363:  ASSOCF_NOTRUNCATE','LongWord( $00000020);
6364:  ASSOCF_VERIFY','LongWord( $00000040);
6365:  ASSOCF_REMAPRUNDLL','LongWord( $00000080);
6366:  ASSOCF_NOFIXUPS','LongWord( $00000100);
6367:  ASSOCF_IGNOREBASECLASS','LongWord( $00000200);
6368:  ASSOCF', 'DWORD
6369:  ASSOCSTR_COMMAND','LongInt'( 1);
6370:  ASSOCSTR_EXECUTABLE','LongInt'( 2);
6371:  ASSOCSTR_FRIENDLYDOCNAME','LongInt'( 3);
6372:  ASSOCSTR_FRIENDLYAPPNAME','LongInt'( 4);
6373:  ASSOCSTR_NOOPEN','LongInt'( 5);
6374:  ASSOCSTR_SHELLNEWVALUE','LongInt'( 6);
6375:  ASSOCSTR_DDECOMMAND','LongInt'( 7);
6376:  ASSOCSTR_DDEIFEXEC','LongInt'( 8);
6377:  ASSOCSTR_DDEAPPLICATION','LongInt'( 9);
6378:  ASSOCSTR_DDETOPIC','LongInt'( 10);
6379:  ASSOCSTR_INFOTIP','LongInt'( 11);
6380:  ASSOCSTR_MAX','LongInt'( 12);
6381:  ASSOCSTR', 'DWORD
6382:  ASSOCKEY_SHELLEXECCLASS','LongInt'( 1);
6383:  ASSOCKEY_APP','LongInt'( 2);
6384:  ASSOCKEY_CLASS','LongInt'( 3);
6385:  ASSOCKEY_BASECLASS','LongInt'( 4);
6386:  ASSOCKEY_MAX','LongInt'( 5);
6387:  ASSOCKEY', 'DWORD
6388:  ASSOCDATA_MSIDESCRIPTOR','LongInt'( 1);
6389:  ASSOCDATA_NOACTIVATEHANDLER','LongInt'( 2);
6390:  ASSOCDATA_QUERYCLASSSTORE','LongInt'( 3);
6391:  ASSOCDATA_HASPERUSERASSOC','LongInt'( 4);
6392:  ASSOCDATA_MAX','LongInt'( 5);
6393:  ASSOCDATA', 'DWORD
6394:  ASSOCENUM_NONE','LongInt'( 0);
6395:  ASSOCENUM', 'DWORD
6396:  SID_IQueryAssociations','String '{c46ca590-3c3f-11d2-bee6-0000f805ca57}
6397:  SHACF_DEFAULT $00000000);
6398:  SHACF_FILESYSTEM','LongWord( $00000001);
6399:  SHACF_URLHISTORY','LongWord( $00000002);
6400:  SHACF_URLMRU','LongWord( $00000004);
6401:  SHACF_USETAB','LongWord( $00000008);
6402:  SHACF_FILESYS_ONLY','LongWord( $00000010);
6403:  SHACF_AUTOSUGGEST_FORCE_ON','LongWord( $10000000);
6404:  SHACF_AUTOSUGGEST_FORCE_OFF','LongWord( $20000000);
6405:  SHACF_AUTOAPPEND_FORCE_ON','LongWord( $40000000);
6406:  SHACF_AUTOAPPEND_FORCE_OFF','LongWord( DWORD ( $80000000 ));
6407:  Function SHAutoComplete( hwndEdit : HWND; dwFlags : DWORD) : HRESULT
6408:  Procedure SHSetThreadRef( punk : IUnknown)
6409:  Procedure SHGetThreadRef( out ppunk : IUnknown)
6410:  CTF_INSIST','LongWord( $00000001);
6411:  CTF_THREAD_REF','LongWord( $00000002);
6412:  CTF_PROCESS_REF','LongWord( $00000004);
6413:  CTF_COINIT','LongWord( $00000008);
6414:  Function SHCreateShellPalette( hdc : HDC) : HPALETTE
6415:  Procedure ColorRGBToHLS( clrRGB : TColorRef; out pwHue, pwLuminance, pwSaturation : WORD)
6416:  Function ColorHLSToRGB( wHue, wLuminance, wSaturation : WORD) : TColorRef
6417:  Function ColorAdjustLuma( clrRGB : TColorRef; n : Integer; fScale : Boolean) : TColorRef
6418:  Function GetSysColorBrush( nIndex : Integer) : HBRUSH
6419:  Function DrawFocusRect( hDC : HDC; const lprc : TRect) : BOOL
6420:  Function FillRect( hDC : HDC; const lprc : TRect; hbr : HBRUSH) : Integer
6421:  Function FrameRect( hDC : HDC; const lprc : TRect; hbr : HBRUSH) : Integer
6422:  Function InvertRect( hDC : HDC; const lprc : TRect) : BOOL
6423:  Function SetRect( var lprc : TRect; xLeft, yTop, xRight, yBottom : Integer) : BOOL
```

```
6424:  Function SetRectEmpty( var lprc : TRect) : BOOL
6425:  Function CopyRect( var lprcDst : TRect; const lprcSrc : TRect) : BOOL
6426:  Function InflateRect( var lprc : TRect; dx, dy : Integer) : BOOL
6427:  Function IntersectRect2( var lprcDst : TRect; const lprcSrc1, lprcSrc2 : TRect) : BOOL
6428:  Function SubtractRect( var lprcDst : TRect; const lprcSrc1, lprcSrc2 : TRect) : BOOL
6429:
6430:  Function InitializeFlatSB( hWnd : HWND) : Bool
6431:  Procedure UninitializeFlatSB( hWnd : HWND)
6432:  Function FlatSB_GetScrollProp( p1 : HWND; propIndex : Integer; p3 : PInteger) : Bool
6433:  Function FlatSB_SetScrollProp( p1 : HWND; index : Integer; newValue : Integer; p4 : Bool) : Bool
6434:  Function GET_APPCOMMAND_LPARAM( lParam : Integer) : Word  //of JvWin32
6435:  Function GET_DEVICE_LPARAM( lParam : Integer) : Word
6436:  Function GET_MOUSEORKEY_LPARAM( lParam : Integer) : Integer
6437:  Function GET_FLAGS_LPARAM( lParam : Integer) : Word
6438:  Function GET_KEYSTATE_LPARAM( lParam : Integer) : Word
6439:
6440:
6441: //  ***************************************** 204 unit uPSI_ShellAPI;
6442: Function DragQueryFile( Drop : HDROP; FileIndex : UINT; FileName : PChar; cb : UINT) : UINT
6443: Function DragQueryPoint( Drop : HDROP; var Point : TPoint) : BOOL
6444: Procedure DragFinish( Drop : HDROP)
6445: Procedure DragAcceptFiles( Wnd : HWND; Accept : BOOL)
6446: Function ShellExecute(hWnd:HWND;Operation,FileName,Parameters,Directory:PChar;ShowCmd:Integer):HINST
6447: Function FindExecutable( FileName, Directory : PChar; Result : PChar) : HINST
6448: Function ShellAbout( Wnd : HWND; szApp, szOtherStuff : PChar; Icon : HICON) : Integer
6449: Function DuplicateIcon( hInst : HINST; Icon : HICON) : HICON
6450: Function ExtractAssociatedIcon( hInst : HINST; lpIconPath : PChar; var lpiIcon : Word) : HICON
6451: Function ExtractIcon( hInst : HINST; lpszExeFileName : PChar; nIconIndex : UINT) : HICON
6452: Function SHAppBarMessage( dwMessage : DWORD; var pData : TAppBarData) : UINT
6453: Function DoEnvironmentSubst( szString : PChar; cbString : UINT) : DWORD
6454: Function ExtractIconEx(lpszFile:PChar;nIconIndex:Int;var phiconLarge,phiconSmall:HICON;nIcons:UINT):UINT;
6455: Procedure SHFreeNameMappings( hNameMappings : THandle)
6456:
6457:  DLLVER_PLATFORM_WINDOWS','LongWord( $00000001);
6458:  DLLVER_PLATFORM_NT','LongWord( $00000002);
6459:  DLLVER_MAJOR_MASK','LongWord( Int64 ( $FFFF000000000000 ));
6460:  DLLVER_MINOR_MASK','LongWord( Int64 ( $0000FFFF00000000 ));
6461:  DLLVER_BUILD_MASK','LongWord( Int64 ( $00000000FFFF0000 ));
6462:  DLLVER_QFE_MASK','LongWord( Int64 ( $000000000000FFFF ));
6463:  Function MAKEDLLVERULL( Major, Minor, Build, Qfe : Word) : Int64
6464:  Function SimpleXMLEncode( const S : string) : string
6465:  Procedure SimpleXMLDecode( var S : string; TrimBlanks : Boolean)
6466:  Function XMLEncode( const S : string) : string
6467:  Function XMLDecode( const S : string) : string
6468:  Function EntityEncode( const S : string) : string
6469:  Function EntityDecode( const S : string) : string
6470:
6471: procedure RIRegister_CPort_Routines(S: TPSExec);
6472:  Procedure EnumComPorts( Ports : TStrings)
6473:  Procedure ListComPorts( Ports : TStrings)
6474:  Procedure ComPorts( Ports : TStrings)  //Alias to Arduino
6475:  Function GetComPorts: TStringlist;
6476:  Function StrToBaudRate( Str : string) : TBaudRate
6477:  Function StrToStopBits( Str : string) : TStopBits
6478:  Function StrToDataBits( Str : string) : TDataBits
6479:  Function StrToParity( Str : string) : TParityBits
6480:  Function StrToFlowControl( Str : string) : TFlowControl
6481:  Function BaudRateToStr( BaudRate : TBaudRate) : string
6482:  Function StopBitsToStr( StopBits : TStopBits) : string
6483:  Function DataBitsToStr( DataBits : TDataBits) : string
6484:  Function ParityToStr( Parity : TParityBits) : string
6485:  Function FlowControlToStr( FlowControl : TFlowControl) : string
6486:  Function ComErrorsToStr( Errors : TComErrors) : String
6487:
6488:  Function GetMessage( var lpMsg : TMsg; hWnd : HWND; wMsgFilterMin, wMsgFilterMax : UINT) : BOOL
6489:  Function DispatchMessage( const lpMsg : TMsg) : Longint
6490:  Function TranslateMessage( const lpMsg : TMsg) : BOOL
6491:  Function SetMessageQueue( cMessagesMax : Integer) : BOOL
6492:  Function PeekMessage(var lpMsg:TMsg; hWnd:HWND;wMsgFilterMin,wMsgFilterMax,wRemoveMsg:UINT):BOOL
6493:  Function GetMessagePos : DWORD
6494:  Function GetMessageTime : Longint
6495:  Function GetMessageExtraInfo : Longint
6496:  Function GetSpecialFolderPath( const FolderName : string; CanCreate : Boolean) : string
6497:  Procedure JAddToRecentDocs( const Filename : string)
6498:  Procedure ClearRecentDocs
6499:  Function ExtractIconFromFile( FileName : string; Index : Integer) : HICON
6500:  Function CreateShellLink( const AppName, Desc : string; Dest : string) : string
6501:  Procedure GetShellLinkInfo( const LinkFile : WideString; var SLI : TShellLinkInfo)
6502:  Procedure SetShellLinkInfo( const LinkFile : WideString; const SLI : TShellLinkInfo)
6503:  Function RecycleFile( FileToRecycle : string) : Boolean
6504:  Function JCopyFile( FromFile, ToDir : string) : Boolean
6505:  Function ShellObjectTypeEnumToConst( ShellObjectType : TShellObjectType) : UINT
6506:  Function ShellObjectTypeConstToEnum( ShellObjectType : UINT) : TShellObjectType
6507:  Function QueryServiceConfig2A( hService : SC_HANDLE; dwInfoLevel : DWORD; lpBuffer : LPBYTE; cbBufSize :
      DWORD; var pcbBytesNeeded : DWORD) : BOOL
6508:  Function QueryServiceConfig2W( hService : SC_HANDLE; dwInfoLevel : DWORD; lpBuffer : LPBYTE; cbBufSize :
      DWORD; var pcbBytesNeeded : DWORD) : BOOL
6509:  Function QueryServiceConfig2( hService : SC_HANDLE; dwInfoLevel : DWORD; lpBuffer : LPBYTE; cbBufSize :
      DWORD; var pcbBytesNeeded : DWORD) : BOOL
```

```
6510:  Function EnumServicesStatusExA(hSCManager: SC_HANDLE; InfoLevel: SC_ENUM_TYPE; dwServiceType: DWORD;
       dwServiceState: DWORD;lpServices:LPBYTE;cbBufSize:DWORD;var pcbBytesNeeded,lpServicesReturned,
       lpResumeHandle:DWORD;pszGroupName: LP
6511:  Function EnumServicesStatusExW( hSCManager : SC_HANDLE; InfoLevel : SC_ENUM_TYPE; dwServiceType : DWORD;
       dwServiceState : DWORD; lpServices:LPBYTE; cbBufSize:DWORD; var pcbBytesNeeded,lpServicesReturned,
       lpResumeHandle:DWORD; pszGroupNam
6512:  Function EnumServicesStatusEx( hSCManager : SC_HANDLE; InfoLevel : SC_ENUM_TYPE; dwServiceType : DWORD;
       dwServiceState : DWORD;lpServices :LPBYTE;cbBufSize:DWORD; var pcbBytesNeeded,lpServicesReturned,
       lpResumeHandle:DWORD; pszGroupName
6513:  Function ConvertSidToStringSid( sid : PSID; var stringSid : LPWSTR) : BOOL
6514:
6515: ***************************************** unit uPSI_JclPeImage;
6516:
6517:  Function IsValidPeFile( const FileName : TFileName) : Boolean
6518: // Function PeGetNtHeaders( const FileName : TFileName; var NtHeaders : TImageNtHeaders) : Boolean
6519:  Function PeCreateNameHintTable( const FileName : TFileName) : Boolean
6520:  Function PeRebaseImage(const ImageName: TFileName; NewBase : DWORD; TimeStamp : DWORD; MaxNewSize :
       DWORD) : TJclRebaseImageInfo
6521:  Function PeVerifyCheckSum( const FileName : TFileName) : Boolean
6522:  Function PeClearCheckSum( const FileName : TFileName) : Boolean
6523:  Function PeUpdateCheckSum( const FileName : TFileName) : Boolean
6524:  Function PeDoesExportFunction(const FileName:TFileName;const
       FuncName:string;Options:TJclSmartCompOptions):Bool;
6525:  Function PeIsExportFunctionForwardedEx( const FileName : TFileName; const FunctionName : string; var
       ForwardedName : string; Options : TJclSmartCompOptions) : Boolean
6526:  Function PeIsExportFunctionForwarded(const FileName:TFileName;const
       FunctionName:string;Options:TJclSmartCompOptions):Bool
6527:  Function PeDoesImportFunction( const FileName : TFileName; const FunctionName : string; const LibraryName
       : string; Options : TJclSmartCompOptions) : Boolean
6528:  Function PeDoesImportLibrary(const FileName:TFileName;const
       LibraryName:string;Recursive:Boolean):Boolean);
6529:  Function PeImportedLibraries( const FileName : TFileName; const LibrariesList : TStrings; Recursive :
       Boolean; FullPathName : Boolean) : Boolean
6530:  Function PeImportedFunctions(const FileName:TFileName;const FunctionsList:TStrings;const
       LibraryName:string; IncludeLibNames : Boolean): Boolean
6531:  Function PeExportedFunctions( const FileName : TFileName; const FunctionsList : TStrings) : Boolean
6532:  Function PeExportedNames( const FileName : TFileName; const FunctionsList : TStrings) : Boolean
6533:  Function PeExportedVariables( const FileName : TFileName; const FunctionsList : TStrings) : Boolean
6534:  Function PeResourceKindNames(const FileN:TFileName;ResourceType:TJclPeResourceKind;const
       NamesList:TStrings):Bool
6535:  Function PeBorFormNames( const FileName : TFileName; const NamesList : TStrings) : Boolean
6536:  Function PeBorDependedPackages(const FileName:TFileName;PackagesList:TStrings;FullPathName,
       Descript:Bool):Bool;
6537:  Function PeFindMissingImports( const FileName : TFileName; MissingImportsList : TStrings) : Boolean;
6538:  Function PeFindMissingImports1( RequiredImportsList, MissingImportsList : TStrings) : Boolean;
6539:  Function PeCreateRequiredImportList(const FileName: TFileName; RequiredImportsList: TStrings): Boolean;
6540:  //Function PeMapImgNtHeaders( const BaseAddress : Pointer) : PImageNtHeaders
6541:  //Function PeMapImgLibraryName( const BaseAddress : Pointer) : string
6542:  //Function PeMapImgSections( const NtHeaders : PImageNtHeaders) : PImageSectionHeader
6543:  //Function PeMapImgFindSection( const NtHeaders : PImageNtHeaders; const SectionName : string) :
       PImageSectionHeader
6544:  //Function PeMapImgExportedVariables(const Module: HMODULE; const VariablesList:TStrings):Boolean
6545:  //Function PeMapImgResolvePackageThunk( Address : Pointer) : Pointer
6546:  Function PeMapFindResource(const Module:HMODULE;const ResourceType:PChar;const ResourceName:string):
       ___Pointer;
6547:   SIRegister_TJclPeSectionStream(CL);
6548:   SIRegister_TJclPeMapImgHookItem(CL);
6549:   SIRegister_TJclPeMapImgHooks(CL);
6550:  //Function PeDbgImgNtHeaders(ProcessHandle:THandle;BaseAddress:Pointer;var
       NtHeaders:TImageNtHeaders):Boolean
6551:  //Function PeDbgImgLibraryName(ProcessHandle:THandle; BaseAddress:Pointer; var Name:string):Boolean
6552:   Type TJclBorUmSymbolKind','(skData,skFunction,skConstructor,skDestructor,skRTTI,skVTable)
6553:   TJclBorUmSymbolModifier', '( smQualified, smLinkProc )
6554:   TJclBorUmSymbolModifiers', 'set of TJclBorUmSymbolModifier
6555:   TJclBorUmDescription', 'record Kind : TJclBorUmSymbolKind; Modifiers : TJclBorUmSymbolModifiers; end
6556:   TJclBorUmResult', '( urOk, urNotMangled, urMicrosoft, urError )
6557:   TJclPeUmResult', '( umNotMangled, umBorland, umMicrosoft )
6558:  Function PeBorUnmangleName( const Name : string; var Unmangled : string; var Description :
       TJclBorUmDescription; var BasePos : Integer) : TJclBorUmResult;
6559:  Function PeBorUnmangleName1(const Name:string;var Unmangled:string;var
       Descript:TJclBorUmDescription):TJclBorUmResult;
6560:  Function PeBorUnmangleName2( const Name : string; var Unmangled : string) : TJclBorUmResult;
6561:  Function PeBorUnmangleName3( const Name : string) : string;
6562:  Function PeIsNameMangled( const Name : string) : TJclPeUmResult
6563:  Function PeUnmangleName( const Name : string; var Unmangled : string) : TJclPeUmResult
6564:
6565:
6566: //****************** SysTools uPSI_StSystem; ************************************
6567:  Function StCopyFile( const SrcPath, DestPath : AnsiString) : Cardinal
6568:  Function CreateTempFile( const aFolder : AnsiString; const aPrefix : AnsiString) : AnsiString
6569:  Function DeleteVolumeLabel( Drive : Char) : Cardinal
6570:  //Procedure EnumerateDirectories(const
       StartDir:AnsiStr;FL:TStrings;SubDirs:Bool;IncludeItem:TIncludeItemFunc);
6571:  //Procedure EnumerateFiles(const StartDir:AnsiString;FL:TStrings;SubDirs:Bool
       IncludeItem:TIncludeItemFunc);
6572:  Function FileHandlesLeft( MaxHandles : Cardinal) : Cardinal
6573:  Function FileMatchesMask( const FileName, FileMask : AnsiString) : Boolean
6574:  Function FileTimeToStDateTime( FileTime : LongInt) : TStDateTimeRec
6575:  Function FindNthSlash( const Path : AnsiString; n : Integer) : Integer
```

```
6576:  Function FlushOsBuffers( Handle : Integer) : Boolean
6577:  Function GetCurrentUser : AnsiString
6578:  Function GetDiskClass( Drive : Char) : DiskClass
6579:  Function GetDiskInfo(Drive:Char;var ClustersAvail,TotalClusters,BytesPerSector,
       SectorsPerCluster:Cardinal):Bool;
6580:  Function GetDiskSpace(Drive:Char;var UserSpaceAvail:Double;var TotalSpaceAvail:Double;var
       DiskSize:Double):Bool;
6581:  Function GetDiskSpace(Drive:Char;var UserSpaceAvail:Comp;var TotalSpaceAvail:Comp;var
       DiskSize:Comp):Boolean;
6582:    { index 0 - FreeBytesAvailable, 1 - TotalNumberOfBytes, 2 - TotalNumberOfFreeBytes  }
6583:  Function getDiskSpace2(const path: String; index: integer): int64;
6584:  Function GetFileCreateDate( const FileName : AnsiString) : TDateTime
6585:  Function StGetFileLastAccess( const FileName : AnsiString) : TDateTime
6586:  Function GetFileLastModify( const FileName : AnsiString) : TDateTime
6587:  Function GetHomeFolder( aForceSlash : Boolean) : AnsiString
6588:  Function GetLongPath( const APath : AnsiString) : AnsiString
6589:  Function GetMachineName : AnsiString
6590:  Function GetMediaID( Drive : Char; var MediaIDRec : MediaIDType) : Cardinal
6591:  Function GetParentFolder( const APath : AnsiString; aForceSlash : Boolean) : AnsiString
6592:  Function GetShortPath( const APath : AnsiString) : AnsiString
6593:  Function GetSystemFolder( aForceSlash : Boolean) : AnsiString
6594:  Function GetTempFolder( aForceSlash : boolean) : AnsiString
6595:  Function StGetWindowsFolder( aForceSlash : boolean) : AnsiString
6596:  Function GetWorkingFolder( aForceSlash : boolean) : AnsiString
6597:  Function GlobalDateTimeToLocal( const UTC : TStDateTimeRec; MinOffset : Integer) : TStDateTimeRec
6598:  Function StIsDirectory( const DirName : AnsiString) : Boolean
6599:  Function IsDirectoryEmpty( const S : AnsiString) : Integer
6600:  Function IsDriveReady( Drive : Char) : Boolean
6601:  Function IsFile( const FileName : AnsiString) : Boolean
6602:  Function IsFileArchive( const S : AnsiString) : Integer
6603:  Function IsFileHidden( const S : AnsiString) : Integer
6604:  Function IsFileReadOnly( const S : AnsiString) : Integer
6605:  Function IsFileSystem( const S : AnsiString) : Integer
6606:  Function LocalDateTimeToGlobal( const DT1 : TStDateTimeRec; MinOffset : Integer) : TStDateTimeRec
6607:  Function ReadVolumeLabel( var VolName : AnsiString; Drive : Char) : Cardinal
6608:  Function SameFile( const FilePath1, FilePath2 : AnsiString; var ErrorCode : Integer) : Boolean
6609:  Function SetMediaID( Drive : Char; var MediaIDRec : MediaIDType) : Cardinal
6610:  Procedure SplitPath( const APath : AnsiString; Parts : TStrings)
6611:  Function StDateTimeToFileTime( const FileTime : TStDateTimeRec) : LongInt
6612:  Function StDateTimeToUnixTime( const DT1 : TStDateTimeRec) : Longint
6613:  Function UnixTimeToStDateTime( UnixTime : Longint) : TStDateTimeRec
6614:  Function ValidDrive( Drive : Char) : Boolean
6615:  Function WriteVolumeLabel( const VolName : AnsiString; Drive : Char) : Cardinal
6616:
6617: //****************************unit uPSI_JclLANMan;*****************************************
6618: Function CreateAccount( const Server, Username, Fullname, Password, Description, Homedir, Script : string;
       const PasswordNeverExpires : Boolean) : Boolean
6619:  Function CreateLocalAccount( const Username, Fullname, Password, Description, Homedir, Script : string;
       const PasswordNeverExpires : Boolean) : Boolean
6620:  Function DeleteAccount( const Servername, Username : string) : Boolean
6621:  Function DeleteLocalAccount( Username : string) : Boolean
6622:  Function CreateLocalGroup( const Server, Groupname, Description : string) : Boolean
6623:  Function CreateGlobalGroup( const Server, Groupname, Description : string) : Boolean
6624:  Function DeleteLocalGroup( const Server, Groupname : string) : Boolean
6625:  Function GetLocalGroups( const Server : string; const Groups : TStrings) : Boolean
6626:  Function GetGlobalGroups( const Server : string; const Groups : TStrings) : Boolean
6627:  Function LocalGroupExists( const Group : string) : Boolean
6628:  Function GlobalGroupExists( const Server, Group : string) : Boolean
6629:  Function AddAccountToLocalGroup( const Accountname, Groupname : string) : Boolean
6630:  Function LookupGroupName( const Server : string; const RID : TNetWellKnownRID) : string
6631:  Procedure ParseAccountName( const QualifiedName : string; var Domain, UserName : string)
6632:  Function IsLocalAccount( const AccountName : string) : Boolean
6633:  Function TimeStampInterval( StartStamp, EndStamp : TDateTime) : integer
6634:  Function GetRandomString( NumChar : cardinal) : string
6635:
6636: //****************************unit uPSI_cUtils;*****************************************
6637: TypeS('TUnitType', '( utSrc, utHead, utRes, utPrj, utOther )
6638: Function cIsWinNT : boolean
6639:  Procedure cFilesFromWildcard(Directory,Mask: string;var Files:TStringList;Subdirs,ShowDirs,
       Multitasking:Boolean;
6640:  Function cExecuteFile( const FileName, Params, DefaultDir : string; ShowCmd : Integer) : THandle
6641:  Function cRunAndGetOutput(Cmd,WorkDir:string; ErrFunc:TErrFunc; LineOutputFunc:TLineOutputFunc;
       CheckAbortFunc : TCheckAbortFunc; ShowReturnValue : Boolean) : string
6642:  Function cGetShortName( FileName : string) : string
6643:  Procedure cShowError( Msg : String)
6644:  Function cCommaStrToStr( s : string; formatstr : string) : string
6645:  Function cIncludeQuoteIfSpaces( s : string) : string
6646:  Function cIncludeQuoteIfNeeded( s : string) : string
6647:  Procedure cLoadFilefromResource( const FileName : string; ms : TMemoryStream)
6648:  Function cValidateFile(const FileName:string; const WorkPath:string;const CheckDirs:boolean):string;
6649:  Function cBuildFilter( var value : string; const FLTStyle : TFILTERSET) : boolean;
6650:  Function cBuildFilter1( var value : string; const _filters : array of string) : boolean;
6651:  Function cCodeInstoStr( s : string) : string
6652:  Function cStrtoCodeIns( s : string) : string
6653:  Procedure cStrtoAttr( var Attr : TSynHighlighterAttributes; Value : string)
6654:  Function cAttrtoStr( const Attr : TSynHighlighterAttributes) : string
6655:  Procedure cStrtoPoint( var pt : TPoint; value : string)
6656:  Function cPointtoStr( const pt : TPoint) : string
6657:  Function cListtoStr( const List : TStrings) : string
```

```
6658:  Function ListtoStr( const List : TStrings) : string
6659:  Procedure StrtoList( s : string; const List : TStrings; const delimiter : char)
6660:  Procedure cStrtoList( s : string; const List : TStrings; const delimiter : char)
6661:  Function cGetFileTyp( const FileName : string) : TUnitType
6662:  Function cGetExTyp( const FileName : string) : TExUnitType
6663:  Procedure cSetPath( Add : string; const UseOriginal : boolean)
6664:  Function cExpandFileto( const FileName : string; const BasePath : string) : string
6665:  Function cFileSamePath( const FileName : string; const TestPath : string) : boolean
6666:  Procedure cCloneMenu( const FromMenu : TMenuItem; ToMenu : TMenuItem)
6667:  Function cGetLastPos( const SubStr : string; const S : string) : integer
6668:  Function cGenMakePath( FileName : String) : String;
6669:  Function cGenMakePath2( FileName : String) : String
6670:  Function cGenMakePath1( FileName : String; EscapeSpaces, EncloseInQuotes : Boolean) : String;
6671:  Function cGetRealPath( BrokenFileName : String; Directory : String) : String
6672:  Function cCalcMod( Count : Integer) : Integer
6673:  Function cGetVersionString( FileName : string) : string
6674:  Function cCheckChangeDir( var Dir : string) : boolean
6675:  Function cGetAssociatedProgram(const Extension:string; var Filename,Description: string):boolean
6676:  Function cIsNumeric( s : string) : boolean
6677:  Procedure StrtoAttr( var Attr : TSynHighlighterAttributes; Value : string)
6678:  Function AttrtoStr( const Attr : TSynHighlighterAttributes) : string
6679:  Function GetFileTyp( const FileName : string) : TUnitType
6680:  Function Atoi(const aStr: string): integer
6681:  Function Itoa(const aint: integer): string
6682:  Function Atof(const aStr: string): double');
6683:  Function Atol(const aStr: string): longint');
6684:
6685:
6686: procedure SIRegister_cHTTPUtils(CL: TPSPascalCompiler);
6687: begin
6688:   FindClass('TOBJECT'),'EHTTP
6689:   FindClass('TOBJECT'),'EHTTPParser
6690:   //AnsiCharSet', 'set of AnsiChar
6691:   AnsiStringArray', 'array of AnsiString
6692:   THTTPProtocolEnum', '( hpNone, hpCustom, hpHTTP, hpHTTPS )
6693:   THTTPVersionEnum', '( hvNone, hvCustom, hvHTTP10, hvHTTP11 )
6694:   THTTPVersion', 'record Version : THTTPVersionEnum; Protocol : TH'
6695:    +'TTPProtocolEnum; CustomProtocol : AnsiString; CustomMajVersion : Integer; '
6696:    +'CustomMinVersion : Integer; end
6697:   THTTPHeaderNameEnum', '( hntCustom, hntHost, hntContentType, hnt'
6698:    +'ContentLength, hntContentTransferEncoding, hntContentLocation, hntContentL'
6699:    +'anguage, hntContentEncoding, hntTransferEncoding, hntDate, hntServer, hntU'
6700:    +'serAgent, hntLocation, hntConnection, hntExpires, hntCacheControl, hntSetC'
6701:    +'ookie, hntCookie, hntAuthorization, hntVia, hntWarning, hntContentRange, h'
6702:    +'ntXForwardedFor, hntPragma, hntXPoweredBy, hntWWWAuthenticate, hntLastModi'
6703:    +'fied, hntETag, hntProxyAuthorization, hntReferer, hntAge, hntAcceptRanges,'
6704:    +' hntAcceptEncoding, hntAcceptLanguage, hntAcceptCharset, hntIfModifiedSinc'
6705:    +'e, hntIfUnmodifiedSince, hntRetryAfter, hntUpgrade, hntStatus, hntProxyCon'
6706:    +'nection, hntOrigin, hntKeepAlive )
6707:   THTTPHeaderName', 'record Value : THTTPHeaderNameEnum; Custom: AnsiString; end
6708:   THTTPCustomHeader', 'record FieldName : AnsiString; FieldValue :'
6709:    +' AnsiString; end
6710:   //PHTTPCustomHeader', '^THTTPCustomHeader // will not work
6711:   THTTPContentLengthEnum', '( hcltNone, hcltByteCount )
6712:   THTTPContentLength', 'record Value : THTTPContentLengthEnum; ByteCount:Int64; end
6713:   //PHTTPContentLength', '^THTTPContentLength // will not work
6714:   THTTPContentTypeMajor', '( hctmCustom, hctmText, hctmImage )
6715:   THTTPContentTypeEnum', '( hctNone, hctCustomParts, hctCustomStri'
6716:    +'ng, hctTextHtml, hctTextAscii, hctTextCss, hctTextPlain, hctTextXml, hctTe'
6717:    +'xtCustom, hctImageJpeg, hctImagePng, hctImageGif, hctImageCustom, hctAppli'
6718:    +'cationJSON, hctApplicationOctetStream, hctApplicationJavaScript, hctApplic'
6719:    +'ationCustom, hctAudioCustom, hctVideoCustom )
6720:   THTTPContentType', 'record Value : THTTPContentTypeEnum; CustomM'
6721:    +'ajor : AnsiString; CustomMinor : AnsiString; Parameters : AnsiStringArray;'
6722:    +' CustomStr : AnsiString; end
6723:   THTTPDateFieldEnum', '( hdNone, hdCustom, hdParts, hdDateTime )
6724:   THTTPDateField', 'record Value : THTTPDateFieldEnum; DayOfWeek :'
6725:    +' Integer; Day : integer; Month : integer; Year : Integer; Hour : integer; '
6726:    +'Min : integer; Sec : Integer; TimeZoneGMT : Boolean; CustomTimeZone : Ansi'
6727:    +'String; DateTime : TDateTime; Custom : AnsiString; end
6728:   THTTPTransferEncodingEnum', '( hteNone, hteCustom, hteChunked )
6729:   THTTPTransferEncoding', 'record Value : THTTPTransferEncodingEnu'
6730:    +'m; Custom : AnsiString; end
6731:   THTTPConnectionFieldEnum', '( hcfNone, hcfCustom, hcfClose, hcfKeepAlive )
6732:   THTTPConnectionField', 'record Value : THTTPConnectionFieldEnum;'
6733:    +' Custom : AnsiString; end
6734:   THTTPAgeFieldEnum', '( hafNone, hafCustom, hafAge )
6735:   THTTPAgeField', 'record Value: THTTPAgeFieldEnum; Age : Int64;Custom:AnsiString; end
6736:   THTTPCacheControlFieldEnum', '( hccfNone, hccfDecoded, hccfCustom )
6737:   THTTPCacheControlRequestSubField', '( hccsfNoCache, hccsfNoStore'
6738:    +', hccsfMaxAge, hccsfMaxStale, hccsfMinFresh, hccsfNoTransform, hccsfOnlyIfCached )
6739:   THTTPCacheControlResponseSubField', '( hccrfPublic, hccrfPrivate'
6740:    +', hccrfNoCache, hccrfNoStore, hccrfNoTransform, hccrfMustRevalidate, hccrf'
6741:    +'ProxyRevalidate, hccrfMaxAge, hccrfSMaxAge )
6742:   THTTPCacheControlField', 'record Value : THTTPCacheControlFieldEnum; end
6743:   THTTPContentEncodingEnum', '( hceNone, hceCustom, hceIdentity, h'
6744:    +'ceCompress, hceDeflate, hceExi, hceGzip, hcePack200Gzip )
6745:   THTTPContentEncoding', 'record Value:THTTPContentEncodingEnum;Custom:AnsiString; end;
6746:   THTTPContentEncodingFieldEnum', '( hcefNone, hcefList )
```

```
6747:   THTTPContentEncodingField', 'record Value : THTTPContentEncoding'
6748:    +'FieldEnum; List : array of THTTPContentEncoding; end
6749:   THTTPRetryAfterFieldEnum', '( hrafNone, hrafCustom, harfDate, harfSeconds )
6750:   THTTPRetryAfterField', 'record Value : THTTPRetryAfterFieldEnum;'
6751:    +' Custom : AnsiString; Date : TDateTime; Seconds : Int64; end
6752:   THTTPContentRangeFieldEnum', '( hcrfNone, hcrfCustom, hcrfByteRange )
6753:   THTTPContentRangeField', 'record Value : THTTPContentRangeFieldE'
6754:    +'num; ByteFirst : Int64; ByteLast : Int64; ByteSize : Int64; Custom : AnsiString; end
6755:   THTTPSetCookieFieldEnum', '( hscoNone, hscoDecoded, hscoCustom )
6756:   THTTPSetCookieCustomField', 'record Name : AnsiString; Value : AnsiString; end
6757:   THTTPSetCookieCustomFieldArray', 'array of THTTPSetCookieCustomField
6758:   THTTPSetCookieField', 'record Value : THTTPSetCookieFieldEnum; D'
6759:    +'omain : AnsiString; Path : AnsiString; Expires : THTTPDateField; MaxAge : '
6760:    +'Int64; HttpOnly : Boolean; Secure : Boolean; CustomFields : THTTPSetCookie'
6761:    +'CustomFieldArray; Custom : AnsiString; end
6762:   //PHTTPSetCookieField', '^THTTPSetCookieField // will not work
6763:   THTTPSetCookieFieldArray', 'array of THTTPSetCookieField
6764:   THTTPCookieFieldEnum', '( hcoNone, hcoDecoded, hcoCustom )
6765:   THTTPCookieFieldEntry', 'record Name : AnsiString; Value : AnsiString; end
6766:   //PHTTPCookieFieldEntry', '^THTTPCookieFieldEntry // will not work
6767:   THTTPCookieFieldEntryArray', 'array of THTTPCookieFieldEntry
6768:   THTTPCookieField', 'record Value : THTTPCookieFieldEnum; Entries'
6769:    +' : THTTPCookieFieldEntryArray; Custom : AnsiString; end
6770:   THTTPCommonHeaders', 'record TransferEncoding : THTTPTransferEnc'
6771:    +'oding; ContentType : THTTPContentType; ContentLength : THTTPContentLength;'
6772:    +' Connection : THTTPConnectionField; ProxyConnection : THTTPConnectionField'
6773:    +'; Date : THTTPDateField; ContentEncoding : THTTPContentEncodingField; end
6774:   THTTPCustomHeaders', 'array of THTTPCustomHeader
6775:    //THTTPFixedHeaders','array[THTTPHeaderNameEnum] of AnsiString
6776:   THTTPFixedHeaders','array[0..42] of AnsiString
6777:    THTTPMethodEnum', '( hmNone, hmCustom, hmGET, hmPUT, hmPOST, hmC'
6778:    +'ONNECT, hmHEAD, hmDELETE, hmOPTIONS, hmTRACE )
6779:   THTTPMethod', 'record Value : THTTPMethodEnum; Custom : AnsiString; end
6780:   THTTPRequestStartLine','record Method: THTTPMethod;URI: AnsiString;Version:THTTPVersion; end
6781:   THTTPRequestHeader', 'record CommonHeaders : THTTPCommonHeaders;'
6782:    +' FixedHeaders : THTTPFixedHeaders; CustomHeaders : THTTPCustomHeaders; Coo'
6783:    +'kie : THTTPCookieField; IfModifiedSince:THTTPDateField;IfUnmodifiedSince:THTTPDateField;end
6784:   //PHTTPRequestHeader', '^THTTPRequestHeader // will not work
6785:   THTTPRequest', 'record StartLine : THTTPRequestStartLine; Header'
6786:    +' : THTTPRequestHeader; HeaderComplete : Boolean; HasContent : Boolean; end
6787:   THTTPResponseStartLineMessage', '( hslmNone, hslmCustom, hslmOK)
6788:   THTTPResponseStartLine', 'record Version : THTTPVersion; Code : '
6789:    +'Integer; Msg : THTTPResponseStartLineMessage; CustomMsg : AnsiString; end
6790:   THTTPResponseHeader', 'record CommonHeaders : THTTPCommonHeaders'
6791:    +'; FixedHeaders : THTTPFixedHeaders; CustomHeaders : THTTPCustomHeaders; Co'
6792:    +'okies : THTTPSetCookieFieldArray; Expires : THTTPDateField; LastModified :'
6793:    +' THTTPDateField; Age : THTTPAgeField; end
6794:   //PHTTPResponseHeader', '^THTTPResponseHeader // will not work
6795:   THTTPResponse', 'record StartLine : THTTPResponseStartLine; Head'
6796:    +'er : THTTPResponseHeader; HeaderComplete : Boolean; HasContent : Boolean; end
6797:  Function HTTPMessageHasContent( const H : THTTPCommonHeaders) : Boolean
6798:  Procedure InitHTTPRequest( var A : THTTPRequest)
6799:  Procedure InitHTTPResponse( var A : THTTPResponse)
6800:  Procedure ClearHTTPVersion( var A : THTTPVersion)
6801:  Procedure ClearHTTPContentLength( var A : THTTPContentLength)
6802:  Procedure ClearHTTPContentType( var A : THTTPContentType)
6803:  Procedure ClearHTTPDateField( var A : THTTPDateField)
6804:  Procedure ClearHTTPTransferEncoding( var A : THTTPTransferEncoding)
6805:  Procedure ClearHTTPConnectionField( var A : THTTPConnectionField)
6806:  Procedure ClearHTTPAgeField( var A : THTTPAgeField)
6807:  Procedure ClearHTTPContentEncoding( var A : THTTPContentEncoding)
6808:  Procedure ClearHTTPContentEncodingField( var A : THTTPContentEncodingField)
6809:  Procedure ClearHTTPContentRangeField( var A : THTTPContentRangeField)
6810:  Procedure ClearHTTPSetCookieField( var A : THTTPSetCookieField)
6811:  Procedure ClearHTTPCommonHeaders( var A : THTTPCommonHeaders)
6812:  //Procedure ClearHTTPFixedHeaders( var A : THTTPFixedHeaders)
6813:  Procedure ClearHTTPCustomHeaders( var A : THTTPCustomHeaders)
6814:  Procedure ClearHTTPCookieField( var A : THTTPCookieField)
6815:  Procedure ClearHTTPMethod( var A : THTTPMethod)
6816:  Procedure ClearHTTPRequestStartLine( var A : THTTPRequestStartLine)
6817:  Procedure ClearHTTPRequestHeader( var A : THTTPRequestHeader)
6818:  Procedure ClearHTTPRequest( var A : THTTPRequest)
6819:  Procedure ClearHTTPResponseStartLine( var A : THTTPResponseStartLine)
6820:  Procedure ClearHTTPResponseHeader( var A : THTTPResponseHeader)
6821:  Procedure ClearHTTPResponse( var A : THTTPResponse)
6822:   THTTPStringOption', '( hsoNone )
6823:   THTTPStringOptions', 'set of THTTPStringOption
6824:   FindClass('TOBJECT'),'TAnsiStringBuilder
6825:
6826:  Procedure BuildStrHTTPVersion(const A:THTTPVersion;const B:TAnsiStringBuilder; P:THTTPStringOptions;
6827:  Procedure BuildStrHTTPContentLengthValue(const
      A:THTTPContentLength;B:TAnsiStringBuilder;P:THTTPStringOptions)
6828:  Procedure BuildStrHTTPContentLength(const A : THTTPContentLength;
      B:TAnsiStringBuilder;P:THTTPStringOptions)
6829:  Procedure BuildStrHTTPContentTypeValue(const A:THTTPContentType;B:TAnsiStringBuilder;const
      P:THTTPStringOptions)
6830:  Procedure BuildStrHTTPContentType(const A:THTTPContType;const B:TAnsiStringBuilder; const
      P:THTTPStringOptions)
6831:  Procedure BuildStrRFCDateTime( const DOW, Da, Mo, Ye, Ho, Mi, Se : Integer; const TZ : AnsiString; const
      B : TAnsiStringBuilder; const P : THTTPStringOptions)
```

```
6832:  Procedure BuildStrHTTPDateFieldValue( const A : THTTPDateField; const B : TAnsiStringBuilder; const P :
       THTTPStringOptions)
6833:  Procedure BuildStrHTTPDateField(const A:THTTPDateField;const B:TAnsiStringBuilder;const
       P:THTTPStringOptions);
6834:  Procedure BuildStrHTTPTransferEncodingValue( const A : THTTPTransferEncoding; const B :
       TAnsiStringBuilder; const P : THTTPStringOptions)
6835:  Procedure BuildStrHTTPTransferEncoding( const A : THTTPTransferEncoding; const B : TAnsiStringBuilder;
       const P : THTTPStringOptions)
6836:  Procedure BuildStrHTTPContentRangeField( const A : THTTPContentRangeField; const B : TAnsiStringBuilder;
       const P : THTTPStringOptions)
6837:  Procedure BuildStrHTTPConnectionFieldValue( const A : THTTPConnectionField; const B : TAnsiStringBuilder;
       const P : THTTPStringOptions)
6838:  Procedure BuildStrHTTPConnectionField( const A : THTTPConnectionField; const B : TAnsiStringBuilder;
       const P : THTTPStringOptions)
6839:  Procedure BuildStrHTTPAgeField(const A:THTTPAgeField;const B:TAnsiStringBuilder;const
       P:THTTPStringOptions);
6840:  Procedure BuildStrHTTPContentEncoding( const A : THTTPContentEncoding; const B : TAnsiStringBuilder;
       const P : THTTPStringOptions)
6841:  Procedure BuildStrHTTPContentEncodingField(const A:THTTPContentEncodingField;const
       B:TAnsiStringBuilder;const P:THTTPStringOptions)
6842:  Procedure BuildStrHTTPProxyConnectionField(const A : THTTPConnectionField; const B : TAnsiStringBuilder;
       const P : THTTPStringOptions)
6843:  Procedure BuildStrHTTPCommonHeaders( const A : THTTPCommonHeaders; const B : TAnsiStringBuilder; const P
       : THTTPStringOptions)
6844:  Procedure BuildStrHTTPFixedHeaders(const A:THTTPFixedHeaders;const B:TAnsiStrBuilder;const
       P:THTTPStringOptions)
6845:  Procedure BuildStrHTTPCustomHeaders( const A : THTTPCustomHeaders; const B : TAnsiStringBuilder; const P
       : THTTPStringOptions)
6846:  Procedure BuildStrHTTPSetCookieFieldValue( const A : THTTPSetCookieField; const B : TAnsiStringBuilder;
       const P : THTTPStringOptions)
6847:  Procedure BuildStrHTTPCookieFieldValue( const A : THTTPCookieField; const B : TAnsiStringBuilder; const P
       : THTTPStringOptions)
6848:  Procedure BuildStrHTTPCookieField(const A:THTTPCookieField;const B:TAnsiStrBuilder;const
       P:THTTPStringOptions);
6849:  Procedure BuildStrHTTPMethod( const A : THTTPMethod; const B : TAnsiStringBuilder; const P :
       THTTPStringOptions)
6850:  Procedure BuildStrHTTPRequestStartLine( const A : THTTPRequestStartLine; const B : TAnsiStringBuilder;
       const P : THTTPStringOptions)
6851:  Procedure BuildStrHTTPRequestHeader(const A:THTTPRequestHeader;const B:TAnsiStringBuilder;const
       P:THTTPStringOptions);
6852:  Procedure BuildStrHTTPRequest(const A : THTTPRequest; const B : TAnsiStringBuilder; const P :
       THTTPStringOptions)
6853:  Procedure BuildStrHTTPResponseCookieFieldArray( const A : THTTPSetCookieFieldArray; const B :
       TAnsiStringBuilder; const P : THTTPStringOptions)
6854:  Procedure BuildStrHTTPResponseStartLine(const A:THTTPResponseStartLine;const B:TAnsiStrBldr;const P
       THTTPStrOptions);
6855:  Procedure BuildStrHTTPResponseHeader(const A:THTTPRespHeader;const B:TAnsiStrBuilder;const
       P:THTTPStringOptions);
6856:  Procedure BuildStrHTTPResponse(const A:THTTPResponse; const B:TAnsiStringBuilder; const
       P:THTTPStringOptions);
6857:  Function HTTPContentTypeValueToStr( const A : THTTPContentType) : AnsiString
6858:  Function HTTPSetCookieFieldValueToStr( const A : THTTPSetCookieField) : AnsiString
6859:  Function HTTPCookieFieldValueToStr( const A : THTTPCookieField) : AnsiString
6860:  Function HTTPMethodToStr( const A : THTTPMethod) : AnsiString
6861:  Function HTTPRequestToStr( const A : THTTPRequest) : AnsiString
6862:  Function HTTPResponseToStr( const A : THTTPResponse) : AnsiString
6863:  Procedure PrepareCookie(var A:THTTPCookieField;const B:THTTPSetCookieFieldArray;const
       Domain:AnsiString;const Secure:Bool; THTTPParserHeaderParseFunc', 'Function ( const HeaderName : THTT'
6864:    +PHeaderNameEnum; const HeaderPtr : ___Pointer) : Boolean
6865:   SIRegister_THTTPParser(CL);
6866:   FindClass('TOBJECT'),'THTTPContentDecoder
6867:   THTTPContentDecoderProc', 'Procedure ( const Sender : THTTPContentDecoder)
6868:   THTTPContentDecoderContentType', '( crctFixedSize, crctChunked, crctUnsized )
6869:   THTTPContentDecoderChunkState', '( crcsChunkHeader, crcsContent,'
6870:    +' crcsContentCRLF, crcsTrailer, crcsFinished )
6871:   THTTPContentDecoderLogEvent', 'Procedure ( const Sender : THTTPContentDecoder; const LogMsg : String)
6872:   SIRegister_THTTPContentDecoder(CL);
6873:   THTTPContentReaderMechanism', '( hcrmEvent, hcrmString, hcrmStream, hcrmFile )
6874:   FindClass('TOBJECT'),'THTTPContentReader
6875:   THTTPContentReaderProc', 'Procedure ( const Sender : THTTPContentReader)
6876:   THTTPContentReaderLogEvent','Procedure(const Sender:THTTPContentReader;const LogMsg:String;const
       LogLevel:Int;
6877:   SIRegister_THTTPContentReader(CL);
6878:   THTTPContentWriterMechanism','(hctmEvent, hctmString, hctmStream, hctmFile )
6879:   FindClass('TOBJECT'),'THTTPContentWriter
6880:   THTTPContentWriterLogEvent', 'Procedure (const Sender : THTTPContentWriter;const LogMsg:AnsiString);
6881:   SIRegister_THTTPContentWriter(CL);
6882:  Procedure SelfTestcHTTPUtils
6883: end;
6884:
6885: (*----------------------------------------------------------------------------*)
6886: procedure SIRegister_cTLSUtils(CL: TPSPascalCompiler);
6887: begin
6888:  'TLSLibraryVersion','String '1.00
6889:  'TLSError_None','LongInt'( 0);
6890:  'TLSError_InvalidBuffer','LongInt'( 1);
6891:  'TLSError_InvalidParameter','LongInt'( 2);
6892:  'TLSError_InvalidCertificate','LongInt'( 3);
6893:  'TLSError_InvalidState','LongInt'( 4);
```

```
6894:  'TLSError_DecodeError','LongInt'( 5);
6895:  'TLSError_BadProtocol','LongInt'( 6);
6896:  Function TLSErrorMessage( const TLSError : Integer) : String
6897:   SIRegister_ETLSError(CL);
6898:   TTLSProtocolVersion', 'record major : Byte; minor : Byte; end
6899:   PTLSProtocolVersion', '^TTLSProtocolVersion // will not work
6900:  Procedure InitSSLProtocolVersion30( var A : TTLSProtocolVersion)
6901:  Procedure InitTLSProtocolVersion10( var A : TTLSProtocolVersion)
6902:  Procedure InitTLSProtocolVersion11( var A : TTLSProtocolVersion)
6903:  Procedure InitTLSProtocolVersion12( var A : TTLSProtocolVersion)
6904:  Function IsTLSProtocolVersion( const A, B : TTLSProtocolVersion) : Boolean
6905:  Function IsSSL2( const A : TTLSProtocolVersion) : Boolean
6906:  Function IsSSL3( const A : TTLSProtocolVersion) : Boolean
6907:  Function IsTLS10( const A : TTLSProtocolVersion) : Boolean
6908:  Function IsTLS11( const A : TTLSProtocolVersion) : Boolean
6909:  Function IsTLS12( const A : TTLSProtocolVersion) : Boolean
6910:  Function IsTLS10OrLater( const A : TTLSProtocolVersion) : Boolean
6911:  Function IsTLS11OrLater( const A : TTLSProtocolVersion) : Boolean
6912:  Function IsTLS12OrLater( const A : TTLSProtocolVersion) : Boolean
6913:  Function IsFutureTLSVersion( const A : TTLSProtocolVersion) : Boolean
6914:  Function IsKnownTLSVersion( const A : TTLSProtocolVersion) : Boolean
6915:  Function TLSProtocolVersionToStr( const A : TTLSProtocolVersion) : String
6916:  Function TLSProtocolVersionName( const A : TTLSProtocolVersion) : String
6917:   PTLSRandom', '^TTLSRandom // will not work
6918:  Procedure InitTLSRandom( var Random : TTLSRandom)
6919:  Function TLSRandomToStr( const Random : TTLSRandom) : AnsiString
6920:  'TLSSessionIDMaxLen','LongInt'( 32);
6921:  Procedure InitTLSSessionID( var SessionID : TTLSSessionID; const A : AnsiString)
6922:  Function EncodeTLSSessionID(var Buffer:string;const Size:Int;const SessionID:TTLSSessionID):Int;
6923:  Function DecodeTLSSessionID(const Buffer:string;const Size:Int;var SessionID:TTLSSessionID):Int;
6924:   TTLSSignatureAndHashAlgorithm', 'record Hash : TTLSHashAlgorithm'
6925:    +'; Signature : TTLSSignatureAlgorithm; end
6926:  // PTLSSignatureAndHashAlgorithm', '^TTLSSignatureAndHashAlgorithm +'// will not work
6927:   TTLSSignatureAndHashAlgorithmArray', 'array of TTLSSignatureAndHashAlgorithm
6928:   TTLSKeyExchangeAlgorithm', '( tlskeaNone, tlskeaNULL, tlskeaDHE_'
6929:    +'DSS, tlskeaDHE_RSA, tlskeaDH_Anon, tlskeaRSA, tlskeaDH_DSS, tlskeaDH_RSA )
6930:   TTLSMACAlgorithm', '( tlsmaNone, tlsmaNULL, tlsmaHMAC_MD5, tlsma'
6931:    +'HMAC_SHA1, tlsmaHMAC_SHA256, tlsmaHMAC_SHA384, tlsmaHMAC_SHA512 )
6932:   TTLSMacAlgorithmInfo', 'record Name : AnsiString; DigestSize : I'
6933:    +'nteger; Supported : Boolean; end
6934:   PTLSMacAlgorithmInfo', '^TTLSMacAlgorithmInfo // will not work
6935:  'TLS_MAC_MAXDIGESTSIZE','LongInt'( 64);
6936:   TTLSPRFAlgorithm', '( tlspaSHA256 )
6937:  Function tlsP_MD5( const Secret, Seed : AnsiString; const Size : Integer) : AnsiString
6938:  Function tlsP_SHA1( const Secret, Seed : AnsiString; const Size : Integer) : AnsiString
6939:  Function tlsP_SHA256( const Secret, Seed : AnsiString; const Size : Integer) : AnsiString
6940:  Function tlsP_SHA512( const Secret, Seed : AnsiString; const Size : Integer) : AnsiString
6941:  Function tls10PRF( const Secret, ALabel, Seed : AnsiString; const Size : Integer) : AnsiString
6942:  Function tls12PRF_SHA256( const Secret, ALabel, Seed : AnsiString; const Size : Integer) : AnsiString
6943:  Function tls12PRF_SHA512( const Secret, ALabel, Seed : AnsiString; const Size : Integer) : AnsiString
6944:  Function TLSPRF(const ProtoVersion:TTLSProtocolVersion;const Secret,ALabel,Seed:AString;const
      Size:Int):AString;
6945:  Function tls10KeyBlock(const MasterSecret, ServerRandom,ClientRandom:AnsiString; const
      Size:Integer):AnsiString
6946:  Function tls12SHA256KeyBlock(const MasterSecret,ServerRandom,ClientRandom: AnsiString;const
      Size:Int):AnsiString;
6947:  Function tls12SHA512KeyBlock(const MasterSecret,ServerRandom,ClientRandom: AnsiString;const
      Size:Int):AnsiString;
6948:  Function TLSKeyBlock(const ProtocolVersion:TTLSProtocolVersion; const MasterSecret, ServerRandom,
      ClientRandom : AnsiString; const Size : Integer) : AnsiString
6949:  Function tls10MasterSecret(const PreMasterSecret,ClientRandom, ServerRandom:AnsiString) :AnsiString;
6950:  Function tls12SHA256MasterSecret(const PreMasterSecret,ClientRandom,ServerRandom:AnsiString):AnsiString;
6951:  Function tls12SHA512MasterSecret(const PreMasterSecret,ClientRandom,ServerRandom:AnsiString): AnsiString;
6952:  Function TLSMasterSecret( const ProtocolVersion: TTLSProtocolVersion;const PreMasterSecret,ClientRandom,
      ServerRandom:AnsiString) : AnsiString
6953:   TTLSKeys', 'record KeyBlock : AnsiString; ClientMACKey : AnsiStr'
6954:    +'ing; ServerMACKey : AnsiString; ClientEncKey : AnsiString; ServerEncKey : '
6955:    +'AnsiString; ClientIV : AnsiString; ServerIV : AnsiString; end
6956:  Procedure GenerateTLSKeys( const ProtocolVersion : TTLSProtocolVersion; const MACKeyBits, CipherKeyBits,
      IVBits : Integer; const MasterSecret, ServerRandom, ClientRandom : AnsiString; var TLSKeys : TTLSKeys)
6957:  Procedure GenerateFinalTLSKeys(const ProtocolVersion:TTLSProtocolVersion;const IsExportable:Boolean;const
      ExpandedKeyBits:Integer;const ServerRandom,ClientRandom:AnsiString;var TLSKeys:TTLSKeys)
6958:  'TLS_PLAINTEXT_FRAGMENT_MAXSIZE','LongInt'( 16384 - 1);
6959:  'TLS_COMPRESSED_FRAGMENT_MAXSIZE','LongInt'( 16384 + 1024);
6960:  Procedure SelfTestcTLSUtils
6961: end;
6962:
6963: (*----------------------------------------------------------------------------*)
6964: procedure SIRegister_Reversi(CL: TPSPascalCompiler);
6965: begin
6966:   sPosData','record corner : boolean; square2x2 : boolean; edge:boolean; stable : integer; internal :
      integer; disks : integer; mx : integer; my : integer; end
6967:  // pBoard', '^tBoard // will not work
6968:  Function rCalculateData( cc : byte; cx, cy : integer) : sPosData
6969:  Function rCheckMove( color : byte; cx, cy : integer) : integer
6970:  //Function rDoStep( data : pBoard) : word
6971:  Function winExecAndWait( const sAppPath : string; wVisible : word) : boolean
6972: end;
6973:
```

```
6974: procedure SIRegister_IWDBCommon(CL: TPSPascalCompiler);
6975: begin
6976: Function InEditMode( ADataset : TDataset) : Boolean
6977: Function CheckDataSource( ADataSource : TDataSource) : Boolean;
6978: Function CheckDataSource1(ADataSource:TDataSource;const AFieldName:string;var VField:TField):boolean;
6979: Function GetFieldText( AField : TField) : String
6980: end;
6981:
6982: procedure SIRegister_SortGrid(CL: TPSPascalCompiler);
6983: begin
6984:   TPrintMode', '( pmPrint, pmPreview, pmPageCount )
6985:   TMyPrintRange', '( prAll, prSelected )
6986:   TSortStyle', '( ssAutomatic, ssNormal, ssNumeric, ssNumericExten'
6987:    +'ded, ssDateTime, ssTime, ssCustom )
6988:   TSortDirection', '( sdAscending, sdDescending )
6989:   TSetChecked', 'Procedure ( Sender : TObject; ACol, ARow : integer; State : Boolean)
6990:   TGetCombobox', 'Procedure ( Sender : TObject; ACol, ARow : integ'
6991:    +'er; var Strs : TStringList; var Width, Height : integer; var Sorted : Boolean)
6992:   TSetCombobox', 'Procedure ( Sender : TObject; ACol, ARow : integer; Str : String)
6993:   TSetEllipsis', 'Procedure ( Sender : TObject; ACol, ARow : integer)
6994:   SIRegister_TSortOptions(CL);
6995:   SIRegister_TPrintOptions(CL);
6996:   TSortedListEntry', 'record Str : String; RowNum : integer; SortOption : TSortOptions; end
6997:   SIRegister_TSortedList(CL);
6998:   TCellBevelStyle', '( cbNone, cbRaised, cbLowered )
6999:   TCellBevel', 'record Style: TCellBevelStyle; UpperLeftColor: TColor; LowerRightColor : TColor; end
7000:   TVertAlignment', '( taTopJustify, taBottomJustify, taMiddle )
7001:   TFormatOptions', 'record Brush : TBrush; Font : TFont; Alignment'
7002:    +'Horz : TAlignment; AlignmentVert : TVertAlignment; Bevel : TCellBevel; HideText : Boolean; end
7003:   SIRegister_TFontSetting(CL);
7004:   SIRegister_TFontList(CL);
7005:   AddTypeS(TFormatDrawCellEvent', 'Procedure ( Sender : TObject; Col, Row :'
7006:    + integer;State:TGridDrawState;var FormatOptions:TFormatOptions;var CheckBox,Combobox,Ellipsis:Bool);
7007:   TSetFilterEvent', 'Procedure ( ARows : TStrings; var Accept : Boolean)
7008:   TSearchEvent', 'Procedure ( ARows : TStrings; var Accept : Boolean)
7009:   TUpdateGridEvent', 'Procedure ( Sender : TObject; ARow : integer)
7010:   TSizeChangedEvent', 'Procedure ( Sender : TObject; OldColCount, OldRowCount : integer)
7011:   TBeginSortEvent', 'Procedure ( Sender : TObject; var Col : integer)
7012:   TEndSortEvent', 'Procedure ( Sender : TObject; Col : integer)
7013:   TGetSortStyleEvent', 'Procedure ( Sender : TObject; Col : intege'
7014:    +'r; var SortStyle : TSortStyle)
7015:   TCellValidateEvent', 'Procedure ( Sender : TObject; ACol, ARow :'
7016:    +' integer; const OldValue : string; var NewValue : String; var Valid : Boolean)
7017:   SIRegister_TSortGrid(CL);
7018:  Function ExtendedCompare( const Str1, Str2 : String) : Integer
7019:  Function NormalCompare( const Str1, Str2 : String) : Integer
7020:  Function DateTimeCompare( const Str1, Str2 : String) : Integer
7021:  Function NumericCompare( const Str1, Str2 : String) : Integer
7022:  Function TimeCompare( const Str1, Str2 : String) : Integer
7023:  //Function Compare( Item1, Item2 : Pointer) : Integer
7024: end;
7025:
7026: ********************************** procedure Register_IB(CL: TPSPascalCompiler);
7027:  Procedure IBAlloc( var P, OldSize, NewSize : Integer)
7028:  Procedure IBError( ErrMess : TIBClientError; const Args : array of const)
7029:  Procedure IBDataBaseError
7030:  Function StatusVector : PISC_STATUS
7031:  Function StatusVectorArray : PStatusVector
7032:  Function CheckStatusVector( ErrorCodes : array of ISC_STATUS) : Boolean
7033:  Function StatusVectorAsText : string
7034:  Procedure SetIBDataBaseErrorMessages( Value : TIBDataBaseErrorMessages)
7035:  Function GetIBDataBaseErrorMessages : TIBDataBaseErrorMessages
7036:
7037:
7038: //****************************unit uPSI_BoldUtils;*****************************************
7039:  Function CharCount( c : char; const s : string) : integer
7040:  Function BoldNamesEqual( const name1, name2 : string) : Boolean
7041:  Procedure BoldAppendToStrings(strings: TStrings; const aString: string; const ForceNewLine:Boolean)
7042:  Function BoldSeparateStringList(strings:TStringList;const Separator,PreString,PostString:String):String
7043:  Function BoldSeparatedAppend( const S1, S2 : string; const Separator : string) : string
7044:  Function BoldTrim( const S : string) : string
7045:  Function BoldIsPrefix( const S, Prefix : string) : Boolean
7046:  Function BoldStrEqual( P1, P2 : PChar; Len : integer) : Boolean
7047:  Function BoldStrAnsiEqual( P1, P2 : PChar; Len : integer) : Boolean
7048:  Function BoldAnsiEqual( const S1, S2 : string) : Boolean
7049:  Function BoldStrStringEqual( const S1 : string; P2 : PChar; Len : integer) : Boolean
7050:  Function BoldCaseIndependentPos( const Substr, S : string) : Integer
7051:  //Procedure EnumToStrings( aTypeInfo : pTypeInfo; Strings : TStrings)
7052:  Function CapitalisedToSpaced( Capitalised : String) : String
7053:  Function SpacedToCapitalised( Spaced : String) : String
7054:  Function BooleanToString( BoolValue : Boolean) : String
7055:  Function StringToBoolean( StrValue : String) : Boolean
7056:  Function GetUpperLimitForMultiplicity( const Multiplicity : String) : Integer
7057:  Function GetLowerLimitForMultiplicity( const Multiplicity : String) : Integer
7058:  Function StringListToVarArray( List : TStringList) : variant
7059:  Function IsLocalMachine( const Machinename : WideString) : Boolean
7060:  Function GetComputerNameStr : string
7061:  Function TimeStampComp( const Time1, Time2 : TTimeStamp) : Integer
7062:  Function BoldStrToDateFmt(const S:string;const DateFormat:string;const DateSeparatorChar:char):TDateTime
```

```
7063:  Function BoldDateToStrFmt(const aDate:TDateTime;DateFormat:string;const DateSeparatorChar:char):String;
7064:  Function BoldParseFormattedDateList(const value:String;const formats:TStrings;var Date:TDateTime):Boolean;
7065:  Function BoldParseFormattedDate(const value:String;const formats:array of string; var
       Date:TDateTime):Boolean;
7066:  Procedure EnsureTrailing( var Str : String; ch : char)
7067:  Function BoldDirectoryExists( const Name : string) : Boolean
7068:  Function BoldForceDirectories( Dir : string) : Boolean
7069:  Function BoldRootRegistryKey : string
7070:  Function GetModuleFileNameAsString( IncludePath : Boolean) : string
7071:  Function BoldVariantToStrings( V : OleVariant; Strings : TStrings) : Integer
7072:  Function LogicalAnd( A, B : Integer) : Boolean
7073:  record TByHandleFileInformation dwFileAttributes : DWORD; '
7074:    +'ftCreationTime : TFileTime; ftLastAccessTime : TFileTime; ftLastWriteTime '
7075:    +': TFileTime; dwVolumeSerialNumber : DWORD; nFileSizeHigh : DWORD; nFileSiz'
7076:    +'eLow : DWORD; nNumberOfLinks : DWORD; nFileIndexHigh : DWORD; nFileIndexLow : DWORD; end
7077:  Function GetFileInformationByHandle(hFile:THandle;var lpFileInformation:TByHandleFileInformation):BOOL;
7078:  Function IsFirstInstance : Boolean
7079:  Procedure ActivateFirst( AString : PChar)
7080:  Procedure ActivateFirstCommandLine
7081:  function MakeAckPkt(const BlockNumber: Word): string;
7082:  procedure SendError(UDPBase:TIdUDPBase;APeerIP:string;const APort:Int;const ErrNumber:Word;ErrStr:string;
7083:  procedure SendError(UDPClient: TIdUDPClient; const ErrNumber: Word; ErrorString: string); overload;
7084:  procedure SendError(UDPBase: TIdUDPBase; APeerIP: string; const APort: Integer;  E: Exception); overload;
7085:  procedure SendError(UDPClient: TIdUDPClient; E: Exception); overload;
7086:  function IdStrToWord(const Value: String): Word;
7087:  function IdWordToStr(const Value: Word): WordStr;
7088:  Function HasInstructionSet( const InstructionSet : TCPUInstructionSet) : Boolean
7089:  Function CPUFeatures : TCPUFeatures
7090:
7091: procedure SIRegister_xrtl_util_CPUUtils(CL: TPSPascalCompiler);
7092: begin
7093:   AddTypeS('TXRTLBitIndex', 'Integer
7094:  Function XRTLSwapBits( Data : Cardinal; Bit1Index, Bit2Index : TXRTLBitIndex) : Cardinal
7095:  Function XRTLBitTest( Data : Cardinal; BitIndex : TXRTLBitIndex) : Boolean
7096:  Function XRTLBitSet( Data : Cardinal; BitIndex : TXRTLBitIndex) : Cardinal
7097:  Function XRTLBitReset( Data : Cardinal; BitIndex : TXRTLBitIndex) : Cardinal
7098:  Function XRTLBitComplement( Data : Cardinal; BitIndex : TXRTLBitIndex) : Cardinal
7099:  Function XRTLSwapHiLo16( X : Word) : Word
7100:  Function XRTLSwapHiLo32( X : Cardinal) : Cardinal
7101:  Function XRTLSwapHiLo64( X : Int64) : Int64
7102:  Function XRTLROL32( A, S : Cardinal) : Cardinal
7103:  Function XRTLROR32( A, S : Cardinal) : Cardinal
7104:  Function XRTLROL16( A : Word; S : Cardinal) : Word
7105:  Function XRTLROR16( A : Word; S : Cardinal) : Word
7106:  Function XRTLROL8( A : Byte; S : Cardinal) : Byte
7107:  Function XRTLROR8( A : Byte; S : Cardinal) : Byte
7108:  //Procedure XRTLXorBlock( I1, I2, O1 : PByteArray; Len : integer)
7109:  //Procedure XRTLIncBlock( P : PByteArray; Len : integer)
7110:  Procedure XRTLUMul64( const A, B : Integer; var MulL, MulH : Integer)
7111:  Function XRTLPopulation( A : Cardinal) : Cardinal
7112: end;
7113:
7114: Function XRTLURLDecode( const ASrc : WideString) : WideString
7115: Function XRTLURLEncode( const ASrc : WideString) : WideString
7116: Function XRTLURINormalize( const AURI : WideString) : WideString
7117: Procedure XRTLURIParse(const AURI:WideString;var VProtocol,VHost,VPath,VDocument,VPort,VBookmark,VUserName,
       VPassword : WideString)
7118: Function XRTLExtractLongPathName(APath: string): string;
7119:
7120: procedure SIRegister_cFundamentUtils(CL: TPSPascalCompiler);
7121: begin
7122:   AddTypeS('Int8', 'ShortInt
7123:   AddTypeS('Int16', 'SmallInt
7124:   AddTypeS('Int32', 'LongInt
7125:   AddTypeS('UInt8', 'Byte
7126:   AddTypeS('UInt16', 'Word
7127:   AddTypeS('UInt32', 'LongWord
7128:   AddTypeS('UInt64', 'Int64
7129:   AddTypeS('Word8', 'UInt8
7130:   AddTypeS('Word16', 'UInt16
7131:   AddTypeS('Word32', 'UInt32
7132:   AddTypeS('Word64', 'UInt64
7133:   AddTypeS('LargeInt', 'Int64
7134:   AddTypeS('NativeInt', 'Integer
7135:   AddTypeS('NativeUInt', 'Cardinal
7136:   Const('BitsPerByte','LongInt'( 8);
7137:   Const('BitsPerWord','LongInt'( 16);
7138:   Const('BitsPerLongWord','LongInt'( 32);
7139:  //Const('BitsPerCardinal','LongInt'( BytesPerCardinal * 8);
7140:  //Const('BitsPerNativeWord','LongInt'( BytesPerNativeWord * 8);
7141:  Function MinI( const A, B : Integer) : Integer
7142:  Function MaxI( const A, B : Integer) : Integer
7143:  Function MinC( const A, B : Cardinal) : Cardinal
7144:  Function MaxC( const A, B : Cardinal) : Cardinal
7145:  Function SumClipI( const A, I : Integer) : Integer
7146:  Function SumClipC( const A : Cardinal; const I : Integer) : Cardinal
7147:  Function InByteRange( const A : Int64) : Boolean
7148:  Function InWordRange( const A : Int64) : Boolean
7149:  Function InLongWordRange( const A : Int64) : Boolean
```

```
7150:  Function InShortIntRange( const A : Int64) : Boolean
7151:  Function InSmallIntRange( const A : Int64) : Boolean
7152:  Function InLongIntRange( const A : Int64) : Boolean
7153:   AddTypeS('Bool8', 'ByteBool
7154:   AddTypeS('Bool16', 'WordBool
7155:   AddTypeS('Bool32', 'LongBool
7156:   AddTypeS('TCompareResult', '( crLess, crEqual, crGreater, crUndefined )
7157:   AddTypeS('TCompareResultSet', 'set of TCompareResult
7158:  Function ReverseCompareResult( const C : TCompareResult) : TCompareResult
7159:  Const('MinSingle','Single').setExtended( 1.5E-45);
7160:  Const('MaxSingle','Single').setExtended( 3.4E+38);
7161:  Const('MinDouble','Double').setExtended( 5.0E-324);
7162:  Const('MaxDouble','Double').setExtended( 1.7E+308);
7163:  Const('MinExtended','Extended').setExtended(3.4E-4932);
7164:  Const('MaxExtended','Extended').setExtended(1.1E+4932);
7165:  Const('MinCurrency','Currency').SetExtended( - 922337203685477.5807);
7166:  Const('MaxCurrency','Currency').SetExtended( 922337203685477.5807);
7167:  Function MinF( const A, B : Float) : Float
7168:  Function MaxF( const A, B : Float) : Float
7169:  Function ClipF( const Value : Float; const Low, High : Float) : Float
7170:  Function InSingleRange( const A : Float) : Boolean
7171:  Function InDoubleRange( const A : Float) : Boolean
7172:  Function InCurrencyRange( const A : Float) : Boolean;
7173:  Function InCurrencyRange1( const A : Int64) : Boolean;
7174:  Function FloatExponentBase2( const A : Extended; var Exponent : Integer) : Boolean
7175:  Function FloatExponentBase10( const A : Extended; var Exponent : Integer) : Boolean
7176:  Function FloatIsInfinity( const A : Extended) : Boolean
7177:  Function FloatIsNaN( const A : Extended) : Boolean
7178:  Const('SingleCompareDelta','Extended').setExtended( 1.0E-34);
7179:  Const('DoubleCompareDelta','Extended').setExtended( 1.0E-280);
7180:  Const('ExtendedCompareDelta','Extended').setExtended( 1.0E-4400);
7181:  Const('DefaultCompareDelta','Extended').SetExtended( 1.0E-34);
7182:  Function FloatZero( const A : Float; const CompareDelta : Float) : Boolean
7183:  Function FloatOne( const A : Float; const CompareDelta : Float) : Boolean
7184:  Function FloatsEqual( const A, B : Float; const CompareDelta : Float) : Boolean
7185:  Function FloatsCompare( const A, B : Float; const CompareDelta : Float) : TCompareResult
7186:  Const('SingleCompareEpsilon','Extended').setExtended( 1.0E-5);
7187:  Const('DoubleCompareEpsilon','Extended').setExtended( 1.0E-13);
7188:  Const('ExtendedCompareEpsilon','Extended').setExtended( 1.0E-17);
7189:  Const('DefaultCompareEpsilon','Extended').setExtended( 1.0E-10);
7190:  Function ApproxEqual( const A, B : Extended; const CompareEpsilon : Double) : Boolean
7191:  Function ApproxCompare( const A, B : Extended; const CompareEpsilon : Double): TCompareResult
7192:  Function cClearBit( const Value, BitIndex : LongWord) : LongWord
7193:  Function cSetBit( const Value, BitIndex : LongWord) : LongWord
7194:  Function cIsBitSet( const Value, BitIndex : LongWord) : Boolean
7195:  Function cToggleBit( const Value, BitIndex : LongWord) : LongWord
7196:  Function cIsHighBitSet( const Value : LongWord) : Boolean
7197:  Function SetBitScanForward( const Value : LongWord) : Integer;
7198:  Function SetBitScanForward1( const Value, BitIndex : LongWord) : Integer;
7199:  Function SetBitScanReverse( const Value : LongWord) : Integer;
7200:  Function SetBitScanReverse1( const Value, BitIndex : LongWord) : Integer;
7201:  Function ClearBitScanForward( const Value : LongWord) : Integer;
7202:  Function ClearBitScanForward1( const Value, BitIndex : LongWord) : Integer;
7203:  Function ClearBitScanReverse( const Value : LongWord) : Integer;
7204:  Function ClearBitScanReverse1( const Value, BitIndex : LongWord) : Integer;
7205:  Function cReverseBits( const Value : LongWord) : LongWord;
7206:  Function cReverseBits1( const Value : LongWord; const BitCount : Integer) : LongWord;
7207:  Function cSwapEndian( const Value : LongWord) : LongWord
7208:  Function cTwosComplement( const Value : LongWord) : LongWord
7209:  Function RotateLeftBits16( const Value : Word; const Bits : Byte) : Word
7210:  Function RotateLeftBits32( const Value : LongWord; const Bits : Byte) : LongWord
7211:  Function RotateRightBits16( const Value : Word; const Bits : Byte) : Word
7212:  Function RotateRightBits32( const Value : LongWord; const Bits : Byte) : LongWord
7213:  Function cBitCount( const Value : LongWord) : LongWord
7214:  Function cIsPowerOfTwo( const Value : LongWord) : Boolean
7215:  Function LowBitMask( const HighBitIndex : LongWord) : LongWord
7216:  Function HighBitMask( const LowBitIndex : LongWord) : LongWord
7217:  Function RangeBitMask( const LowBitIndex, HighBitIndex : LongWord) : LongWord
7218:  Function SetBitRange( const Value: LongWord; const LowBitIndex, HighBitIndex: LongWord) : LongWord
7219:  Function ClearBitRange(const Value: LongWord; const LowBitIndex,HighBitIndex: LongWord) : LongWord
7220:  Function ToggleBitRange(const Value:LongWord; const LowBitIndex,HighBitIndex: LongWord) : LongWord
7221:  Function IsBitRangeSet(const Value: LongWord; const LowBitIndex,HighBitIndex : LongWord) : Boolean
7222:  Function IsBitRangeClear(const Value: LongWord; const LowBitIndex,HighBitIndex: LongWord): Boolean
7223: //  AddTypeS('CharSet', 'set of AnsiChar
7224:   AddTypeS('CharSet', 'set of Char       //!!!
7225:   AddTypeS('AnsiCharSet', 'TCharSet
7226:   AddTypeS('ByteSet', 'set of Byte
7227:   AddTypeS('AnsiChar', 'Char
7228:    // Function AsCharSet( const C : array of AnsiChar) : CharSet
7229:  Function AsByteSet( const C : array of Byte) : ByteSet
7230:  Procedure ComplementChar( var C : CharSet; const Ch : Char)
7231:  Procedure ClearCharSet( var C : CharSet)
7232:  Procedure FillCharSet( var C : CharSet)
7233:  Procedure ComplementCharSet( var C : CharSet)
7234:  Procedure AssignCharSet( var DestSet : CharSet; const SourceSet : CharSet)
7235:  Procedure Union( var DestSet : CharSet; const SourceSet : CharSet)
7236:  Procedure Difference( var DestSet : CharSet; const SourceSet : CharSet)
7237:  Procedure Intersection( var DestSet : CharSet; const SourceSet : CharSet)
7238:  Procedure XORCharSet( var DestSet : CharSet; const SourceSet : CharSet)
```

```
7239:  Function IsSubSet( const A, B : CharSet) : Boolean
7240:  Function IsEqual( const A, B : CharSet) : Boolean
7241:  Function IsEmpty( const C : CharSet) : Boolean
7242:  Function IsComplete( const C : CharSet) : Boolean
7243:  Function cCharCount( const C : CharSet) : Integer
7244:  Procedure ConvertCaseInsensitive( var C : CharSet)
7245:  Function CaseInsensitiveCharSet( const C : CharSet) : CharSet
7246:  Function IntRangeLength( const Low, High : Integer) : Int64
7247:  Function IntRangeAdjacent( const Low1, High1, Low2, High2 : Integer) : Boolean
7248:  Function IntRangeOverlap( const Low1, High1, Low2, High2 : Integer) : Boolean
7249:  Function IntRangeHasElement( const Low, High, Element : Integer) : Boolean
7250:  Function IntRangeIncludeElement( var Low, High : Integer; const Element : Integer) : Boolean
7251:  Function IntRangeIncludeElementRange(var Low,High:Integer;const LowElement,HighElement:Integer):Boolean
7252:  Function CardRangeLength( const Low, High : Cardinal) : Int64
7253:  Function CardRangeAdjacent( const Low1, High1, Low2, High2 : Cardinal) : Boolean
7254:  Function CardRangeOverlap( const Low1, High1, Low2, High2 : Cardinal) : Boolean
7255:  Function CardRangeHasElement( const Low, High, Element : Cardinal) : Boolean
7256:  Function CardRangeIncludeElement( var Low, High : Cardinal; const Element : Cardinal) : Boolean
7257:  Function CardRangeIncludeElementRange(var Low,High:Card;const LowElement,HighElement:Card):Boolean;
7258:   AddTypeS('UnicodeChar', 'WideChar
7259:  Function Compare( const I1, I2 : Boolean) : TCompareResult;
7260:  Function Compare1( const I1, I2 : Integer) : TCompareResult;
7261:  Function Compare2( const I1, I2 : Int64) : TCompareResult;
7262:  Function Compare3( const I1, I2 : Extended) : TCompareResult;
7263:  Function CompareA( const I1, I2 : AnsiString) : TCompareResult
7264:  Function CompareW( const I1, I2 : WideString) : TCompareResult
7265:  Function cSgn( const A : LongInt) : Integer;
7266:  Function cSgn1( const A : Int64) : Integer;
7267:  Function cSgn2( const A : Extended) : Integer;
7268:  AddTypeS('TConvertResult', '( convertOK, convertFormatError, convertOverflow )
7269:  Function AnsiCharToInt( const A : AnsiChar) : Integer
7270:  Function WideCharToInt( const A : WideChar) : Integer
7271:  Function CharToInt( const A : Char) : Integer
7272:  Function IntToAnsiChar( const A : Integer) : AnsiChar
7273:  Function IntToWideChar( const A : Integer) : WideChar
7274:  Function IntToChar( const A : Integer) : Char
7275:  Function IsHexAnsiChar( const Ch : AnsiChar) : Boolean
7276:  Function IsHexWideChar( const Ch : WideChar) : Boolean
7277:  Function IsHexChar( const Ch : Char) : Boolean
7278:  Function HexAnsiCharToInt( const A : AnsiChar) : Integer
7279:  Function HexWideCharToInt( const A : WideChar) : Integer
7280:  Function HexCharToInt( const A : Char) : Integer
7281:  Function IntToUpperHexAnsiChar( const A : Integer) : AnsiChar
7282:  Function IntToUpperHexWideChar( const A : Integer) : WideChar
7283:  Function IntToUpperHexChar( const A : Integer) : Char
7284:  Function IntToLowerHexAnsiChar( const A : Integer) : AnsiChar
7285:  Function IntToLowerHexWideChar( const A : Integer) : WideChar
7286:  Function IntToLowerHexChar( const A : Integer) : Char
7287:  Function IntToStringA( const A : Int64) : AnsiString
7288:  Function IntToStringW( const A : Int64) : WideString
7289:  Function IntToString( const A : Int64) : String
7290:  Function UIntToStringA( const A : NativeUInt) : AnsiString
7291:  Function UIntToStringW( const A : NativeUInt) : WideString
7292:  Function UIntToString( const A : NativeUInt) : String
7293:  Function LongWordToStrA( const A : LongWord; const Digits : Integer) : AnsiString
7294:  Function LongWordToStrW( const A : LongWord; const Digits : Integer) : WideString
7295:  Function LongWordToStrU( const A : LongWord; const Digits : Integer) : UnicodeString
7296:  Function LongWordToStr( const A : LongWord; const Digits : Integer) : String
7297:  Function LongWordToHexA(const A:LongWord;const Digits:Integer;const UpperCase:Boolean):AnsiString;
7298:  Function LongWordToHexW(const A:LongWord;const Digits:Integer;const UpperCase:Boolean):WideString;
7299:  Function LongWordToHex( const A : LongWord; const Digits : Integer;const UpperCase:Boolean):String
7300:  Function LongWordToOctA( const A : LongWord; const Digits : Integer) : AnsiString
7301:  Function LongWordToOctW( const A : LongWord; const Digits : Integer) : WideString
7302:  Function LongWordToOct( const A : LongWord; const Digits : Integer) : String
7303:  Function LongWordToBinA( const A : LongWord; const Digits : Integer) : AnsiString
7304:  Function LongWordToBinW( const A : LongWord; const Digits : Integer) : WideString
7305:  Function LongWordToBin( const A : LongWord; const Digits : Integer) : String
7306:  Function TryStringToInt64A( const S : AnsiString; out A : Int64) : Boolean
7307:  Function TryStringToInt64W( const S : WideString; out A : Int64) : Boolean
7308:  Function TryStringToInt64( const S : String; out A : Int64) : Boolean
7309:  Function StringToInt64DefA( const S : AnsiString; const Default : Int64) : Int64
7310:  Function StringToInt64DefW( const S : WideString; const Default : Int64) : Int64
7311:  Function StringToInt64Def( const S : String; const Default : Int64) : Int64
7312:  Function StringToInt64A( const S : AnsiString) : Int64
7313:  Function StringToInt64W( const S : WideString) : Int64
7314:  Function StringToInt64( const S : String) : Int64
7315:  Function TryStringToIntA( const S : AnsiString; out A : Integer) : Boolean
7316:  Function TryStringToIntW( const S : WideString; out A : Integer) : Boolean
7317:  Function TryStringToInt( const S : String; out A : Integer) : Boolean
7318:  Function StringToIntDefA( const S : AnsiString; const Default : Integer) : Integer
7319:  Function StringToIntDefW( const S : WideString; const Default : Integer) : Integer
7320:  Function StringToIntDef( const S : String; const Default : Integer) : Integer
7321:  Function StringToIntA( const S : AnsiString) : Integer
7322:  Function StringToIntW( const S : WideString) : Integer
7323:  Function StringToInt( const S : String) : Integer
7324:  Function TryStringToLongWordA( const S : AnsiString; out A : LongWord) : Boolean
7325:  Function TryStringToLongWordW( const S : WideString; out A : LongWord) : Boolean
7326:  Function TryStringToLongWord( const S : String; out A : LongWord) : Boolean
7327:  Function StringToLongWordA( const S : AnsiString) : LongWord
```

```
7328:  Function StringToLongWordW( const S : WideString) : LongWord
7329:  Function StringToLongWord( const S : String) : LongWord
7330:  Function HexToUIntA( const S : AnsiString) : NativeUInt
7331:  Function HexToUIntW( const S : WideString) : NativeUInt
7332:  Function HexToUInt( const S : String) : NativeUInt
7333:  Function TryHexToLongWordA( const S : AnsiString; out A : LongWord) : Boolean
7334:  Function TryHexToLongWordW( const S : WideString; out A : LongWord) : Boolean
7335:  Function TryHexToLongWord( const S : String; out A : LongWord) : Boolean
7336:  Function HexToLongWordA( const S : AnsiString) : LongWord
7337:  Function HexToLongWordW( const S : WideString) : LongWord
7338:  Function HexToLongWord( const S : String) : LongWord
7339:  Function TryOctToLongWordA( const S : AnsiString; out A : LongWord) : Boolean
7340:  Function TryOctToLongWordW( const S : WideString; out A : LongWord) : Boolean
7341:  Function TryOctToLongWord( const S : String; out A : LongWord) : Boolean
7342:  Function OctToLongWordA( const S : AnsiString) : LongWord
7343:  Function OctToLongWordW( const S : WideString) : LongWord
7344:  Function OctToLongWord( const S : String) : LongWord
7345:  Function TryBinToLongWordA( const S : AnsiString; out A : LongWord) : Boolean
7346:  Function TryBinToLongWordW( const S : WideString; out A : LongWord) : Boolean
7347:  Function TryBinToLongWord( const S : String; out A : LongWord) : Boolean
7348:  Function BinToLongWordA( const S : AnsiString) : LongWord
7349:  Function BinToLongWordW( const S : WideString) : LongWord
7350:  Function BinToLongWord( const S : String) : LongWord
7351:  Function FloatToStringA( const A : Extended) : AnsiString
7352:  Function FloatToStringW( const A : Extended) : WideString
7353:  Function FloatToString( const A : Extended) : String
7354:  Function TryStringToFloatA( const A : AnsiString; out B : Extended) : Boolean
7355:  Function TryStringToFloatW( const A : WideString; out B : Extended) : Boolean
7356:  Function TryStringToFloat( const A : String; out B : Extended) : Boolean
7357:  Function StringToFloatA( const A : AnsiString) : Extended
7358:  Function StringToFloatW( const A : WideString) : Extended
7359:  Function StringToFloat( const A : String) : Extended
7360:  Function StringToFloatDefA( const A : AnsiString; const Default : Extended) : Extended
7361:  Function StringToFloatDefW( const A : WideString; const Default : Extended) : Extended
7362:  Function StringToFloatDef( const A : String; const Default : Extended) : Extended
7363:  Function EncodeBase64(const S,Alphabet:AnsiString; const Pad:Boolean;const PadMultiple:Integer;const
      PadChar: AnsiChar) : AnsiString
7364:  Function DecodeBase64( const S, Alphabet : AnsiString; const PadSet : CharSet) : AnsiString
7365:  unit uPSI_cFundamentUtils;
7366:  Const('b64_MIMEBase64','Str').String('ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz0123456789+/
7367:  Const('b64_UUEncode','String').String('!"#$%&''()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_';
7368:  Const('b64_XXEncode','String').String('+-0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz';
7369:  Const('CCHARSET','Stringb64_XXEncode);
7370:  Const('CHEXSET','String'0123456789ABCDEF
7371:  Const('HEXDIGITS','String'0123456789ABCDEF
7372:  StHexDigits  : array[0..$F] of Char = '0123456789ABCDEF';
7373:  Const('DIGISET','String'0123456789
7374:  Const('LETTERSET','String'ABCDEFGHIJKLMNOPQRSTUVWXYZ'
7375:  Const('DIGISET2','TCharset').SetSet('0123456789'
7376:  Const('LETTERSET2','TCharset').SetSet('ABCDEFGHIJKLMNOPQRSTUVWXYZ'
7377:  Const('HEXSET2','TCharset').SetSET('0123456789ABCDEF');
7378:  Const('NUMBERSET','TCharset').SetSet('0123456789');
7379:  Const('NUMBERS','String'0123456789');
7380:  Const('LETTERS','String'ABCDEFGHIJKLMNOPQRSTUVWXYZ');
7381:  Function CharSetToStr( const C : CharSet) : AnsiString
7382:  Function StrToCharSet( const S : AnsiString) : CharSet
7383:  Function MIMEBase64Decode( const S : AnsiString) : AnsiString
7384:  Function MIMEBase64Encode( const S : AnsiString) : AnsiString
7385:  Function UUDecode( const S : AnsiString) : AnsiString
7386:  Function XXDecode( const S : AnsiString) : AnsiString
7387:  Function BytesToHex( const P : array of Byte; const UpperCase : Boolean) : AnsiString
7388:  Function InterfaceToStrA( const I : IInterface) : AnsiString
7389:  Function InterfaceToStrW( const I : IInterface) : WideString
7390:  Function InterfaceToStr( const I : IInterface) : String
7391:  Function ObjectClassName( const O : TObject) : String
7392:  Function ClassClassName( const C : TClass) : String
7393:  Function ObjectToStr( const O : TObject) : String
7394:  Function ObjectToString( const O : TObject) : String
7395:  Function CharSetToStr( const C : CharSet) : AnsiString
7396:  Function StrToCharSet( const S : AnsiString) : CharSet
7397:  Function HashStrA(const S : AnsiString; const Index : Integer; const Count: Integer;const
      AsciiCaseSensitive : Boolean; const Slots : LongWord) : LongWord
7398:  Function HashStrW(const S:WideString;const Index:Integer;const Count:Integer;const
      AsciiCaseSensitive:Boolean; const Slots:LongWord) : LongWord
7399:  Function HashStr(const S : String; const Index : Integer; const Count : Integer; const AsciiCaseSensitive
      : Boolean; const Slots : LongWord) : LongWord
7400:  Function HashInteger( const I : Integer; const Slots : LongWord) : LongWord
7401:  Function HashLongWord( const I : LongWord; const Slots : LongWord) : LongWord
7402:  Const('Bytes1KB','LongInt'( 1024);
7403:   SIRegister_IInterface(CL);
7404:  Procedure SelfTestCFundamentUtils
7405:
7406: Function CreateSchedule : IJclSchedule
7407: Function NullStamp : TTimeStamp
7408: Function CompareTimeStamps( const Stamp1, Stamp2 : TTimeStamp) : Int64
7409: Function EqualTimeStamps( const Stamp1, Stamp2 : TTimeStamp) : Boolean
7410: Function IsNullTimeStamp( const Stamp : TTimeStamp) : Boolean
7411:
7412: procedure SIRegister_uwinplot(CL: TPSPascalCompiler);
```

```
7413: begin
7414:  AddTypeS('TFunc', 'function(X : Float) : Float;
7415: Function InitGraphics( Width, Height : Integer) : Boolean
7416: Procedure SetWindow( Canvas : TCanvas; X1, X2, Y1, Y2 : Integer; GraphBorder : Boolean)
7417: Procedure SetOxScale( Scale : TScale; OxMin, OxMax, OxStep : Float)
7418: Procedure SetOyScale( Scale : TScale; OyMin, OyMax, OyStep : Float)
7419: Procedure GetOxScale( var Scale : TScale; var OxMin, OxMax, OxStep : Float)
7420: Procedure GetOyScale( var Scale : TScale; var OyMin, OyMax, OyStep : Float)
7421: Procedure SetGraphTitle( Title : String)
7422: Procedure SetOxTitle( Title : String)
7423: Procedure SetOyTitle( Title : String)
7424: Function GetGraphTitle : String
7425: Function GetOxTitle : String
7426: Function GetOyTitle : String
7427: Procedure PlotOxAxis( Canvas : TCanvas)
7428: Procedure PlotOyAxis( Canvas : TCanvas)
7429: Procedure PlotGrid( Canvas : TCanvas; Grid : TGrid)
7430: Procedure WriteGraphTitle( Canvas : TCanvas)
7431: Function SetMaxCurv( NCurv : Byte) : Boolean
7432: Procedure SetPointParam( CurvIndex, Symbol, Size : Integer; Color : TColor)
7433: Procedure SetLineParam( CurvIndex : Integer; Style : TPenStyle; Width : Integer; Color : TColor)
7434: Procedure SetCurvLegend( CurvIndex : Integer; Legend : String)
7435: Procedure SetCurvStep( CurvIndex, Step : Integer)
7436: Function GetMaxCurv : Byte
7437: Procedure GetPointParam( CurvIndex : Integer; var Symbol, Size : Integer; var Color : TColor)
7438: Procedure GetLineParam(CurvIndex:Integer;var Style:TPenStyle;var Width:Integer; var Color:TColor);
7439: Function GetCurvLegend( CurvIndex : Integer) : String
7440: Function GetCurvStep( CurvIndex : Integer) : Integer
7441: Procedure PlotPoint( Canvas : TCanvas; X, Y : Float; CurvIndex : Integer)
7442: Procedure PlotCurve( Canvas : TCanvas; X, Y : TVector; Lb, Ub, CurvIndex : Integer)
7443: Procedure PlotCurveWithErrorBars(Canvas : TCanvas; X,Y,S: TVector; Ns,Lb,Ub,CurvIndex:Integer)
7444: Procedure PlotFunc(Canvas: TCanvas; Func: TFunc; Xmin,Xmax: Float; Npt,CurvIndex: Integer)
7445: Procedure WriteLegend( Canvas : TCanvas; NCurv : Integer; ShowPoints, ShowLines : Boolean)
7446: Procedure ConRec( Canvas : TCanvas; Nx, Ny, Nc : Integer; X, Y, Z : TVector; F : TMatrix)
7447: Function Xpixel( X : Float) : Integer
7448: Function Ypixel( Y : Float) : Integer
7449: Function Xuser( X : Integer) : Float
7450: Function Yuser( Y : Integer) : Float
7451: end;
7452:
7453: Procedure FFT( NumSamples : Integer; InArray, OutArray : TCompVector)
7454: Procedure IFFT( NumSamples : Integer; InArray, OutArray : TCompVector)
7455: Procedure FFT_Integer( NumSamples : Integer; RealIn, ImagIn : TIntVector; OutArray : TCompVector)
7456: Procedure FFT_Integer_Cleanup
7457: Procedure CalcFrequency(NumSamples,FrequencyIndex: Integer;InArray: TCompVector;var FT : Complex)
7458: //unit uPSI_JclStreams;
7459: Function StreamSeek( Stream : TStream; const Offset : Int64; const Origin : TSeekOrigin) : Int64
7460: Function StreamCopy( Source : TStream; Dest : TStream; BufferSize : Integer) : Int64
7461: Function CompareStreams( A, B : TStream; BufferSize : Integer) : Boolean
7462: Function JCompareFiles( const FileA, FileB : TFileName; BufferSize : Integer) : Boolean
7463:
7464: procedure SIRegister_FmxUtils(CL: TPSPascalCompiler);
7465: begin
7466:  FindClass('TOBJECT'),'EInvalidDest
7467:  FindClass('TOBJECT'),'EFCantMove
7468:  Procedure fmxCopyFile( const FileName, DestName : string)
7469:  Procedure fmxMoveFile( const FileName, DestName : string)
7470:  Function fmxGetFileSize( const FileName : string) : LongInt
7471:  Function fmxFileDateTime( const FileName : string) : TDateTime
7472:  Function fmxHasAttr( const FileName : string; Attr : Word) : Boolean
7473:  Function fmxExecuteFile( const FileName, Params, DefaultDir : string; ShowCmd : Integer):THandle;
7474: end;
7475:
7476: procedure SIRegister_FindFileIter(CL: TPSPascalCompiler);
7477: begin
7478:  SIRegister_IFindFileIterator(CL);
7479:  Function CreateFindFile(const Path:string; IncludeAttr:Integer;out iffi:IFindFileIterator):Bool;
7480: end;
7481:
7482: procedure SIRegister_PCharUtils(CL: TPSPascalCompiler);
7483: begin
7484:  Function SkipWhite( cp : PChar) : PChar
7485:  Function ReadStringDoubleQuotedMaybe( cp : PChar; var AStr : string) : PChar
7486:  Function ReadStringSingleQuotedMaybe( cp : PChar; var AStr : string) : PChar
7487:  Function ReadIdent( cp : PChar; var ident : string) : PChar
7488: end;
7489:
7490: procedure SIRegister_JclStrHashMap(CL: TPSPascalCompiler);
7491: begin
7492:   SIRegister_TStringHashMapTraits(CL);
7493:  Function CaseSensitiveTraits : TStringHashMapTraits
7494:  Function CaseInsensitiveTraits : TStringHashMapTraits
7495:   THashNode', 'record Str : string; Ptr : Pointer; Left : PHashNod'
7496:    +'e; Right : PHashNode; end
7497:   //PHashArray', '^THashArray // will not work
7498:   SIRegister_TStringHashMap(CL);
7499:  THashValue', 'Cardinal
7500:  Function StrHash( const s : string) : THashValue
7501:  Function TextHash( const s : string) : THashValue
```

```
7502:  Function DataHash( var AValue, ASize : Cardinal) : THashValue
7503:  Function Iterate_FreeObjects( AUserData : Pointer; const AStr : string; var AData : Pointer) : Boolean
7504:  Function Iterate_Dispose( AUserData : Pointer; const AStr : string; var AData : Pointer) : Boolean
7505:  Function Iterate_FreeMem( AUserData : Pointer; const AStr : string; var AData : Pointer) : Boolean
7506:   SIRegister_TCaseSensitiveTraits(CL);
7507:   SIRegister_TCaseInsensitiveTraits(CL);
7508:
7509:
7510: //************************************************************************unit uPSI_umath;
7511:  Function uExpo( X : Float) : Float
7512:  Function uExp2( X : Float) : Float
7513:  Function uExp10( X : Float) : Float
7514:  Function uLog( X : Float) : Float
7515:  Function uLog2( X : Float) : Float
7516:  Function uLog10( X : Float) : Float
7517:  Function uLogA( X, A : Float) : Float
7518:  Function uIntPower( X : Float; N : Integer): Float
7519:  Function uPower( X, Y : Float) : Float
7520:  Function SgnGamma( X : Float) : Integer
7521:  Function Stirling( X : Float) : Float
7522:  Function StirLog( X : Float) : Float
7523:  Function Gamma( X : Float) : Float
7524:  Function LnGamma( X : Float) : Float
7525:  Function DiGamma( X : Float) : Float
7526:  Function TriGamma( X : Float) : Float
7527:  Function IGamma( X : Float) : Float
7528:  Function JGamma( X : Float) : Float
7529:  Function InvGamma( X : Float) : Float
7530:  Function Erf( X : Float) : Float
7531:  Function Erfc( X : Float) : Float
7532: Function Correl(X, Y : TVector; Lb, Ub : Integer) : Float;
7533: { Correlation coefficient between samples X and Y }
7534: function DBeta(A, B, X : Float) : Float;
7535: { Density of Beta distribution with parameters A and B }
7536: Function LambertW( X : Float; UBranch, Offset : Boolean) : Float
7537: Function Beta(X, Y : Float) : Float
7538: Function Binomial( N, K : Integer) : Float
7539: Function PBinom( N : Integer; P : Float; K : Integer) : Float
7540: Procedure Cholesky( A, L : TMatrix; Lb, Ub : Integer)
7541: Procedure LU_Decomp( A : TMatrix; Lb, Ub : Integer)
7542: Procedure LU_Solve( A : TMatrix; B : TVector; Lb, Ub : Integer; X : TVector)
7543: Function DNorm( X : Float) : Float
7544:
7545: function DGamma(A, B, X : Float) : Float;
7546: { Density of Gamma distribution with parameters A and B }
7547: function DKhi2(Nu : Integer; X : Float) : Float;
7548: { Density of Khi-2 distribution with Nu d.o.f. }
7549: function DStudent(Nu : Integer; X : Float) : Float;
7550: { Density of Student distribution with Nu d.o.f. }
7551: function DSnedecor(Nu1, Nu2 : Integer; X : Float) : Float;
7552: { Density of Fisher-Snedecor distribution with Nu1 and Nu2 d.o.f. }
7553: function IBeta(A, B, X : Float) : Float;
7554: { Incomplete Beta function}
7555: function Correl(X, Y : TVector; Lb, Ub : Integer) : Float;
7556:
7557: procedure SIRegister_unlfit(CL: TPSPascalCompiler);
7558: begin
7559:  Procedure SetOptAlgo( Algo : TOptAlgo)
7560: procedure SetOptAlgo(Algo : TOptAlgo);
7561: { ----------------------------------------------------------------------
7562:   Sets the optimization algorithm according to Algo, which must be
7563:   NL_MARQ, NL_SIMP, NL_BFGS, NL_SA, NL_GA. Default is NL_MARQ   }
7564:
7565:  Function GetOptAlgo : TOptAlgo
7566:  Procedure SetMaxParam( N : Byte)
7567:  Function GetMaxParam : Byte
7568:  Procedure SetParamBounds( I : Byte; ParamMin, ParamMax : Float)
7569:  Procedure GetParamBounds( I : Byte; var ParamMin, ParamMax : Float)
7570:  Function NullParam( B : TVector; Lb, Ub : Integer) : Boolean
7571:  Procedure NLFit( RegFunc : TRegFunc; DerivProc : TDerivProc; X, Y : TVector; Lb, Ub : Integer; MaxIter :
     Integer; Tol : Float; B : TVector; FirstPar, LastPar : Integer; V : TMatrix)
7572:  Procedure WNLFit( RegFunc : TRegFunc; DerivProc : TDerivProc; X, Y, S : TVector; Lb, Ub:Integer;
     MaxIter:Integer;Tol : Float; B : TVector; FirstPar, LastPar : Integer; V : TMatrix)
7573:  Procedure SetMCFile( FileName : String)
7574:  Procedure SimFit(RegFunc:TRegFunc;X,Y:TVector;Lb,Ub:Integer;B:TVector;FirstPar,LastPar:Integer;V:TMatrix;
7575:  Procedure WSimFit(RegFunc:TRegFunc; X,Y,S:TVector;Lb,Ub:Integer;B:TVector;FirstPar,
     LastPar:Integer;V:TMatrix);
7576: end;
7577:
7578: (*----------------------------------------------------------------------------*)
7579: procedure SIRegister_usimplex(CL: TPSPascalCompiler);
7580: begin
7581:  Procedure SaveSimplex( FileName : string)
7582:  Procedure Simplex(Func:TFuncNVar; X:TVector;Lb,Ub:Integer; MaxIter:Integer;Tol:Float; var F_min:Float);
7583: end;
7584: (*----------------------------------------------------------------------------*)
7585: procedure SIRegister_uregtest(CL: TPSPascalCompiler);
7586: begin
7587:  Procedure RegTest(Y,Ycalc: TVector;LbY,UbY:Integer;V:TMatrix;LbV,UbV:Integer;var Test:TRegTest)
```

```
7588:  Procedure WRegTest(Y,Ycalc,S:TVector;LbY,UbY:Integer;V:TMatrix;LbV,UbV:Integer;var Test:TRegTest);
7589: end;
7590:
7591: procedure SIRegister_ustrings(CL: TPSPascalCompiler);
7592: begin
7593:  Function LTrim( S : String) : String
7594:  Function RTrim( S : String) : String
7595:  Function uTrim( S : String) : String
7596:  Function StrChar( N : Byte; C : Char) : String
7597:  Function RFill( S : String; L : Byte) : String
7598:  Function LFill( S : String; L : Byte) : String
7599:  Function CFill( S : String; L : Byte) : String
7600:  Function Replace( S : String; C1, C2 : Char) : String
7601:  Function Extract( S : String; var Index : Byte; Delim : Char) : String
7602:  Procedure Parse( S : String; Delim : Char; Field : TStrVector; var N : Byte)
7603:  Procedure SetFormat( NumLength, MaxDec : Integer; FloatPoint, NSZero : Boolean)
7604:  Function FloatStr( X : Float) : String
7605:  Function IntStr( N : LongInt) : String
7606:  Function uCompStr( Z : Complex) : String
7607: end;
7608:
7609: procedure SIRegister_uhyper(CL: TPSPascalCompiler);
7610: begin
7611:  Function uSinh( X : Float) : Float
7612:  Function uCosh( X : Float) : Float
7613:  Function uTanh( X : Float) : Float
7614:  Function uArcSinh( X : Float) : Float
7615:  Function uArcCosh( X : Float) : Float
7616:  Function ArcTanh( X : Float) : Float
7617:  Procedure SinhCosh( X : Float; var SinhX, CoshX : Float)
7618: end;
7619:
7620: procedure SIRegister_urandom(CL: TPSPascalCompiler);
7621: begin
7622: type RNG_Type =
7623:   (RNG_MWC,      { Multiply-With-Carry }
7624:    RNG_MT,       { Mersenne Twister }
7625:    RNG_UVAG);    { Universal Virtual Array Generator }
7626:  Procedure SetRNG( RNG : RNG_Type)
7627:  Procedure InitGen( Seed : RNG_IntType)
7628:  Procedure SRand( Seed : RNG_IntType)
7629:  Function IRanGen : RNG_IntType
7630:  Function IRanGen31 : RNG_IntType
7631:  Function RanGen1 : Float
7632:  Function RanGen2 : Float
7633:  Function RanGen3 : Float
7634:  Function RanGen53 : Float
7635: end;
7636:
7637: //  Optimization by Simulated Annealing
7638: procedure SIRegister_usimann(CL: TPSPascalCompiler);
7639: begin
7640:  Procedure InitSAParams( NT, NS, NCycles : Integer; RT : Float)
7641:  Procedure SA_CreateLogFile( FileName : String)
7642:  Procedure SimAnn(Func: TFuncNVar; X, Xmin, Xmax : TVector; Lb, Ub : Integer; var F_min : Float);
7643: end;
7644:
7645: procedure SIRegister_uranuvag(CL: TPSPascalCompiler);
7646: begin
7647:  Procedure InitUVAGbyString( KeyPhrase : string)
7648:  Procedure InitUVAG( Seed : RNG_IntType)
7649:  Function IRanUVAG : RNG_IntType
7650: end;
7651:
7652: procedure SIRegister_ugenalg(CL: TPSPascalCompiler);
7653: begin
7654:  Procedure InitGAParams( NP, NG : Integer; SR, MR, HR : Float)
7655:  Procedure GA_CreateLogFile( LogFileName : String)
7656:  Procedure GenAlg(Func: TFuncNVar; X, Xmin, Xmax : TVector; Lb, Ub : Integer; var F_min : Float);
7657: end;
7658:
7659:  TVector', 'array of Float
7660: procedure SIRegister_uqsort(CL: TPSPascalCompiler);
7661: begin
7662:  Procedure QSort( X : TVector; Lb, Ub : Integer)
7663:  Procedure DQSort( X : TVector; Lb, Ub : Integer)
7664: end;
7665:
7666: procedure SIRegister_uinterv(CL: TPSPascalCompiler);
7667: begin
7668:  Procedure Interval( X1, X2 : Float; MinDiv, MaxDiv : Integer; var Min, Max, Step : Float)
7669:  Procedure AutoScale(X: TVector; Lb, Ub : Integer; Scale : TScale; var XMin, XMax, XStep:Float)
7670: end;
7671:
7672: procedure SIRegister_D2XXUnit(CL: TPSPascalCompiler);
7673: begin
7674:   FT_Result', 'Integer
7675:   //TDWordptr', '^DWord // will not work
7676:   TFT_Program_Data', 'record Signature1 : DWord; Signature2 : DWor'
```

```
7677:    d; Version : DWord; VendorID : Word; ProductID : Word; Manufacturer : PCha'
7678:    r; ManufacturerID : PChar; Description : PChar; SerialNumber : PChar; MaxP'
7679:    ower : Word; PnP : Word; SelfPowered : Word; RemoteWakeup : Word; Rev4 : B'
7680:    yte; IsoIn : Byte; IsoOut : Byte; PullDownEnable : Byte; SerNumEnable : By'
7681:    te; USBVersionEnable : Byte; USBVersion : Word; Rev5 : Byte; IsoInA : Byte'
7682:    ; IsoInB : Byte; IsoOutA : Byte; IsoOutB : Byte; PullDownEnable5 : Byte; S'
7683:    erNumEnable5 : Byte; USBVersionEnable5 : Byte; USBVersion5 : Word; AIsHigh'
7684:    Current : Byte; BIsHighCurrent : Byte; IFAIsFifo : Byte; IFAIsFifoTar : By'
7685:    te; IFAIsFastSer : Byte; AIsVCP : Byte; IFBIsFifo : Byte; IFBIsFifoTar : B'
7686:    yte; IFBIsFastSer : Byte; BIsVCP : Byte; UseExtOsc : Byte; HighDriveIOs : '
7687:    Byte; EndpointSize : Byte; PullDownEnableR : Byte; SerNumEnableR : Byte; I'
7688:    nvertTXD : Byte; InvertRXD : Byte; InvertRTS : Byte; InvertCTS : Byte; Inv'
7689:    ertDTR : Byte; InvertDSR : Byte; InvertDCD : Byte; InvertRI : Byte; Cbus0 '
7690:    : Byte; Cbus1 : Byte; Cbus2 : Byte; Cbus3 : Byte; Cbus4 : Byte; RIsVCP : B'
7691:    yte; end
7692: end;
7693:
7694:
7695: //************************************ PaintFX*************************
7696: procedure SIRegister_TJvPaintFX(CL: TPSPascalCompiler);
7697: begin
7698:   //with RegClassS(CL,'TComponent', 'TJvPaintFX') do
7699:   with AddClassN(FindClass('TComponent'),'TJvPaintFX') do begin
7700:     Procedure Solarize( const Src : TBitmap; var Dst : TBitmap; Amount : Integer)
7701:     Procedure Posterize( const Src : TBitmap; var Dst : TBitmap; Amount : Integer)
7702:     Procedure Blend( const Src1, Src2 : TBitmap; var Dst : TBitmap; Amount : Single)
7703:     Procedure Blend2( const Src1, Src2 : TBitmap; var Dst : TBitmap; Amount : Single)
7704:     Procedure ExtractColor( const Dst : TBitmap; AColor : TColor)
7705:     Procedure ExcludeColor( const Dst : TBitmap; AColor : TColor)
7706:     Procedure Turn( Src, Dst : TBitmap)
7707:     Procedure TurnRight( Src, Dst : TBitmap)
7708:     Procedure HeightMap( const Dst : TBitmap; Amount : Integer)
7709:     Procedure TexturizeTile( const Dst : TBitmap; Amount : Integer)
7710:     Procedure TexturizeOverlap( const Dst : TBitmap; Amount : Integer)
7711:     Procedure RippleRandom( const Dst : TBitmap; Amount : Integer)
7712:     Procedure RippleTooth( const Dst : TBitmap; Amount : Integer)
7713:     Procedure RippleTriangle( const Dst : TBitmap; Amount : Integer)
7714:     Procedure Triangles( const Dst : TBitmap; Amount : Integer)
7715:     Procedure DrawMandelJulia(const Dst: TBitmap; x0,y0,x1,y1:Single; Niter:Integer; Mandel:Boolean)
7716:     Procedure FilterXBlue( const Dst : TBitmap; Min, Max : Integer)
7717:     Procedure FilterXGreen( const Dst : TBitmap; Min, Max : Integer)
7718:     Procedure FilterXRed( const Dst : TBitmap; Min, Max : Integer)
7719:     Procedure FilterBlue( const Dst : TBitmap; Min, Max : Integer)
7720:     Procedure FilterGreen( const Dst : TBitmap; Min, Max : Integer)
7721:     Procedure FilterRed( const Dst : TBitmap; Min, Max : Integer)
7722:     Procedure Emboss( var Bmp : TBitmap)
7723:     Procedure Plasma( Src1, Src2, Dst : TBitmap; Scale, Turbulence : Single)
7724:     Procedure Shake( Src, Dst : TBitmap; Factor : Single)
7725:     Procedure ShakeDown( Src, Dst : TBitmap; Factor : Single)
7726:     Procedure KeepBlue( const Dst : TBitmap; Factor : Single)
7727:     Procedure KeepGreen( const Dst : TBitmap; Factor : Single)
7728:     Procedure KeepRed( const Dst : TBitmap; Factor : Single)
7729:     Procedure Mandelbrot( const Dst : TBitmap; Factor : Integer)
7730:     Procedure MaskMandelbrot( const Dst : TBitmap; Factor : Integer)
7731:     Procedure FoldRight( Src1, Src2, Dst : TBitmap; Amount : Single)
7732:     Procedure QuartoOpaque( Src, Dst : TBitmap)
7733:     Procedure SemiOpaque( Src, Dst : TBitmap)
7734:     Procedure ShadowDownLeft( const Dst : TBitmap)
7735:     Procedure ShadowDownRight( const Dst : TBitmap)
7736:     Procedure ShadowUpLeft( const Dst : TBitmap)
7737:     Procedure ShadowUpRight( const Dst : TBitmap)
7738:     Procedure Darkness( const Dst : TBitmap; Amount : Integer)
7739:     Procedure Trace( const Dst : TBitmap; Intensity : Integer)
7740:     Procedure FlipRight( const Dst : TBitmap)
7741:     Procedure FlipDown( const Dst : TBitmap)
7742:     Procedure SpotLight( const Dst : TBitmap; Amount : Integer; Spot : TRect)
7743:     Procedure SplitLight( const Dst : TBitmap; Amount : Integer)
7744:     Procedure MakeSeamlessClip( var Dst : TBitmap; Seam : Integer)
7745:     Procedure Wave( const Dst : TBitmap; Amount, Inference, Style : Integer)
7746:     Procedure Mosaic( const Bm : TBitmap; Size : Integer)
7747:     Procedure SmoothRotate( var Src, Dst : TBitmap; CX, CY : Integer; Angle : Single)
7748:     Procedure SmoothResize( var Src, Dst : TBitmap)
7749:     Procedure Twist( var Bmp, Dst : TBitmap; Amount : Integer)
7750:     Procedure SplitBlur( const Dst : TBitmap; Amount : Integer)
7751:     Procedure GaussianBlur( const Dst : TBitmap; Amount : Integer)
7752:     Procedure Smooth( const Dst : TBitmap; Weight : Integer)
7753:     Procedure GrayScale( const Dst : TBitmap)
7754:     Procedure AddColorNoise( const Dst : TBitmap; Amount : Integer)
7755:     Procedure AddMonoNoise( const Dst : TBitmap; Amount : Integer)
7756:     Procedure Contrast( const Dst : TBitmap; Amount : Integer)
7757:     Procedure Lightness( const Dst : TBitmap; Amount : Integer)
7758:     Procedure Saturation( const Dst : TBitmap; Amount : Integer)
7759:     Procedure Spray( const Dst : TBitmap; Amount : Integer)
7760:     Procedure AntiAlias( const Dst : TBitmap)
7761:     Procedure AntiAliasRect( const Dst : TBitmap; XOrigin, YOrigin, XFinal, YFinal : Integer)
7762:     Procedure SmoothPoint( const Dst : TBitmap; XK, YK : Integer)
7763:     Procedure FishEye( var Bmp, Dst : TBitmap; Amount : Single)
7764:     Procedure Marble( const Src : TBitmap; var Dst : TBitmap; Scale : Single; Turbulence : Integer)
7765:     Procedure Marble2( const Src : TBitmap; var Dst : TBitmap; Scale : Single; Turbulence: Integer)
```

```
7766:     Procedure Marble3( const Src : TBitmap; var Dst : TBitmap; Scale : Single; Turbulence: Integer)
7767:     Procedure Marble4( const Src : TBitmap; var Dst : TBitmap; Scale : Single; Turbulence: Integer)
7768:     Procedure Marble5( const Src : TBitmap; var Dst : TBitmap; Scale : Single; Turbulence: Integer)
7769:     Procedure Marble6( const Src : TBitmap; var Dst : TBitmap; Scale : Single; Turbulence: Integer)
7770:     Procedure Marble7( const Src : TBitmap; var Dst : TBitmap; Scale : Single; Turbulence: Integer)
7771:     Procedure Marble8( const Src : TBitmap; var Dst : TBitmap; Scale : Single; Turbulence: Integer)
7772:     Procedure SqueezeHor( Src, Dst : TBitmap; Amount : Integer; Style : TLightBrush)
7773:     Procedure SplitRound( Src, Dst : TBitmap; Amount : Integer; Style : TLightBrush)
7774:     Procedure Tile( Src, Dst : TBitmap; Amount : Integer)
7775:     Procedure Stretch( Src, Dst : TBitmap; Filter : TFilterProc; AWidth : Single)
7776:     Procedure Grow( Src1, Src2, Dst : TBitmap; Amount : Single; X, Y : Integer)
7777:     Procedure Invert( Src : TBitmap)
7778:     Procedure MirrorRight( Src : TBitmap)
7779:     Procedure MirrorDown( Src : TBitmap)
7780:   end;
7781: end;
7782:
7783: (*----------------------------------------------------------------------------*)
7784: procedure SIRegister_JvPaintFX(CL: TPSPascalCompiler);
7785: begin
7786:   AddTypeS('TLightBrush', '( lbBrightness, lbContrast, lbSaturation, lbFishe'
7787:    +'ye, lbrotate, lbtwist, lbrimple, mbHor, mbTop, mbBottom, mbDiamond, mbWast'
7788:    +'e, mbRound, mbRound2, mbSplitRound, mbSplitWaste )
7789:   SIRegister_TJvPaintFX(CL);
7790:  Function SplineFilter( Value : Single) : Single
7791:  Function BellFilter( Value : Single) : Single
7792:  Function TriangleFilter( Value : Single) : Single
7793:  Function BoxFilter( Value : Single) : Single
7794:  Function HermiteFilter( Value : Single) : Single
7795:  Function Lanczos3Filter( Value : Single) : Single
7796:  Function MitchellFilter( Value : Single) : Single
7797: end;
7798:
7799:
7800: (*----------------------------------------------------------------------------*)
7801: procedure SIRegister_Chart(CL: TPSPascalCompiler);
7802: begin
7803:  'TeeMsg_DefaultFunctionName','String 'TeeFunction
7804:  TeeMsg_DefaultSeriesName','String 'Series
7805:  TeeMsg_DefaultToolName','String 'ChartTool
7806:  ChartComponentPalette','String 'TeeChart
7807:  TeeMaxLegendColumns',LongInt'( 2);
7808:  TeeDefaultLegendSymbolWidth','LongInt'( 20);
7809:  TeeTitleFootDistance,LongInt( 5);
7810:   SIRegister_TCustomChartWall(CL);
7811:   SIRegister_TChartWall(CL);
7812:   SIRegister_TChartLegendGradient(CL);
7813:   TLegendStyle', '( lsAuto, lsSeries, lsValues, lsLastValues, lsSeriesGroups )
7814:   TLegendAlignment', '( laLeft, laRight, laTop, laBottom )
7815:   FindClass('TOBJECT'),'LegendException
7816:   TOnGetLegendText', 'Procedure ( Sender : TCustomAxisPanel; Legen'
7817:    +'dStyle : TLegendStyle; Index : Integer; var LegendText : String)
7818:   FindClass('TOBJECT'),'TCustomChartLegend
7819:   TLegendSymbolSize', '( lcsPercent, lcsPixels )
7820:   TLegendSymbolPosition', '( spLeft, spRight )
7821:   TSymbolDrawEvent','Procedure(Sender:TObject;Series:TChartSeries;ValueIndex:Integer;R:TRect);
7822:   TSymbolCalcHeight', 'Function  : Integer
7823:   SIRegister_TLegendSymbol(CL);
7824:   SIRegister_TTeeCustomShapePosition(CL);
7825:   TCheckBoxesStyle', '( cbsCheck, cbsRadio )
7826:   SIRegister_TLegendTitle(CL);
7827:   SIRegister_TLegendItem(CL);
7828:   SIRegister_TLegendItems(CL);
7829:   TLegendCalcSize', 'Procedure ( Sender : TCustomChartLegend; var ASize : Integer)
7830:   FindClass('TOBJECT'),'TCustomChart
7831:   SIRegister_TCustomChartLegend(CL);
7832:   SIRegister_TChartLegend(CL);
7833:   SIRegister_TChartTitle(CL);
7834:   SIRegister_TChartFootTitle(CL);
7835:   TChartClick', 'Procedure ( Sender : TCustomChart; Button : TMous'
7836:    +'eButton; Shift : TShiftState; X, Y : Integer)
7837:   TChartClickAxis', 'Procedure ( Sender : TCustomChart; Axis : TCh'
7838:    +'artAxis; Button : TMouseButton; Shift : TShiftState; X, Y : Integer)
7839:   TChartClickSeries', 'Procedure ( Sender : TCustomChart; Series :'
7840:    +'TChartSeries; ValueIndex : Integer; Button: TMouseButton; Shift:TShiftState;X,Y:Integer)
7841:   TChartClickTitle', 'Procedure ( Sender : TCustomChart; ATitle : '
7842:    +'TChartTitle; Button : TMouseButton; Shift : TShiftState; X, Y : Integer)
7843:   TOnGetLegendPos', 'Procedure (Sender: TCustomChart; Index: Integer; var X,Y,XColor:Integer)
7844:   TOnGetLegendRect', 'Procedure ( Sender : TCustomChart; var Rect : TRect)
7845:   TAxisSavedScales', 'record Auto : Boolean; AutoMin : Boolean; Au'
7846:    +'toMax : Boolean; Min : Double; Max : Double; end
7847:   TAllAxisSavedScales', 'array of TAxisSavedScales
7848:   SIRegister_TChartBackWall(CL);
7849:   SIRegister_TChartRightWall(CL);
7850:   SIRegister_TChartBottomWall(CL);
7851:   SIRegister_TChartLeftWall(CL);
7852:   SIRegister_TChartWalls(CL);
7853:   TChartAllowScrollEvent','Procedure(Sender:TChartAxis;var AMin,AMax:Double;var AllowScroll:Boolean);
7854:   SIRegister_TCustomChart(CL);
```

```
7855:   SIRegister_TChart(CL);
7856:   SIRegister_TTeeSeriesTypes(CL);
7857:   SIRegister_TTeeToolTypes(CL);
7858:   SIRegister_TTeeDragObject(CL);
7859:   SIRegister_TColorPalettes(CL);
7860:  Procedure RegisterTeeSeries(ASeriesClass:TChartSeriesClass;ADescription,
      AGalleryPage:PString;ANumGallerySeries:Integer;
7861:  Procedure RegisterTeeSeries1( ASeriesClass : TChartSeriesClass; ADescription : PString);
7862:  Procedure RegisterTeeFunction(AFunctClass:TTeeFunctionClass;ADescription,
      AGalleryPage:PString;ANumGallerySeries: Int;
7863:  Procedure RegisterTeeBasicFunction( AFunctionClass : TTeeFunctionClass; ADescription : PString)
7864:  Procedure RegisterTeeSeriesFunction(ASeriesClass: TChartSeriesClass;AFunctionClass:TTeeFunctionClass;
      ADescription, AGalleryPage : PString; ANumGallerySeries : Integer; ASubIndex : Integer)
7865:  Procedure UnRegisterTeeSeries( const ASeriesList : array of TChartSeriesClass)
7866:  Procedure UnRegisterTeeFunctions( const AFunctionList : array of TTeeFunctionClass)
7867:  Procedure AssignSeries( var OldSeries, NewSeries : TChartSeries)
7868:  Function CreateNewTeeFunction( ASeries : TChartSeries; AClass : TTeeFunctionClass) : TTeeFunction
7869:  Function CreateNewSeries( AOwner : TComponent; AChart : TCustomAxisPanel; AClass : TChartSeriesClass;
      AFunctionClass : TTeeFunctionClass) : TChartSeries
7870:  Function CloneChartSeries( ASeries : TChartSeries) : TChartSeries;
7871:  Function CloneChartSeries1( ASeries : TChartSeries; AChart : TCustomAxisPanel) : TChartSeries;
7872:  Function CloneChartSeries2(ASeries:TChartSeries;AOwner:TComponent;AChart:TCustomAxisPanel):TChartSeries;;
7873:  Function CloneChartTool( ATool : TTeeCustomTool; AOwner : TComponent) : TTeeCustomTool
7874:  Function ChangeSeriesType( var ASeries : TChartSeries; NewType : TChartSeriesClass) : TChartSeries
7875:  Procedure ChangeAllSeriesType( AChart : TCustomChart; AClass : TChartSeriesClass)
7876:  Function GetNewSeriesName( AOwner : TComponent) : TComponentName
7877:  Procedure RegisterTeeTools( const ATools : array of TTeeCustomToolClass)
7878:  Procedure UnRegisterTeeTools( const ATools : array of TTeeCustomToolClass)
7879:  Function GetGallerySeriesName( ASeries : TChartSeries) : String
7880:  Procedure PaintSeriesLegend(ASeries:TChartSeries;ACanvas:TCanvas;const
      R:TRect;ReferenceChart:TCustomChart);
7881:   SIRegister_TChartTheme(CL);
7882:   //TChartThemeClass', 'class of TChartTheme
7883:   //TCanvasClass', 'class of TCanvas3D
7884:  Function SeriesNameOrIndex( ASeries : TCustomChartSeries) : String
7885:  Function SeriesTitleOrName( ASeries : TCustomChartSeries) : String
7886:  Procedure FillSeriesItems( AItems : TStrings; AList : TCustomSeriesList; UseTitles : Boolean)
7887:  Procedure ShowMessageUser( const S : String)
7888:  Function HasNoMandatoryValues( ASeries : TChartSeries) : Boolean
7889:  Function HasLabels( ASeries : TChartSeries) : Boolean
7890:  Function HasColors( ASeries : TChartSeries) : Boolean
7891:  Function SeriesGuessContents( ASeries : TChartSeries) : TeeFormatFlag
7892:  Procedure TeeDrawBitmapEditor( Canvas : TCanvas; Element : TCustomChartElement; Left, Top : Integer)
7893: end;
7894:
7895:
7896: procedure SIRegister_TeeProcs(CL: TPSPascalCompiler);
7897: begin
7898:  //'TeeFormBorderStyle',' bsNone);
7899:   SIRegister_TMetafile(CL);
7900:  'TeeDefVerticalMargin','LongInt'( 4);
7901:  'TeeDefHorizMargin','LongInt'( 3);
7902:  'crTeeHand','LongInt'( TCursor ( 2020 ));
7903:  'TeeMsg_TeeHand','String 'crTeeHand
7904:  'TeeNormalPrintDetail','LongInt'( 0);
7905:  'TeeHighPrintDetail','LongInt'( - 100);
7906:  'TeeDefault_PrintMargin','LongInt'( 15);
7907:  'MaxDefaultColors','LongInt'( 19);
7908:  'TeeTabDelimiter','Char #9);
7909:   TDateTimeStep', '( dtOneMicroSecond, dtOneMillisecond, dtOneSeco'
7910:    +'nd, dtFiveSeconds, dtTenSeconds, dtFifteenSeconds, dtThirtySeconds, dtOneM'
7911:    +'inute, dtFiveMinutes, dtTenMinutes, dtFifteenMinutes, dtThirtyMinutes, dtO'
7912:    +'neHour, dtTwoHours, dtSixHours, dtTwelveHours, dtOneDay, dtTwoDays, dtThre'
7913:    +'eDays, dtOneWeek, dtHalfMonth, dtOneMonth, dtTwoMonths, dtThreeMonths, dtF'
7914:    +'ourMonths, dtSixMonths, dtOneYear, dtNone )
7915:   SIRegister_TCustomPanelNoCaption(CL);
7916:   FindClass('TOBJECT'),'TCustomTeePanel
7917:   SIRegister_TZoomPanning(CL);
7918:   SIRegister_TTeeEvent(CL);
7919:   //SIRegister_TTeeEventListeners(CL);
7920:   TTeeMouseEventKind', '( meDown, meUp, meMove )
7921:   SIRegister_TTeeMouseEvent(CL);
7922:   SIRegister_TCustomTeePanel(CL);
7923:   //TChartGradient', 'TTeeGradient
7924:   //TChartGradientClass', 'class of TChartGradient
7925:   TPanningMode', '( pmNone, pmHorizontal, pmVertical, pmBoth )
7926:   SIRegister_TTeeZoomPen(CL);
7927:   SIRegister_TTeeZoomBrush(CL);
7928:   TTeeZoomDirection', '( tzdHorizontal, tzdVertical, tzdBoth )
7929:   SIRegister_TTeeZoom(CL);
7930:   FindClass('TOBJECT'),'TCustomTeePanelExtended
7931:   TTeeBackImageMode', '( pbmStretch, pbmTile, pbmCenter, pbmCustom )
7932:   SIRegister_TBackImage(CL);
7933:   SIRegister_TCustomTeePanelExtended(CL);
7934:   //TChartBrushClass', 'class of TChartBrush
7935:   SIRegister_TTeeCustomShapeBrushPen(CL);
7936:   TChartObjectShapeStyle', '( fosRectangle, fosRoundRectangle, fosEllipse )
7937:   TTextFormat', '( ttfNormal, ttfHtml )
7938:   SIRegister_TTeeCustomShape(CL);
```

```
7939:   SIRegister_TTeeShape(CL);
7940:   SIRegister_TTeeExportData(CL);
7941:  Function TeeStr( const Num : Integer) : String
7942:  Function DateTimeDefaultFormat( const AStep : Double) : String
7943:  Function TEEDaysInMonth( Year, Month : Word) : Word
7944:  Function FindDateTimeStep( const StepValue : Double) : TDateTimeStep
7945:  Function NextDateTimeStep( const AStep : Double) : Double
7946:  Function PointInLine( const P : TPoint; const px, py, qx, qy : Integer) : Boolean;
7947:  Function PointInLine1( const P, FromPoint, ToPoint : TPoint) : Boolean;
7948:  Function PointInLine2(const P,FromPoint,ToPoint:TPoint;const TolerancePixels:Integer):Boolean;
7949:  Function PointInLine3( const P : TPoint; const px, py, qx, qy, TolerancePixels:Integer):Boolean;
7950:  Function PointInLineTolerance(const P:TPoint;const px,py,qx,qy,TolerancePixels:Integer):Boolean;
7951:  Function PointInPolygon( const P : TPoint; const Poly : array of TPoint) : Boolean
7952:  Function PointInTriangle( const P, P0, P1, P2 : TPoint) : Boolean;
7953:  Function PointInTriangle1( const P : TPoint; X0, X1, Y0, Y1 : Integer) : Boolean;
7954:  Function PointInHorizTriangle( const P : TPoint; Y0, Y1, X0, X1 : Integer) : Boolean
7955:  Function PointInEllipse( const P : TPoint; const Rect : TRect) : Boolean;
7956:  Function PointInEllipse1( const P: TPoint;Left,Top,Right, Bottom : Integer) : Boolean;
7957:  Function DelphiToLocalFormat( const Format : String) : String
7958:  Function LocalToDelphiFormat( const Format : String) : String
7959:  Procedure TEEEnableControls(Enable: Boolean; const ControlArray : array of TControl)
7960:  Function TeeRoundDate(const ADate : TDateTime; AStep : TDateTimeStep) : TDateTime
7961:  Procedure TeeDateTimeIncrement(IsDateTime:Boolean;Increment:Boolean;var Value:Double;const
      AnIncrement:Double; tmpWhichDateTime:TDateTimeStep)
7962:    TTeeSortCompare', 'Function ( a, b : Integer) : Integer
7963:    TTeeSortSwap', 'Procedure ( a, b : Integer)
7964:  Procedure TeeSort(StartIndex,EndIndex:Integer;CompareFunc:TTeeSortCompare;SwapFunc:TTeeSortSwap);
7965:  Function TeeGetUniqueName( AOwner : TComponent; const AStartName : String) : string
7966:  Function TeeExtractField( St : String; Index : Integer) : String;
7967:  Function TeeExtractField1( St : String; Index : Integer; const Separator : String) : String;
7968:  Function TeeNumFields( St : String) : Integer;
7969:  Function TeeNumFields1( const St, Separator : String) : Integer;
7970:  Procedure TeeGetBitmapEditor( AObject : TObject; var Bitmap : TBitmap)
7971:  Procedure TeeLoadBitmap( Bitmap : TBitmap; const Name1, Name2 : String)
7972:  // TColorArray', 'array of TColor
7973:  Function GetDefaultColor( const Index : Integer) : TColor
7974:  Procedure SetDefaultColorPalette;
7975:  Procedure SetDefaultColorPalette1( const Palette : array of TColor);
7976:  'TeeCheckBoxSize','LongInt'( 11);
7977:  Procedure TeeDrawCheckBox(x,y:Integer;Canvas:TCanvas;Checked:Boolean;ABackColor:TColor;CheckBox:Boolean);
7978:  Function TEEStrToFloatDef( const S : string; const Default : Extended) : Extended
7979:  Function TryStrToFloat( const S : String; var Value : Double) : Boolean
7980:  Function CrossingLines( const X1, Y1, X2, Y2, X3, Y3, X4, Y4 : Double; out x, y : Double) : Boolean
7981:  Procedure TeeTranslateControl( AControl : TControl);
7982:  Procedure TeeTranslateControl1( AControl : TControl; const ExcludeChilds : array of TControl);
7983:  Function ReplaceChar( const AString : String; const Search : Char; const Replace : Char) : String
7984:  //Procedure RectToFourPoints( const ARect : TRect; const Angle : Double; var P : TFourPoints)
7985:  Function TeeAntiAlias( Panel : TCustomTeePanel; ChartRect : Boolean) : TBitmap
7986:  //Procedure DrawBevel(Canvas:TTeeCanvas;Bevel:TPanelBevel;var R:TRect;Width:Integer;Round:Integer);
7987:  //Function ScreenRatio( ACanvas : TCanvas3D) : Double
7988:  Function TeeReadBoolOption( const AKey : String; DefaultValue : Boolean) : Boolean
7989:  Procedure TeeSaveBoolOption( const AKey : String; Value : Boolean)
7990:  Function TeeReadIntegerOption( const AKey : String; DefaultValue : Integer) : Integer
7991:  Procedure TeeSaveIntegerOption( const AKey : String; Value : Integer)
7992:  Function TeeReadStringOption( const AKey, DefaultValue : String) : String
7993:  Procedure TeeSaveStringOption( const AKey, Value : String)
7994:  Function TeeDefaultXMLEncoding : String
7995:  Procedure ConvertTextToXML( Stream : TStream; XMLHeader : Boolean)
7996:   TeeWindowHandle', 'Integer
7997:  Procedure TeeGotoURL( Handle : TeeWindowHandle; const URL : String)
7998:  Procedure HtmlTextOut( ACanvas : TCanvas; x, y : Integer; Text : String)
7999:  Function HtmlTextExtent( ACanvas : TCanvas; const Text : String) : TSize
8000: end;
8001:
8002:
8003: using mXBDEUtils
8004: ********************************************************************************
8005:  Procedure SetAlias( aAlias, aDirectory : String)
8006:  Procedure CheckRegistryEntry(Reg:TRegistry;const Path,Value:String;const Default,
      Desired:Variant;Size:Byte);
8007:  Function GetFileVersionNumber( const FileName : String) : TVersionNo
8008:  Procedure SetBDE( aPath, aNode, aValue : String)
8009:  function RestartDialog(Wnd: HWnd; Reason: PChar; Flags: Integer): Integer; stdcall;
8010:  Function GetSystemDirectory( lpBuffer : string; uSize : UINT) : UINT
8011:  Function GetSystemDirectoryW( lpBuffer : pchar; uSize : UINT) : UINT
8012:  Function GetTempPath( nBufferLength : DWORD; lpBuffer : string) : DWORD
8013:  Function GetWindowsDirectoryW( nBufferLength : DWORD; lpBuffer : string) : DWORD
8014:  Function GetTempFileName(lpPathName,lpPrefixString:string;uUnique:UINT;lpTempFileName:string):UINT;
8015:
8016:
8017: procedure SIRegister_cDateTime(CL: TPSPascalCompiler);
8018: begin
8019: AddClassN(FindClass('TOBJECT'),'EDateTime
8020: Function DatePart( const D : TDateTime) : Integer
8021: Function TimePart( const D : TDateTime) : Double
8022: Function Century( const D : TDateTime) : Word
8023: Function Year( const D : TDateTime) : Word
8024: Function Month( const D : TDateTime) : Word
8025: Function Day( const D : TDateTime) : Word
```

```
8026: Function Hour( const D : TDateTime) : Word
8027: Function Minute( const D : TDateTime) : Word
8028: Function Second( const D : TDateTime) : Word
8029: Function Millisecond( const D : TDateTime) : Word
8030: ('OneDay','Extended').setExtended( 1.0);
8031: ('OneHour','Extended').SetExtended( OneDay / 24);
8032: ('OneMinute','Extended').SetExtended( OneHour / 60);
8033: ('OneSecond','Extended').SetExtended( OneMinute / 60);
8034: ('OneMillisecond','Extended').SetExtended( OneSecond / 1000);
8035: ('OneWeek','Extended').SetExtended( OneDay * 7);
8036: ('HoursPerDay','Extended').SetExtended( 24);
8037: ('MinutesPerHour','Extended').SetExtended( 60);
8038: ('SecondsPerMinute','Extended').SetExtended( 60);
8039: Procedure SetYear( var D : TDateTime; const Year : Word)
8040: Procedure SetMonth( var D : TDateTime; const Month : Word)
8041: Procedure SetDay( var D : TDateTime; const Day : Word)
8042: Procedure SetHour( var D : TDateTime; const Hour : Word)
8043: Procedure SetMinute( var D : TDateTime; const Minute : Word)
8044: Procedure SetSecond( var D : TDateTime; const Second : Word)
8045: Procedure SetMillisecond( var D : TDateTime; const Milliseconds : Word)
8046: Function IsEqual( const D1, D2 : TDateTime) : Boolean;
8047: Function IsEqual1( const D1 : TDateTime; const Ye, Mo, Da : Word):Boolean;
8048: Function IsEqual2( const D1 : TDateTime; const Ho, Mi, Se, ms : Word):Boolean;
8049: Function IsAM( const D : TDateTime) : Boolean
8050: Function IsPM( const D : TDateTime) : Boolean
8051: Function IsMidnight( const D : TDateTime) : Boolean
8052: Function IsNoon( const D : TDateTime) : Boolean
8053: Function IsSunday( const D : TDateTime) : Boolean
8054: Function IsMonday( const D : TDateTime) : Boolean
8055: Function IsTuesday( const D : TDateTime) : Boolean
8056: Function IsWedneday( const D : TDateTime) : Boolean
8057: Function IsThursday( const D : TDateTime) : Boolean
8058: Function IsFriday( const D : TDateTime) : Boolean
8059: Function IsSaturday( const D : TDateTime) : Boolean
8060: Function IsWeekend( const D : TDateTime) : Boolean
8061: Function Noon( const D : TDateTime) : TDateTime
8062: Function Midnight( const D : TDateTime) : TDateTime
8063: Function FirstDayOfMonth( const D : TDateTime) : TDateTime
8064: Function LastDayOfMonth( const D : TDateTime) : TDateTime
8065: Function NextWorkday( const D : TDateTime) : TDateTime
8066: Function PreviousWorkday( const D : TDateTime) : TDateTime
8067: Function FirstDayOfYear( const D : TDateTime) : TDateTime
8068: Function LastDayOfYear( const D : TDateTime) : TDateTime
8069: Function EasterSunday( const Year : Word) : TDateTime
8070: Function GoodFriday( const Year : Word) : TDateTime
8071: Function AddMilliseconds( const D : TDateTime; const N : Int64) : TDateTime
8072: Function AddSeconds( const D : TDateTime; const N : Int64) : TDateTime
8073: Function AddMinutes( const D : TDateTime; const N : Integer) : TDateTime
8074: Function AddHours( const D : TDateTime; const N : Integer) : TDateTime
8075: Function AddDays( const D : TDateTime; const N : Integer) : TDateTime
8076: Function AddWeeks( const D : TDateTime; const N : Integer) : TDateTime
8077: Function AddMonths( const D : TDateTime; const N : Integer) : TDateTime
8078: Function AddYears( const D : TDateTime; const N : Integer) : TDateTime
8079: Function DayOfYear( const Ye, Mo, Da : Word) : Integer
8080: Function DayOfYear( const D : TDateTime) : Integer
8081: Function DaysInMonth( const Ye, Mo : Word) : Integer
8082: Function DaysInMonth( const D : TDateTime) : Integer
8083: Function DaysInYear( const Ye : Word) : Integer
8084: Function DaysInYearDate( const D : TDateTime) : Integer
8085: Function WeekNumber( const D : TDateTime) : Integer
8086: Function ISOFirstWeekOfYear( const Ye : Word) : TDateTime
8087: Procedure ISOWeekNumber( const D : TDateTime; var WeekNumber, WeekYear : Word)
8088: Function DiffMilliseconds( const D1, D2 : TDateTime) : Int64
8089: Function DiffSeconds( const D1, D2 : TDateTime) : Integer
8090: Function DiffMinutes( const D1, D2 : TDateTime) : Integer
8091: Function DiffHours( const D1, D2 : TDateTime) : Integer
8092: Function DiffDays( const D1, D2 : TDateTime) : Integer
8093: Function DiffWeeks( const D1, D2 : TDateTime) : Integer
8094: Function DiffMonths( const D1, D2 : TDateTime) : Integer
8095: Function DiffYears( const D1, D2 : TDateTime) : Integer
8096: Function GMTBias : Integer
8097: Function GMTTimeToLocalTime( const D : TDateTime) : TDateTime
8098: Function LocalTimeToGMTTime( const D : TDateTime) : TDateTime
8099: Function NowAsGMTTime : TDateTime
8100: Function DateTimeToISO8601String( const D : TDateTime) : AnsiString
8101: Function ISO8601StringToTime( const D : AnsiString) : TDateTime
8102: Function ISO8601StringAsDateTime( const D : AnsiString) : TDateTime
8103: Function DateTimeToANSI( const D : TDateTime) : Integer
8104: Function ANSIToDateTime( const Julian : Integer) : TDateTime
8105: Function DateTimeToISOInteger( const D : TDateTime) : Integer
8106: Function DateTimeToISOString( const D : TDateTime) : AnsiString
8107: Function ISOIntegerToDateTime( const ISOInteger : Integer) : TDateTime
8108: Function TwoDigitRadix2000YearToYear( const Y : Integer) : Integer
8109: Function DateTimeAsElapsedTime(const D:TDateTime; const IncludeMilliseconds:Boolean):AnsiString
8110: Function UnixTimeToDateTime( const UnixTime : LongWord) : TDateTime
8111: Function DateTimeToUnixTime( const D : TDateTime) : LongWord
8112: Function EnglishShortDayOfWeekStrA( const DayOfWeek : Integer) : AnsiString
8113: Function EnglishShortDayOfWeekStrU( const DayOfWeek : Integer) : UnicodeString
8114: Function EnglishLongDayOfWeekStrA( const DayOfWeek : Integer) : AnsiString
```

```
8115: Function EnglishLongDayOfWeekStrU( const DayOfWeek : Integer) : UnicodeString
8116: Function EnglishShortMonthStrA( const Month : Integer) : AnsiString
8117: Function EnglishShortMonthStrU( const Month : Integer) : UnicodeString
8118: Function EnglishLongMonthStrA( const Month : Integer) : AnsiString
8119: Function EnglishLongMonthStrU( const Month : Integer) : UnicodeString
8120: Function EnglishShortDayOfWeekA( const S : AnsiString) : Integer
8121: Function EnglishShortDayOfWeekU( const S : UnicodeString) : Integer
8122: Function EnglishLongDayOfWeekA( const S : AnsiString) : Integer
8123: Function EnglishLongDayOfWeekU( const S : UnicodeString) : Integer
8124: Function EnglishShortMonthA( const S : AnsiString) : Integer
8125: Function EnglishShortMonthU( const S : UnicodeString) : Integer
8126: Function EnglishLongMonthA( const S : AnsiString) : Integer
8127: Function EnglishLongMonthU( const S : UnicodeString) : Integer
8128: Function RFC850DayOfWeekA( const S : AnsiString) : Integer
8129: Function RFC850DayOfWeekU( const S : UnicodeString) : Integer
8130: Function RFC1123DayOfWeekA( const S : AnsiString) : Integer
8131: Function RFC1123DayOfWeekU( const S : UnicodeString) : Integer
8132: Function RFCMonthA( const S : AnsiString) : Word
8133: Function RFCMonthU( const S : UnicodeString) : Word
8134: Function GMTTimeToRFC1123TimeA( const D : TDateTime; const IncludeSeconds:Boolean) : AnsiString
8135: Function GMTTimeToRFC1123TimeU( const D : TDateTime; const IncludeSeconds:Boolean) : UnicodeString
8136: Function GMTDateTimeToRFC1123DateTimeA(const D: TDateTime; const IncludeDayOfWeek:Bool):AnsiString;
8137: Function GMTDateTimeToRFC1123DateTimeU(const D:TDateTime;const IncludeDayOfWeek:Bool):UnicodeString;
8138: Function DateTimeToRFCDateTimeA( const D : TDateTime) : AnsiString
8139: Function DateTimeToRFCDateTimeU( const D : TDateTime) : UnicodeString
8140: Function NowAsRFCDateTimeA : AnsiString
8141: Function NowAsRFCDateTimeU : UnicodeString
8142: Function RFCDateTimeToGMTDateTime( const S : AnsiString) : TDateTime
8143: Function RFCDateTimeToDateTime( const S : AnsiString) : TDateTime
8144: Function RFCTimeZoneToGMTBias( const Zone : AnsiString) : Integer
8145: Function TimePeriodStr( const D : TDateTime) : AnsiString
8146: Procedure SelfTest
8147: end;
8148: //****************************************CFileUtils
8149: Function PathHasDriveLetterA( const Path : AnsiString) : Boolean
8150: Function PathHasDriveLetter( const Path : String) : Boolean
8151: Function PathIsDriveLetterA( const Path : AnsiString) : Boolean
8152: Function PathIsDriveLetter( const Path : String) : Boolean
8153: Function PathIsDriveRootA( const Path : AnsiString) : Boolean
8154: Function PathIsDriveRoot( const Path : String) : Boolean
8155: Function PathIsRootA( const Path : AnsiString) : Boolean
8156: Function PathIsRoot( const Path : String) : Boolean
8157: Function PathIsUNCPathA( const Path : AnsiString) : Boolean
8158: Function PathIsUNCPath( const Path : String) : Boolean
8159: Function PathIsAbsoluteA( const Path : AnsiString) : Boolean
8160: Function PathIsAbsolute( const Path : String) : Boolean
8161: Function PathIsDirectoryA( const Path : AnsiString) : Boolean
8162: Function PathIsDirectory( const Path : String) : Boolean
8163: Function PathInclSuffixA( const Path : AnsiString; const PathSep : Char) : AnsiString
8164: Function PathInclSuffix( const Path : String; const PathSep : Char) : String
8165: Function PathExclSuffixA( const Path : AnsiString; const PathSep : Char) : AnsiString
8166: Function PathExclSuffix( const Path : String; const PathSep : Char) : String
8167: Procedure PathEnsureSuffixA( var Path : AnsiString; const PathSep : Char)
8168: Procedure PathEnsureSuffix( var Path : String; const PathSep : Char)
8169: Procedure PathEnsureNoSuffixA( var Path : AnsiString; const PathSep : Char)
8170: Procedure PathEnsureNoSuffix( var Path : String; const PathSep : Char)
8171: //Function PathCanonicalA( const Path : AnsiString; const PathSep : Char) : AnsiString
8172: Function PathCanonical( const Path : String; const PathSep : Char) : String
8173: Function PathExpandA(const Path:AnsiString;const BasePath:AnsiString;const PathSep:Char):AnsiString
8174: Function PathExpand( const Path : String; const BasePath : String; const PathSep : Char) : String
8175: Function PathLeftElementA( const Path : AnsiString; const PathSep : Char) : AnsiString
8176: Function PathLeftElement( const Path : String; const PathSep : Char) : String
8177: Procedure PathSplitLeftElementA(const Path:AString;var LeftElement,RightPath:AString;const PathSep:Char);
8178: Procedure PathSplitLeftElement(const Path:String; var LeftElement,RightPath: String;const PathSep:Char);
8179: Procedure DecodeFilePathA(const FilePath:AnsiString; var Path,FileName:AnsiString;const PathSep:Char;
8180: Procedure DecodeFilePath( const FilePath : String; var Path, FileName : String; const PathSep : Char)
8181: Function FileNameValidA( const FileName : AnsiString) : AnsiString
8182: Function FileNameValid( const FileName : String) : String
8183: Function FilePathA(const FileName,Path:AnsiString;const BasePath:AnsiStr;const PathSep:Char):AnsiString;
8184: Function FilePath(const FileName, Path: String;const BasePath: String;const PathSep : Char) : String
8185: Function DirectoryExpandA(const Path:AnsiString;const BasePath:AnsiString;const PathSep:Char):AnsiString
8186: Function DirectoryExpand(const Path: String; const BasePath: String; const PathSep : Char) : String
8187: Function UnixPathToWinPath( const Path : AnsiString) : AnsiString
8188: Function WinPathToUnixPath( const Path : AnsiString) : AnsiString
8189: Procedure CCopyFile( const FileName, DestName : String)
8190: Procedure CMoveFile( const FileName, DestName : String)
8191: Function CDeleteFiles( const FileMask : String) : Boolean
8192: Function FileSeekEx(const FHandle:TFileHandle;const FileOffset:Int64; const FilePos:TFileSeekPos):Int64;
8193: Procedure FileCloseEx( const FileHandle : TFileHandle)
8194: Function FileExistsA( const FileName : AnsiString) : Boolean
8195:  Function CFileExists( const FileName : String) : Boolean
8196:  Function CFileGetSize( const FileName : String) : Int64
8197: Function FileGetDateTime( const FileName : String) : TDateTime
8198: Function FileGetDateTime2( const FileName : String) : TDateTime
8199: Function FileIsReadOnly( const FileName : String) : Boolean
8200: Procedure FileDeleteEx( const FileName : String)
8201: Procedure FileRenameEx( const OldFileName, NewFileName : String)
8202: Function ReadFileStrA( const FileName:AnsiString; const FileSharing : TFileSharing; const FileCreationMode
      : TFileCreationMode; const FileOpenWait : PFileOpenWait) : AnsiString
```

```
8203: Function DirectoryEntryExists( const Name : String) : Boolean
8204: Function DirectoryEntrySize( const Name : String) : Int64
8205:  Function CDirectoryExists( const DirectoryName : String) : Boolean
8206: Function DirectoryGetDateTime( const DirectoryName : String) : TDateTime
8207: Procedure CDirectoryCreate( const DirectoryName : String)
8208: Function GetFirstFileNameMatching( const FileMask : String) : String
8209: Function DirEntryGetAttr( const FileName : AnsiString) : Integer
8210: Function DirEntryIsDirectory( const FileName : AnsiString) : Boolean
8211: Function FileHasAttr( const FileName : String; const Attr : Word) : Boolean
8212:   AddTypeS('TLogicalDriveType', '( DriveRemovable, DriveFixed, DriveRemote, '
8213:    +'DriveCDRom, DriveRamDisk, DriveTypeUnknown )
8214: Function DriveIsValid( const Drive : Char) : Boolean
8215: Function DriveGetType( const Path : AnsiString) : TLogicalDriveType
8216: Function DriveFreeSpace( const Path : AnsiString) : Int64
8217:
8218: procedure SIRegister_cTimers(CL: TPSPascalCompiler);
8219: begin
8220:  AddClassN(FindClass('TOBJECT'),'ETimers
8221:  Const('TickFrequency','LongInt'( 1000);Function GetTick : LongWord
8222: Function TickDelta( const D1, D2 : LongWord) : Integer
8223: Function TickDeltaW( const D1, D2 : LongWord) : LongWord
8224:   AddTypeS('THPTimer', 'Int64
8225: Procedure StartTimer( var Timer : THPTimer)
8226: Procedure StopTimer( var Timer : THPTimer)
8227: Procedure ResumeTimer( var StoppedTimer : THPTimer)
8228: Procedure InitStoppedTimer( var Timer : THPTimer)
8229: Procedure InitElapsedTimer( var Timer : THPTimer; const Milliseconds : Integer)
8230: Function MillisecondsElapsed( const Timer: THPTimer; const TimerRunning : Boolean) : Integer
8231: Function MicrosecondsElapsed( const Timer: THPTimer; const TimerRunning : Boolean) : Int64
8232: Procedure WaitMicroseconds( const MicroSeconds : Integer)
8233: Function GetHighPrecisionFrequency : Int64
8234: Function GetHighPrecisionTimerOverhead : Int64
8235: Procedure AdjustTimerForOverhead( var StoppedTimer : THPTimer; const Overhead : Int64)
8236: Procedure SelfTestCTimer
8237: end;
8238:
8239: procedure SIRegister_cRandom(CL: TPSPascalCompiler);
8240: begin
8241:  Function RandomSeed : LongWord
8242:  Procedure AddEntropy( const Value : LongWord)
8243:  Function RandomUniform : LongWord;
8244:  Function RandomUniform1( const N : Integer) : Integer;
8245:  Function RandomBoolean : Boolean
8246:  Function RandomByte : Byte
8247:  Function RandomByteNonZero : Byte
8248:  Function RandomWord : Word
8249:  Function RandomInt64 : Int64;
8250:  Function RandomInt641( const N : Int64) : Int64;
8251:  Function RandomHex( const Digits : Integer) : String
8252:  Function RandomFloat : Extended
8253:  Function RandomAlphaStr( const Length : Integer) : AnsiString
8254:  Function RandomPseudoWord( const Length : Integer) : AnsiString
8255:  Function RandomPassword(const MinL,MaxLength:Int;const CaseSens,UseSymbols,UseNumbers:Bool):AnsiString;
8256:  Function mwcRandomLongWord : LongWord
8257:  Function urnRandomLongWord : LongWord
8258:  Function moaRandomFloat : Extended
8259:  Function mwcRandomFloat : Extended
8260:  Function RandomNormalF : Extended
8261:  Procedure SelfTestCRandom
8262: end;
8263:
8264: procedure SIRegister_SynEditMiscProcs(CL: TPSPascalCompiler);
8265: begin
8266:  // PIntArray', '^TIntArray // will not work
8267:  Addtypes('TConvertTabsProc','function(const Line:AnsiString; TabWidth: integer):AnsiString
8268:  TConvertTabsProcEx,function(const Line:AnsiString;TabWidth:integer;var HasTabs:boolean):AnsiString
8269:  Function synMax( x, y : integer) : integer
8270:  Function synMin( x, y : integer) : integer
8271:  Function synMinMax( x, mi, ma : integer) : integer
8272:  Procedure synSwapInt( var l, r : integer)
8273:  Function synMaxPoint( const P1, P2 : TPoint) : TPoint
8274:  Function synMinPoint( const P1, P2 : TPoint) : TPoint
8275:  //Function synGetIntArray( Count : Cardinal; InitialValue : integer) : PIntArray
8276:  Procedure synInternalFillRect( dc : HDC; const rcPaint : TRect)
8277:  Function synGetBestConvertTabsProc( TabWidth : integer) : TConvertTabsProc
8278:  Function synConvertTabs( const Line : AnsiString; TabWidth : integer) : AnsiString
8279:  Function synGetBestConvertTabsProcEx( TabWidth : integer) : TConvertTabsProcEx
8280:  Function synConvertTabsEx(const Line:AnsiString;TabWidth:integer; var HasTabs:boolean):AnsiString;
8281:  Function synGetExpandedLength( const aStr : string; aTabWidth : integer) : integer
8282:  Function synCharIndex2CaretPos( Index, TabWidth : integer; const Line : string) : integer
8283:  Function synCaretPos2CharIndex(Position,TabWidth:int;const Line:string;var InsideTabChar:boolean):int;
8284:  Function synStrScanForCharInSet(const Line:string;Start:integer;AChars:TSynIdentChars):integer;
8285:  Function synStrRScanForCharInSet(const Line:string;Start:integer;AChars:TSynIdentChars):integer;
8286:   TStringType', '( stNone, stHalfNumAlpha, stHalfSymbol, stHalfKat'
8287:    +'akana,stWideNumAlpha,stWideSymbol,stWideKatakana,stHiragana,stIdeograph,stControl,stKashida )
8288:  ('C3_NONSPACING','LongInt'( 1);
8289:  'C3_DIACRITIC','LongInt'( 2);
8290:  'C3_VOWELMARK','LongInt'( 4);
8291:  ('C3_SYMBOL','LongInt'( 8);
```

```
8292:  ('C3_KATAKANA','LongWord( $0010);
8293:  ('C3_HIRAGANA','LongWord( $0020);
8294:  ('C3_HALFWIDTH','LongWord( $0040);
8295:  ('C3_FULLWIDTH','LongWord( $0080);
8296:  ('C3_IDEOGRAPH','LongWord( $0100);
8297:  ('C3_KASHIDA','LongWord( $0200);
8298:  ('C3_LEXICAL','LongWord( $0400);
8299:  ('C3_ALPHA','LongWord( $8000);
8300:  ('C3_NOTAPPLICABLE','LongInt'( 0);
8301:  Function synStrScanForMultiByteChar( const Line : string; Start : Integer) : Integer
8302:  Function synStrRScanForMultiByteChar( const Line : string; Start : Integer) : Integer
8303:  Function synIsStringType( Value : Word) : TStringType
8304:  Function synGetEOL( Line : PChar) : PChar
8305:  Function synEncodeString( s : string) : string
8306:  Function synDecodeString( s : string) : string
8307:  Procedure synFreeAndNil( var Obj: TObject)
8308:  Procedure synAssert( Expr : Boolean)
8309:  Function synLastDelimiter( const Delimiters, S : string) : Integer
8310:   TReplaceFlag', '( rfReplaceAll, rfIgnoreCase )
8311:   TReplaceFlags', 'set of TReplaceFlag )
8312:  Function synStringReplace(const S, OldPattern, NewPattern : string; Flags: TReplaceFlags) : string
8313:  Function synGetRValue( RGBValue : TColor) : byte
8314:  Function synGetGValue( RGBValue : TColor) : byte
8315:  Function synGetBValue( RGBValue : TColor) : byte
8316:  Function synRGB( r, g, b : Byte) : Cardinal
8317: //  THighlighterAttriProc', 'Function ( Highlighter : TSynCustomHigh'
8318:   // +'lighter; Attri:TSynHighlighterAttributes;UniqueAttriName:string;Params array of Pointer):Boolean;
8319:  //Function synEnumHighlighterAttris( Highlighter : TSynCustomHighlighter; SkipDuplicates : Boolean;
      HighlighterAttriProc : THighlighterAttriProc; Params : array of Pointer) : Boolean
8320:  Function synCalcFCS( const ABuf, ABufSize : Cardinal) : Word
8321:  Procedure synSynDrawGradient(const ACanvas:TCanvas;const AStartColor,
      AEndColor:TColor;ASteps:integer;const ARect : TRect; const AHorizontal : boolean)
8322: end;
8323:
8324:  Function GET_APPCOMMAND_LPARAM( lParam : LPARAM) : WORD
8325:  Function GET_DEVICE_LPARAM( lParam : LPARAM) : WORD
8326:  Function GET_KEYSTATE_LPARAM( lParam : LPARAM) : WORD
8327:
8328: procedure SIRegister_synautil(CL: TPSPascalCompiler);
8329: begin
8330:  Function STimeZoneBias : integer
8331:  Function TimeZone : string
8332:  Function Rfc822DateTime( t : TDateTime) : string
8333:  Function CDateTime( t : TDateTime) : string
8334:  Function SimpleDateTime( t : TDateTime) : string
8335:  Function AnsiCDateTime( t : TDateTime) : string
8336:  Function GetMonthNumber( Value : String) : integer
8337:  Function GetTimeFromStr( Value : string) : TDateTime
8338:  Function GetDateMDYFromStr( Value : string) : TDateTime
8339:  Function DecodeRfcDateTime( Value : string) : TDateTime
8340:  Function GetUTTime : TDateTime
8341:  Function SetUTTime( Newdt : TDateTime) : Boolean
8342:  Function SGetTick : LongWord
8343:  Function STickDelta( TickOld, TickNew : LongWord) : LongWord
8344:  Function CodeInt( Value : Word) : Ansistring
8345:  Function DecodeInt( const Value : Ansistring; Index : Integer) : Word
8346:  Function CodeLongInt( Value : LongInt) : Ansistring
8347:  Function DecodeLongInt( const Value : Ansistring; Index : Integer) : LongInt
8348:  Function DumpStr( const Buffer : Ansistring) : string
8349:  Function DumpExStr( const Buffer : Ansistring) : string
8350:  Procedure Dump( const Buffer : AnsiString; DumpFile : string)
8351:  Procedure DumpEx( const Buffer : AnsiString; DumpFile : string)
8352:  Function TrimSPLeft( const S : string) : string
8353:  Function TrimSPRight( const S : string) : string
8354:  Function TrimSP( const S : string) : string
8355:  Function SeparateLeft( const Value, Delimiter : string) : string
8356:  Function SeparateRight( const Value, Delimiter : string) : string
8357:  Function SGetParameter( const Value, Parameter : string) : string
8358:  Procedure ParseParametersEx( Value, Delimiter : string; const Parameters : TStrings)
8359:  Procedure ParseParameters( Value : string; const Parameters : TStrings)
8360:  Function IndexByBegin( Value : string; const List : TStrings) : integer
8361:  Function GetEmailAddr( const Value : string) : string
8362:  Function GetEmailDesc( Value : string) : string
8363:  Function CStrToHex( const Value : Ansistring) : string
8364:  Function CIntToBin( Value : Integer; Digits : Byte) : string
8365:  Function CBinToInt( const Value : string) : Integer
8366:  Function ParseURL( URL : string; var Prot, User, Pass, Host, Port, Path, Para:string):string
8367:  Function CReplaceString( Value, Search, Replace : AnsiString) : AnsiString
8368:  Function CRPosEx( const Sub, Value : string; From : integer) : Integer
8369:  Function CRPos( const Sub, Value : String) : Integer
8370:  Function FetchBin( var Value : string; const Delimiter : string) : string
8371:  Function CFetch( var Value : string; const Delimiter : string) : string
8372:  Function FetchEx( var Value : string; const Delimiter, Quotation : string) : string
8373:  Function IsBinaryString( const Value : AnsiString) : Boolean
8374:  Function PosCRLF( const Value : AnsiString; var Terminator : AnsiString) : integer
8375:  Procedure StringsTrim( const value : TStrings)
8376:  Function PosFrom( const SubStr, Value : String; From : integer) : integer
8377:  Function IncPoint( const p : ___pointer; Value : integer) : ___pointer
8378:  Function GetBetween( const PairBegin, PairEnd, Value : string) : string
```

```
8379:  Function CCountOfChar( const Value : string; aChr : char) : integer
8380:  Function UnquoteStr( const Value : string; Quote : Char) : string
8381:  Function QuoteStr( const Value : string; Quote : Char) : string
8382:  Procedure HeadersToList( const Value : TStrings)
8383:  Procedure ListToHeaders( const Value : TStrings)
8384:  Function SwapBytes( Value : integer) : integer
8385:  Function ReadStrFromStream( const Stream : TStream; len : integer) : AnsiString
8386:  Procedure WriteStrToStream( const Stream : TStream; Value : AnsiString)
8387:  Function GetTempFile( const Dir, prefix : AnsiString) : AnsiString
8388:  Function CPadString( const Value : AnsiString; len : integer; Pad : AnsiChar): AnsiString
8389:  Function CXorString( Indata1, Indata2 : AnsiString) : AnsiString
8390:  Function NormalizeHeader( Value : TStrings; var Index : Integer) : string
8391: end;
8392:
8393: procedure SIRegister_StCRC(CL: TPSPascalCompiler);
8394: begin
8395:  ('CrcBufSize','LongInt'( 2048);
8396:  Function Adler32Prim( var Data, DataSize : Cardinal; CurCrc : LongInt) : LongInt
8397:  Function Adler32OfStream( Stream : TStream; CurCrc : LongInt) : LongInt
8398:  Function Adler32OfFile( FileName : AnsiString) : LongInt
8399:  Function Crc16Prim( var Data, DataSize, CurCrc : Cardinal) : Cardinal
8400:  Function Crc16OfStream( Stream : TStream; CurCrc : Cardinal) : Cardinal
8401:  Function Crc16OfFile( FileName : AnsiString) : Cardinal
8402:  Function Crc32Prim( var Data, DataSize : Cardinal; CurCrc : LongInt) : LongInt
8403:  Function Crc32OfStream( Stream : TStream; CurCrc : LongInt) : LongInt
8404:  Function Crc32OfFile( FileName : AnsiString) : LongInt
8405:  Function InternetSumPrim( var Data, DataSize, CurCrc : Cardinal) : Cardinal
8406:  Function InternetSumOfStream( Stream : TStream; CurCrc : Cardinal) : Cardinal
8407:  Function InternetSumOfFile( FileName : AnsiString) : Cardinal
8408:  Function Kermit16Prim( var Data, DataSize, CurCrc : Cardinal) : Cardinal
8409:  Function Kermit16OfStream( Stream : TStream; CurCrc : Cardinal) : Cardinal
8410:  Function Kermit16OfFile( FileName : AnsiString) : Cardinal
8411: end;
8412:
8413: procedure SIRegister_ComObj(cl: TPSPascalCompiler);
8414: begin
8415:  function CreateOleObject(const ClassName: String): IDispatch;
8416:  function GetActiveOleObject(const ClassName: String): IDispatch;
8417:  function ProgIDToClassID(const ProgID: string): TGUID;
8418:  function ClassIDToProgID(const ClassID: TGUID): string;
8419:  function CreateClassID: string;
8420:  function CreateGUIDString: string;
8421:  function CreateGUIDID: string;
8422:  procedure OleError(ErrorCode: longint)
8423:  procedure OleCheck(Result: HResult);
8424: end;
8425:
8426:  Function xCreateOleObject( const ClassName : string) : Variant //or IDispatch
8427:  Function xGetActiveOleObject( const ClassName : string) : Variant
8428:  //Function DllGetClassObject( const CLSID : TCLSID; const IID : TIID; var Obj) : HResult
8429:  Function DllCanUnloadNow : HResult
8430:  Function DllRegisterServer : HResult
8431:  Function DllUnregisterServer : HResult
8432:  Function VarFromInterface( Unknown : IUnknown) : Variant
8433:  Function VarToInterface( const V : Variant) : IDispatch
8434:  Function VarToAutoObject( const V : Variant) : TAutoObject
8435:  //Procedure
      DispInvoke(Dispatch:IDispatch;CallDesc:PCallDesc;DispIDs:PDispIDList;Params:Pointer;Res:PVariant);
8436:  //Procedure DispInvokeError( Status : HResult; const ExcepInfo : TExcepInfo)
8437:  Procedure OleError( ErrorCode : HResult)
8438:  Procedure OleCheck( Result : HResult)
8439:  Function StringToClassID( const S : string) : TCLSID
8440:  Function ClassIDToString( const ClassID : TCLSID) : string
8441:  Function xProgIDToClassID( const ProgID : string) : TCLSID
8442:  Function xClassIDToProgID( const ClassID : TCLSID) : string
8443:  Function xWideCompareStr( const S1, S2 : WideString) : Integer
8444:  Function xWideSameStr( const S1, S2 : WideString) : Boolean
8445:  Function xGUIDToString( const ClassID : TGUID) : string
8446:  Function xStringToGUID( const S : string) : TGUID
8447:  Function xGetModuleName( Module : HMODULE) : string
8448:  Function xAcquireExceptionObject : TObject
8449:  Function xIfThen( AValue : Boolean; const ATrue : Integer; const AFalse : Integer) : Integer
8450:  Function xUtf8Encode( const WS : WideString) : UTF8String
8451:  Function xUtf8Decode( const S : UTF8String) : WideString
8452:  Function xExcludeTrailingPathDelimiter( const S : string) : string
8453:  Function xIncludeTrailingPathDelimiter( const S : string) : string
8454:  Function XRTLHandleCOMException : HResult
8455:  Procedure XRTLCheckArgument( Flag : Boolean)
8456:  //Procedure XRTLCheckOutArgument( out Arg)
8457:  Procedure XRTLInterfaceConnect(const Source:IUnknown;const IID:TIID;const Sink:IUnknown;var
      Connection:Longint);
8458:  Procedure XRTLInterfaceDisconnect(const Source: IUnknown; const IID:TIID;var Connection : Longint)
8459:  Function XRTLRegisterActiveObject(const Unk:IUnknown;ClassID:TCLSID;Flags:DWORD;var
      RegisterCookie:Int):HResult
8460:  Function XRTLUnRegisterActiveObject( var RegisterCookie : Integer) : HResult
8461:  //Function XRTLGetActiveObject( ClassID : TCLSID; RIID : TIID; out Obj) : HResult
8462:  Procedure XRTLEnumActiveObjects( Strings : TStrings)
8463: function   XRTLDefaultCategoryManager: IUnknown;
8464: function   XRTLIsCategoryEmpty(CatID: TGUID; const CategoryManager: IUnknown = nil): Boolean;
```

```
8465: // ICatRegister helper functions
8466: function   XRTLCreateComponentCategory(CatID: TGUID; CatDescription: WideString;
8467:                                        LocaleID: TLCID = LOCALE_USER_DEFAULT;
8468:                                        const CategoryManager: IUnknown = nil): HResult;
8469: function   XRTLRemoveComponentCategory(CatID: TGUID; CatDescription: WideString;
8470:                                        LocaleID: TLCID = LOCALE_USER_DEFAULT;
8471:                                        const CategoryManager: IUnknown = nil): HResult;
8472: function   XRTLRegisterCLSIDInCategory(ClassID: TGUID; CatID: TGUID;
8473:                                        const CategoryManager: IUnknown = nil): HResult;
8474: function   XRTLUnRegisterCLSIDInCategory(ClassID: TGUID; CatID: TGUID;
8475:                                          const CategoryManager: IUnknown = nil): HResult;
8476: // ICatInformation helper functions
8477: function   XRTLGetCategoryDescription(CatID: TGUID; var CatDescription: WideString;
8478:                                       LocaleID: TLCID = LOCALE_USER_DEFAULT;
8479:                                       const CategoryManager: IUnknown = nil): HResult;
8480: function   XRTLGetCategoryList(Strings: TStrings; LocaleID: TLCID = LOCALE_USER_DEFAULT;
8481:                                const CategoryManager: IUnknown = nil): HResult;
8482: function   XRTLGetCategoryCLSIDList(CatID: TGUID; Strings: TStrings;
8483:                                     const CategoryManager: IUnknown = nil): HResult;
8484: function   XRTLGetCategoryProgIDList(CatID: TGUID; Strings: TStrings;
8485:                                      const CategoryManager: IUnknown = nil): HResult;
8486: function XRTLFetch(var AInput: WideString; const ADelim: WideString = ' ';
8487:                    const ADelete: Boolean = True): WideString;
8488: function XRTLRPos(const ASub, AIn: WideString; AStart: Integer = -1): Integer;
8489: Function XRTLGetVariantAsString( const Value : Variant) : string
8490: Function XRTLDateTimeToTimeZoneTime( DT : TDateTime; TimeZone : TXRTLTimeZone) : TDateTime
8491: Function XRTLGetTimeZones : TXRTLTimeZones
8492: Function XFileTimeToDateTime( FileTime : TFileTime) : TDateTime
8493: Function DateTimeToFileTime( DateTime : TDateTime) : TFileTime
8494: Function GMTNow : TDateTime
8495: Function GMTToLocalTime( GMT : TDateTime) : TDateTime
8496: Function LocalTimeToGMT( LocalTime : TDateTime) : TDateTime
8497: Procedure XRTLNotImplemented
8498: Procedure XRTLRaiseError( E : Exception)
8499: Procedure XRTLRaise( E : Exception)');
8500: Procedure XRaise( E : Exception)');
8501: Procedure XRTLInvalidOperation( ClassName:string; OperationName:string; Description: string)
8502:
8503:
8504: procedure SIRegister_xrtl_util_Value(CL: TPSPascalCompiler);
8505: begin
8506:   SIRegister_IXRTLValue(CL);
8507:   SIRegister_TXRTLValue(CL);
8508:   //AddTypeS('PXRTLValueArray', '^TXRTLValueArray // will not work
8509:   AddTypeS('TXRTLValueArray', 'array of IXRTLValue
8510: Function XRTLValue( const AValue : Cardinal) : IXRTLValue;
8511: Function XRTLSetValue( const IValue : IXRTLValue; const AValue : Cardinal) : Cardinal;
8512: Function XRTLGetAsCardinal( const IValue : IXRTLValue) : Cardinal
8513: Function XRTLGetAsCardinalDef( const IValue : IXRTLValue; const DefValue : Cardinal) : Cardinal
8514: Function XRTLValue1( const AValue : Integer) : IXRTLValue;
8515: Function XRTLSetValue1( const IValue : IXRTLValue; const AValue : Integer) : Integer;
8516: Function XRTLGetAsInteger( const IValue : IXRTLValue) : Integer
8517: Function XRTLGetAsIntegerDef( const IValue : IXRTLValue; const DefValue : Integer) : Integer
8518: Function XRTLValue2( const AValue : Int64) : IXRTLValue;
8519: Function XRTLSetValue2( const IValue : IXRTLValue; const AValue : Int64) : Int64;
8520: Function XRTLGetAsInt64( const IValue : IXRTLValue) : Int64
8521: Function XRTLGetAsInt64Def( const IValue : IXRTLValue; const DefValue : Int64) : Int64
8522: Function XRTLValue3( const AValue : Single) : IXRTLValue;
8523: Function XRTLSetValue3( const IValue : IXRTLValue; const AValue : Single) : Single;
8524: Function XRTLGetAsSingle( const IValue : IXRTLValue) : Single
8525: Function XRTLGetAsSingleDef( const IValue : IXRTLValue; const DefValue : Single) : Single
8526: Function XRTLValue4( const AValue : Double) : IXRTLValue;
8527: Function XRTLSetValue4( const IValue : IXRTLValue; const AValue : Double) : Double;
8528: Function XRTLGetAsDouble( const IValue : IXRTLValue) : Double
8529: Function XRTLGetAsDoubleDef( const IValue : IXRTLValue; const DefValue : Double) : Double
8530: Function XRTLValue5( const AValue : Extended) : IXRTLValue;
8531: Function XRTLSetValue5( const IValue : IXRTLValue; const AValue : Extended) : Extended;
8532: Function XRTLGetAsExtended( const IValue : IXRTLValue) : Extended
8533: Function XRTLGetAsExtendedDef( const IValue : IXRTLValue; const DefValue : Extended) : Extended
8534: Function XRTLValue6( const AValue : IInterface) : IXRTLValue;
8535: Function XRTLSetValue6( const IValue : IXRTLValue; const AValue : IInterface) : IInterface;
8536: Function XRTLGetAsInterface( const IValue : IXRTLValue) : IInterface;
8537:  //Function XRTLGetAsInterface1( const IValue : IXRTLValue; out Obj) : IInterface;
8538: Function XRTLGetAsInterfaceDef( const IValue : IXRTLValue; const DefValue : IInterface) : IInterface;
8539: Function XRTLValue7( const AValue : WideString) : IXRTLValue;
8540: Function XRTLSetValue7( const IValue : IXRTLValue; const AValue : WideString) : WideString;
8541: Function XRTLGetAsWideString( const IValue : IXRTLValue) : WideString
8542: Function XRTLGetAsWideStringDef( const IValue : IXRTLValue; const DefValue : WideString) : WideString
8543: Function XRTLValue8( const AValue : TObject; const AOwnValue : Boolean) : IXRTLValue;
8544: Function XRTLSetValue8( const IValue : IXRTLValue; const AValue : TObject) : TObject;
8545: Function XRTLGetAsObject( const IValue : IXRTLValue; const ADetachOwnership : Boolean) : TObject;
8546: Function XRTLGetAsObjectDef(const IValue:IXRTLValue;const DefValue:TObject;const
      ADetachOwnership:Boolean):TObject;
8547: //Function XRTLValue9( const AValue : __Pointer) : IXRTLValue;
8548: //Function XRTLSetValue9( const IValue : IXRTLValue; const AValue : __Pointer) : __Pointer;
8549: //Function XRTLGetAsPointer( const IValue : IXRTLValue) : __Pointer
8550: //Function XRTLGetAsPointerDef( const IValue : IXRTLValue; const DefValue : __Pointer) : __Pointer
8551: Function XRTLValueV( const AValue : Variant) : IXRTLValue;
8552: Function XRTLSetValueV( const IValue : IXRTLValue; const AValue : Variant) : Variant;
```

```
8553: Function XRTLGetAsVariant( const IValue : IXRTLValue) : Variant
8554: Function XRTLGetAsVariantDef( const IValue : IXRTLValue; const DefValue : Variant) : Variant
8555: Function XRTLValue10( const AValue : Currency) : IXRTLValue;
8556: Function XRTLSetValue10( const IValue : IXRTLValue; const AValue : Currency) : Currency;
8557: Function XRTLGetAsCurrency( const IValue : IXRTLValue) : Currency
8558: Function XRTLGetAsCurrencyDef( const IValue : IXRTLValue; const DefValue : Currency) : Currency
8559: Function XRTLValue11( const AValue : Comp) : IXRTLValue;
8560: Function XRTLSetValue11( const IValue : IXRTLValue; const AValue : Comp) : Comp;
8561: Function XRTLGetAsComp( const IValue : IXRTLValue) : Comp
8562: Function XRTLGetAsCompDef( const IValue : IXRTLValue; const DefValue : Comp) : Comp
8563: Function XRTLValue12( const AValue : TClass) : IXRTLValue;
8564: Function XRTLSetValue12( const IValue : IXRTLValue; const AValue : TClass) : TClass;
8565: Function XRTLGetAsClass( const IValue : IXRTLValue) : TClass
8566: Function XRTLGetAsClassDef( const IValue : IXRTLValue; const DefValue : TClass) : TClass
8567: Function XRTLValue13( const AValue : TGUID) : IXRTLValue;
8568: Function XRTLSetValue13( const IValue : IXRTLValue; const AValue : TGUID) : TGUID;
8569: Function XRTLGetAsGUID( const IValue : IXRTLValue) : TGUID
8570: Function XRTLGetAsGUIDDef( const IValue : IXRTLValue; const DefValue : TGUID) : TGUID
8571: Function XRTLValue14( const AValue : Boolean) : IXRTLValue;
8572: Function XRTLSetValue14( const IValue : IXRTLValue; const AValue : Boolean) : Boolean;
8573: Function XRTLGetAsBoolean( const IValue : IXRTLValue) : Boolean
8574: Function XRTLGetAsBooleanDef( const IValue : IXRTLValue; const DefValue : Boolean) : Boolean
8575: end;
8576:
8577: //****************************unit uPSI_GR32;****************************************
8578:
8579:  Function Color32( WinColor : TColor) : TColor32;
8580:  Function Color321( R, G, B : Byte; A : Byte) : TColor32;
8581:  Function Color322( Index : Byte; var Palette : TPalette32) : TColor32;
8582:  Function Gray32( Intensity : Byte; Alpha : Byte) : TColor32
8583:  Function WinColor( Color32 : TColor32) : TColor
8584:  Function ArrayOfColor32( Colors : array of TColor32) : TArrayOfColor32
8585:  Procedure Color32ToRGB( Color32 : TColor32; var R, G, B : Byte)
8586:  Procedure Color32ToRGBA( Color32 : TColor32; var R, G, B, A : Byte)
8587:  Function Color32Components( R, G, B, A : Boolean) : TColor32Components
8588:  Function RedComponent( Color32 : TColor32) : Integer
8589:  Function GreenComponent( Color32 : TColor32) : Integer
8590:  Function BlueComponent( Color32 : TColor32) : Integer
8591:  Function AlphaComponent( Color32 : TColor32) : Integer
8592:  Function Intensity( Color32 : TColor32) : Integer
8593:  Function SetAlpha( Color32 : TColor32; NewAlpha : Integer) : TColor32
8594:  Function HSLtoRGB( H, S, L : Single) : TColor32;
8595:  Procedure RGBtoHSL( RGB : TColor32; out H, S, L : Single);
8596:  Function HSLtoRGB1( H, S, L : Integer) : TColor32;
8597:  Procedure RGBtoHSL1( RGB : TColor32; out H, S, L : Byte);
8598:  Function WinPalette( const P : TPalette32) : HPALETTE
8599:  Function FloatPoint( X, Y : Single) : TFloatPoint;
8600:  Function FloatPoint1( const P : TPoint) : TFloatPoint;
8601:  Function FloatPoint2( const FXP : TFixedPoint) : TFloatPoint;
8602:  Function FixedPoint( X, Y : Integer) : TFixedPoint;
8603:  Function FixedPoint1( X, Y : Single) : TFixedPoint;
8604:  Function FixedPoint2( const P : TPoint) : TFixedPoint;
8605:  Function FixedPoint3( const FP : TFloatPoint) : TFixedPoint;
8606:   AddTypeS('TRectRounding', '( rrClosest, rrOutside, rrInside )
8607:  Function MakeRect( const L, T, R, B : Integer) : TRect;
8608:  Function MakeRect1( const FR : TFloatRect; Rounding : TRectRounding) : TRect;
8609:  Function MakeRect2( const FXR : TRect; Rounding : TRectRounding) : TRect;
8610:  Function GFixedRect( const L, T, R, B : TFixed) : TRect;
8611:  Function FixedRect1( const ARect : TRect) : TRect;
8612:  Function FixedRect2( const FR : TFloatRect) : TRect;
8613:  Function GFloatRect( const L, T, R, B : TFloat) : TFloatRect;
8614:  Function FloatRect1( const ARect : TRect) : TFloatRect;
8615:  Function FloatRect2( const FXR : TRect) : TFloatRect;
8616:  Function GIntersectRect( out Dst : TRect; const R1, R2 : TRect) : Boolean;
8617:  Function IntersectRect1( out Dst : TFloatRect; const FR1, FR2 : TFloatRect) : Boolean;
8618:  Function GUnionRect( out Rect : TRect; const R1, R2 : TRect) : Boolean;
8619:  Function UnionRect1( out Rect : TFloatRect; const R1, R2 : TFloatRect) : Boolean;
8620:  Function GEqualRect( const R1, R2 : TRect) : Boolean;
8621:  Function EqualRect1( const R1, R2 : TFloatRect) : Boolean;
8622:  Procedure GInflateRect( var R : TRect; Dx, Dy : Integer);
8623:  Procedure InflateRect1( var FR : TFloatRect; Dx, Dy : TFloat);
8624:  Procedure GOffsetRect( var R : TRect; Dx, Dy : Integer);
8625:  Procedure OffsetRect1( var FR : TFloatRect; Dx, Dy : TFloat);
8626:  Function IsRectEmpty( const R : TRect) : Boolean;
8627:  Function IsRectEmpty1( const FR : TFloatRect) : Boolean;
8628:  Function GPtInRect( const R : TRect; const P : TPoint) : Boolean;
8629:  Function PtInRect1( const R : TFloatRect; const P : TPoint) : Boolean;
8630:  Function PtInRect2( const R : TRect; const P : TFloatPoint) : Boolean;
8631:  Function PtInRect3( const R : TFloatRect; const P : TFloatPoint) : Boolean;
8632:  Function EqualRectSize( const R1, R2 : TRect) : Boolean;
8633:  Function EqualRectSize1( const R1, R2 : TFloatRect) : Boolean;
8634:  Function MessageBeep( uType : UINT) : BOOL
8635:  Function ShowCursor( bShow : BOOL) : Integer
8636:  Function SetCursorPos( X, Y : Integer) : BOOL
8637:  Function SetCursor( hCursor : HICON) : HCURSOR
8638:  Function GetCursorPos( var lpPoint : TPoint) : BOOL
8639:  //Function ClipCursor( lpRect : PRect) : BOOL
8640:  Function GetClipCursor( var lpRect : TRect) : BOOL
8641:  Function GetCursor : HCURSOR
```

```
8642:  Function CreateCaret( hWnd : HWND; hBitmap : HBITMAP; nWidth, nHeight : Integer) : BOOL
8643:  Function GetCaretBlinkTime : UINT
8644:  Function SetCaretBlinkTime( uMSeconds : UINT) : BOOL
8645:  Function DestroyCaret : BOOL
8646:  Function HideCaret( hWnd : HWND) : BOOL
8647:  Function ShowCaret( hWnd : HWND) : BOOL
8648:  Function SetCaretPos( X, Y : Integer) : BOOL
8649:  Function GetCaretPos( var lpPoint : TPoint) : BOOL
8650:  Function ClientToScreen( hWnd : HWND; var lpPoint : TPoint) : BOOL
8651:  Function ScreenToClient( hWnd : HWND; var lpPoint : TPoint) : BOOL
8652:  Function MapWindowPoints(hWndFrom,hWndTo:HWND; var lpPoints, cPoints : UINT) : Integer
8653:  Function WindowFromPoint( Point : TPoint) : HWND
8654:  Function ChildWindowFromPoint( hWndParent : HWND; Point : TPoint) : HWND
8655:
8656:
8657: procedure SIRegister_GR32_Math(CL: TPSPascalCompiler);
8658: begin
8659:  Function FixedFloor( A : TFixed) : Integer
8660:  Function FixedCeil( A : TFixed) : Integer
8661:  Function FixedMul( A, B : TFixed) : TFixed
8662:  Function FixedDiv( A, B : TFixed) : TFixed
8663:  Function OneOver( Value : TFixed) : TFixed
8664:  Function FixedRound( A : TFixed) : Integer
8665:  Function FixedSqr( Value : TFixed) : TFixed
8666:  Function FixedSqrtLP( Value : TFixed) : TFixed
8667:  Function FixedSqrtHP( Value : TFixed) : TFixed
8668:  Function FixedCombine( W, X, Y : TFixed) : TFixed
8669:  Procedure GRSinCos( const Theta : TFloat; out Sin, Cos : TFloat);
8670:  Procedure GRSinCos1( const Theta, Radius : Single; out Sin, Cos : Single);
8671:  Function GRHypot( const X, Y : TFloat) : TFloat;
8672:  Function Hypot1( const X, Y : Integer) : Integer;
8673:  Function FastSqrt( const Value : TFloat) : TFloat
8674:  Function FastSqrtBab1( const Value : TFloat) : TFloat
8675:  Function FastSqrtBab2( const Value : TFloat) : TFloat
8676:  Function FastInvSqrt( const Value : Single) : Single;
8677:  Function MulDiv( Multiplicand, Multiplier, Divisor : Integer) : Integer
8678:  Function GRIsPowerOf2( Value : Integer) : Boolean
8679:  Function PrevPowerOf2( Value : Integer) : Integer
8680:  Function NextPowerOf2( Value : Integer) : Integer
8681:  Function Average( A, B : Integer) : Integer
8682:  Function GRSign( Value : Integer) : Integer
8683:  Function FloatMod( x, y : Double) : Double
8684: end;
8685:
8686: procedure SIRegister_GR32_LowLevel(CL: TPSPascalCompiler);
8687: begin
8688:  Function Clamp( const Value : Integer) : Integer;
8689:  Procedure GRFillWord( var X, Count : Cardinal; Value : Longword)
8690:  Function StackAlloc( Size : Integer) : Pointer
8691:  Procedure StackFree( P : Pointer)
8692:  Procedure Swap( var A, B : Pointer);
8693:  Procedure Swap1( var A, B : Integer);
8694:  Procedure Swap2( var A, B : TFixed);
8695:  Procedure Swap3( var A, B : TColor32);
8696:  Procedure TestSwap( var A, B : Integer);
8697:  Procedure TestSwap1( var A, B : TFixed);
8698:  Function TestClip( var A, B : Integer; const Size : Integer) : Boolean;
8699:  Function TestClip1( var A, B : Integer; const Start, Stop : Integer) : Boolean;
8700:  Function GRConstrain( const Value, Lo, Hi : Integer) : Integer;
8701:  Function Constrain1( const Value, Lo, Hi : Single) : Single;
8702:  Function SwapConstrain( const Value:Integer; Constrain1,Constrain2:Integer) : Integer
8703:  Function GRMin( const A, B, C : Integer) : Integer;
8704:  Function GRMax( const A, B, C : Integer) : Integer;
8705:  Function Clamp( Value, Max : Integer) : Integer;
8706:  Function Clamp1( Value, Min, Max : Integer) : Integer;
8707:  Function Wrap( Value, Max : Integer) : Integer;
8708:  Function Wrap1( Value, Min, Max : Integer) : Integer;
8709:  Function Wrap3( Value, Max : Single) : Single;;
8710:  Function WrapPow2( Value, Max : Integer) : Integer;
8711:  Function WrapPow21( Value, Min, Max : Integer) : Integer;
8712:  Function Mirror( Value, Max : Integer) : Integer;
8713:  Function Mirror1( Value, Min, Max : Integer) : Integer;
8714:  Function MirrorPow2( Value, Max : Integer) : Integer;
8715:  Function MirrorPow21( Value, Min, Max : Integer) : Integer;
8716:  Function GetOptimalWrap( Max : Integer) : TWrapProc;
8717:  Function GetOptimalWrap1( Min, Max : Integer) : TWrapProcEx;
8718:  Function GetOptimalMirror( Max : Integer) : TWrapProc;
8719:  Function GetOptimalMirror1( Min, Max : Integer) : TWrapProcEx;
8720:  Function GetWrapProc( WrapMode : TWrapMode) : TWrapProc;
8721:  Function GetWrapProc1( WrapMode : TWrapMode; Max : Integer) : TWrapProc;
8722:  Function GetWrapProcEx( WrapMode : TWrapMode) : TWrapProcEx;
8723:  Function GetWrapProcEx1( WrapMode : TWrapMode; Min, Max : Integer):TWrapProcEx;
8724:  Function Div255( Value : Cardinal) : Cardinal
8725:  Function SAR_4( Value : Integer) : Integer
8726:  Function SAR_8( Value : Integer) : Integer
8727:  Function SAR_9( Value : Integer) : Integer
8728:  Function SAR_11( Value : Integer) : Integer
8729:  Function SAR_12( Value : Integer) : Integer
8730:  Function SAR_13( Value : Integer) : Integer
```

```
8731:  Function SAR_14( Value : Integer) : Integer
8732:  Function SAR_15( Value : Integer) : Integer
8733:  Function SAR_16( Value : Integer) : Integer
8734:  Function ColorSwap( WinColor : TColor) : TColor32
8735: end;
8736:
8737: procedure SIRegister_GR32_Filters(CL: TPSPascalCompiler);
8738: begin
8739:  AddTypeS('TLogicalOperator', '( loXOR, loAND, loOR )
8740:  Procedure CopyComponents( Dst, Src : TCustomBitmap32; Components : TColor32Components);
8741:  Procedure CopyComponents1(Dst:TCustBmap32;DstX,
      DstY:Int;Src:TCustomBmap32;SrcRect:TRect;Components:TColor32Comp;
8742:  Procedure AlphaToGrayscale( Dst, Src : TCustomBitmap32)
8743:  Procedure ColorToGrayscale( Dst, Src : TCustomBitmap32; PreserveAlpha : Boolean)
8744:  Procedure IntensityToAlpha( Dst, Src : TCustomBitmap32)
8745:  Procedure Invert( Dst, Src : TCustomBitmap32; Components : TColor32Components)
8746:  Procedure InvertRGB( Dst, Src : TCustomBitmap32)
8747:  Procedure ApplyLUT( Dst, Src : TCustomBitmap32; const LUT : TLUT8; PreserveAlpha : Boolean)
8748:  Procedure ChromaKey( ABitmap : TCustomBitmap32; TrColor : TColor32)
8749:  Function CreateBitmask( Components : TColor32Components) : TColor32
8750:  Procedure ApplyBitmask(Dst: TCustomBitmap32; DstX,DstY:Integer; Src:TCustomBitmap32; SrcRect : TRect;
      Bitmask : TColor32; LogicalOperator : TLogicalOperator);
8751:  Procedure
      ApplyBitmask1(ABitmap:TCustomBitmap32;ARect:TRect;Bitmask:TColor32;LogicalOperator:TLogicalOperator);
8752:  Procedure CheckParams( Dst, Src : TCustomBitmap32; ResizeDst : Boolean)
8753: end;
8754:
8755:
8756: procedure SIRegister_JclNTFS(CL: TPSPascalCompiler);
8757: begin
8758:   AddClassN(FindClass('TOBJECT'),'EJclNtfsError
8759:   AddTypeS('TFileCompressionState', '( fcNoCompression, fcDefaultCompression, fcLZNT1Compression )
8760:  Function NtfsGetCompression( const FileName : string; var State : Short) : Boolean;
8761:  Function NtfsGetCompression1( const FileName : string) : TFileCompressionState;
8762:  Function NtfsSetCompression( const FileName : string; const State : Short) : Boolean
8763:  Procedure NtfsSetFileCompression( const FileName : string; const State : TFileCompressionState)
8764:  Procedure NtfsSetDirectoryTreeCompression(const Directory: string; const State : TFileCompressionState)
8765:  Procedure NtfsSetDefaultFileCompression(const Directory: string; const State:TFileCompressionState)
8766:  Procedure NtfsSetPathCompression(const Path:string;const State:TFileCompressionState;Recursive:Boolean;
8767:   //AddTypeS('TNtfsAllocRanges', 'record Entries : Integer; Data : PFileAlloca'
8768:    //+'tedRangeBuffer; MoreData : Boolean; end
8769:  Function NtfsSetSparse( const FileName : string) : Boolean
8770:  Function NtfsZeroDataByHandle( const Handle : THandle; const First, Last : Int64) : Boolean
8771:  Function NtfsZeroDataByName( const FileName : string; const First, Last : Int64) : Boolean
8772:  //Function NtfsQueryAllocRanges(const FileName:string;Offset,Count:Int64;var
      Ranges:TNtfsAllocRanges):Boolean;
8773:  //Function NtfsGetAllocRangeEntry( const Ranges : TNtfsAllocRanges;
      Index:Integer):TFileAllocatedRangeBuffer
8774:  Function NtfsSparseStreamsSupported( const Volume : string) : Boolean
8775:  Function NtfsGetSparse( const FileName : string) : Boolean
8776:  Function NtfsDeleteReparsePoint( const FileName : string; ReparseTag : DWORD) : Boolean
8777:  Function NtfsSetReparsePoint( const FileName : string; var ReparseData, Size : Longword) : Boolean
8778:  //Function NtfsGetReparsePoint(const FileName:string; var ReparseData:TReparseGuidDataBuffer):Boolean
8779:  Function NtfsGetReparseTag( const Path : string; var Tag : DWORD) : Boolean
8780:  Function NtfsReparsePointsSupported( const Volume : string) : Boolean
8781:  Function NtfsFileHasReparsePoint( const Path : string) : Boolean
8782:  Function NtfsIsFolderMountPoint( const Path : string) : Boolean
8783:  Function NtfsMountDeviceAsDrive( const Device : string; Drive : Char) : Boolean
8784:  Function NtfsMountVolume( const Volume : Char; const MountPoint : string) : Boolean
8785:   AddTypeS('TOpLock', '( olExclusive, olReadOnly, olBatch, olFilter )
8786:  Function NtfsOpLockAckClosePending( Handle : THandle; Overlapped : TOverlapped) : Boolean
8787:  Function NtfsOpLockBreakAckNo2( Handle : THandle; Overlapped : TOverlapped) : Boolean
8788:  Function NtfsOpLockBreakAcknowledge( Handle : THandle; Overlapped : TOverlapped) : Boolean
8789:  Function NtfsOpLockBreakNotify( Handle : THandle; Overlapped : TOverlapped) : Boolean
8790:  Function NtfsRequestOpLock( Handle : THandle; Kind : TOpLock; Overlapped : TOverlapped) : Boolean
8791:  Function NtfsCreateJunctionPoint( const Source, Destination : string) : Boolean
8792:  Function NtfsDeleteJunctionPoint( const Source : string) : Boolean
8793:  Function NtfsGetJunctionPointDestination( const Source : string; var Destination : string) : Boolean
8794:   AddTypeS('TStreamId', '( siInvalid, siStandard, siExtendedAttribute, siSec'
8795:    +'urity, siAlternate, siHardLink, siProperty, siObjectIdentifier, siReparsePoints, siSparseFile )
8796:   AddTypeS('TStreamIds', 'set of TStreamId
8797:   AddTypeS('TInternalFindStreamData', 'record FileHandle : THandle; Context '
8798:    +': ___Pointer; StreamIds : TStreamIds; end
8799:   AddTypeS('TFindStreamData', 'record internal : TInternalFindStreamData; At'
8800:    +'tributes : DWORD; StreamID : TStreamId; Name : WideString; Size : Int64; end
8801:  Function NtfsFindFirstStream(const FileName:string;StreamIds:TStreamIds;var Data:TFindStreamData):Boolean;
8802:  Function NtfsFindNextStream( var Data : TFindStreamData) : Boolean
8803:  Function NtfsFindStreamClose( var Data : TFindStreamData) : Boolean
8804:  Function NtfsCreateHardLink( const LinkFileName, ExistingFileName : string) : Boolean
8805:   AddTypeS('TNtfsHardLinkInfo', 'record LinkCount : Cardinal; FileIndex : Int64; end
8806:  Function NtfsGetHardLinkInfo( const FileName : string; var Info : TNtfsHardLinkInfo) : Boolean
8807:  Function NtfsFindHardLinks(const Path:string;const FileIndexHigh,FileIndexLow:Cardinal;const
      List:TStrings):Bool;
8808:  Function NtfsDeleteHardLinks( const FileName : string) : Boolean
8809:  Function JclAppInstances : TJclAppInstances;
8810:  Function JclAppInstances1( const UniqueAppIdGuidStr : string) : TJclAppInstances;
8811:  Function ReadMessageCheck( var Message: TMessage;const IgnoredOriginatorWnd: HWND) : TJclAppInstDataKind
8812:  Procedure ReadMessageData( const Message : TMessage; var Data : ___Pointer; var Size : Integer)
8813:  Procedure ReadMessageString( const Message : TMessage; var S : string)
```

```
8814:  Procedure ReadMessageStrings( const Message : TMessage; const Strings : TStrings)
8815:
8816:
8817: (*----------------------------------------------------------------------------*)
8818: procedure SIRegister_JclGraphics(CL: TPSPascalCompiler);
8819: begin
8820:   FindClass('TOBJECT'),'EJclGraphicsError
8821:   TDynDynIntegerArrayArray', 'array of TDynIntegerArray
8822:   TDynPointArray', 'array of TPoint
8823:   TDynDynPointArrayArray', 'array of TDynPointArray
8824:   TPointF', 'record X : Single; Y : Single; end
8825:   TDynPointArrayF', 'array of TPointF
8826:   TDrawMode2', '( dmOpaque, dmBlend )
8827:   TStretchFilter2', '( sfNearest, sfLinear, sfSpline )
8828:   TConversionKind', '( ckRed, ckGreen, ckBlue, ckAlpha, ckUniformRGB, ckWeightedRGB )
8829:   TResamplingFilter', '( rfBox, rfTriangle, rfHermite, rfBell, rfSpline, rfLanczos3, rfMitchell )
8830:   TMatrix3d', 'record array[0..2,0..2] of extended end
8831:   TDynDynPointArrayArrayF', 'array of TDynPointArrayF
8832:   TScanLine', 'array of Integer
8833:   TScanLines', 'array of TScanLine
8834:   TColorChannel', '( ccRed, ccGreen, ccBlue, ccAlpha )
8835:   TGradientDirection', '( gdVertical, gdHorizontal )
8836:   TPolyFillMode', '( fmAlternate, fmWinding )
8837:   TJclRegionCombineOperator', '( coAnd, coDiff, coOr, coXor )
8838:   TJclRegionBitmapMode', '( rmInclude, rmExclude )
8839:   TJclRegionKind', '( rkNull, rkSimple, rkComplex, rkError )
8840:   SIRegister_TJclDesktopCanvas(CL);
8841:   FindClass('TOBJECT'),'TJclRegion
8842:   SIRegister_TJclRegionInfo(CL);
8843:   SIRegister_TJclRegion(CL);
8844:   SIRegister_TJclThreadPersistent(CL);
8845:   SIRegister_TJclCustomMap(CL);
8846:   SIRegister_TJclBitmap32(CL);
8847:   SIRegister_TJclByteMap(CL);
8848:   SIRegister_TJclTransformation(CL);
8849:   SIRegister_TJclLinearTransformation(CL);
8850:  Procedure Stretch(NewWidth,
      NewHeight:Card;Filter:TResamplingFilter;Radius:Single;Source:TGraphic;Target:TBitmap);
8851:  Procedure Stretch1(NewWidth,NewHeight:Cardinal;Filter:TResamplingFilter;Radius:Single;Bitmap:TBitmap);
8852:  Procedure DrawBitmap( DC : HDC; Bitmap : HBitMap; X, Y, Width, Height : Integer)
8853:  Function GetAntialiasedBitmap( const Bitmap : TBitmap) : TBitmap
8854:  Procedure BitmapToJPeg( const FileName : string)
8855:  Procedure JPegToBitmap( const FileName : string)
8856:  Function ExtractIconCount( const FileName : string) : Integer
8857:  Function BitmapToIconJ( Bitmap : HBITMAP; cx, cy : Integer) : HICON
8858:  Function IconToBitmapJ( Icon : HICON) : HBITMAP
8859:  Procedure
      BlockTransfer(Dst:TJclBitmap32;DstX:Int;DstY:Int;Src:TJclBitmap32;SrcRect:TRect;CombineOp:TDrawMode)
8860:  Procedure StretchTransfer(Dst:TJclBitmap32;
      DstRect:TRect;Src:TJclBitmap32;SrcRect:TRect;StretchFilter:TStretchFilter; CombineOp : TDrawMode)
8861:  Procedure Transform( Dst, Src : TJclBitmap32; SrcRect : TRect; Transformation : TJclTransformation)
8862:  Procedure SetBorderTransparent( ABitmap : TJclBitmap32; ARect : TRect)
8863:  Function FillGradient(DC:HDC; ARect:TRect; ColorCount:Integer; StartColor,EndColor:TColor;ADirection :
      TGradientDirection) : Boolean;
8864:  Function CreateRegionFromBitmap(Bitmap: TBitmap; RegionColor:TColor;
      RegionBitmapMode:TJclRegionBitmapMode): HRGN
8865:  Procedure ScreenShot( bm : TBitmap; Left, Top, Width, Height : Integer; Window : HWND);
8866:  Procedure ScreenShot1( bm : TBitmap);
8867:  Procedure PolyLineTS( Bitmap : TJclBitmap32; const Points : TDynPointArray; Color : TColor32)
8868:  Procedure PolyLineAS( Bitmap : TJclBitmap32; const Points : TDynPointArray; Color : TColor32)
8869:  Procedure PolyLineFS( Bitmap : TJclBitmap32; const Points : TDynPointArrayF; Color : TColor32)
8870:  Procedure PolygonTS( Bitmap : TJclBitmap32; const Points : TDynPointArray; Color : TColor32)
8871:  Procedure PolygonAS( Bitmap : TJclBitmap32; const Points : TDynPointArray; Color : TColor32)
8872:  Procedure PolygonFS( Bitmap : TJclBitmap32; const Points : TDynPointArrayF; Color : TColor32)
8873:  Procedure PolyPolygonTS(Bitmap:TJclBitmap32;const Points:TDynDynPointArrayArray;Color:TColor32);
8874:  Procedure PolyPolygonAS(Bitmap:TJclBitmap32;const Points:TDynDynPointArrayArray;Color:TColor32);
8875:  Procedure PolyPolygonFS(Bitmap:TJclBitmap32;const Points:TDynDynPointArrayArrayF;Color:TColor32);
8876:  Procedure AlphaToGrayscale( Dst, Src : TJclBitmap32)
8877:  Procedure IntensityToAlpha( Dst, Src : TJclBitmap32)
8878:  Procedure Invert( Dst, Src : TJclBitmap32)
8879:  Procedure InvertRGB( Dst, Src : TJclBitmap32)
8880:  Procedure ColorToGrayscale( Dst, Src : TJclBitmap32)
8881:  Procedure ApplyLUT( Dst, Src : TJclBitmap32; const LUT : TLUT8)
8882:  Procedure SetGamma( Gamma : Single)
8883: end;
8884:
8885: (*----------------------------------------------------------------------------*)
8886: procedure SIRegister_JclSynch(CL: TPSPascalCompiler);
8887: begin
8888:  Function LockedAdd( var Target : Integer; Value : Integer) : Integer
8889:  Function LockedCompareExchange( var Target : Integer; Exch, Comp : Integer) : Integer;
8890:  Function LockedCompareExchange1( var Target : ___Pointer; Exch, Comp : ___Pointer) : Pointer;
8891:  Function LockedDec( var Target : Integer) : Integer
8892:  Function LockedExchange( var Target : Integer; Value : Integer) : Integer
8893:  Function LockedExchangeAdd( var Target : Integer; Value : Integer) : Integer
8894:  Function LockedExchangeDec( var Target : Integer) : Integer
8895:  Function LockedExchangeInc( var Target : Integer) : Integer
8896:  Function LockedExchangeSub( var Target : Integer; Value : Integer) : Integer
8897:  Function LockedInc( var Target : Integer) : Integer
```

```
8898:  Function LockedSub( var Target : Integer; Value : Integer) : Integer
8899:   TJclWaitResult', '( wrAbandoned, wrError, wrIoCompletion, wrSignaled, wrTimeout )
8900:   SIRegister_TJclDispatcherObject(CL);
8901:  Function WaitForMultipleObjects(const Objects:array of
       TJclDispatcherObject;WaitAll:Bool;TimeOut:Cardinal):Cardinal;
8902:  Function WaitAlertableForMultipleObjects(const Objects : array of TJclDispatcherObject; WaitAll:Bool;
       TimeOut : Cardinal):Cardinal
8903:   SIRegister_TJclCriticalSection(CL);
8904:   SIRegister_TJclCriticalSectionEx(CL);
8905:   SIRegister_TJclEvent(CL);
8906:   SIRegister_TJclWaitableTimer(CL);
8907:   SIRegister_TJclSemaphore(CL);
8908:   SIRegister_TJclMutex(CL);
8909:   POptexSharedInfo', '^TOptexSharedInfo // will not work
8910:   TOptexSharedInfo', 'record SpinCount:Int; LockCount: Int; ThreadId:Longword; RecursionCount:Int; end
8911:   SIRegister_TJclOptex(CL);
8912:   TMrewPreferred', '( mpReaders, mpWriters, mpEqual )
8913:   TMrewThreadInfo', 'record ThreadId : Longword; RecursionCount: Integer; Reader : Boolean; end
8914:   TMrewThreadInfoArray', 'array of TMrewThreadInfo
8915:   SIRegister_TJclMultiReadExclusiveWrite(CL);
8916:   PMetSectSharedInfo', '^TMetSectSharedInfo // will not work
8917:   TMetSectSharedInfo', 'record Initialized : LongBool; SpinLock : '
8918:    +'Longint; ThreadsWaiting : Longint; AvailableCount : Longint; MaximumCount : Longint; end
8919:   PMeteredSection', '^TMeteredSection // will not work
8920:   TMeteredSection', 'record Event : THandle; FileMap : THandle; SharedInfo : PMetSectSharedInfo; end
8921:   SIRegister_TJclMeteredSection(CL);
8922:   TEventInfo', 'record EventType : Longint; Signaled : LongBool; end
8923:   TMutexInfo', 'record SignalState : Longint; Owned : Boolean; Abandoned : Boolean; end
8924:   TSemaphoreCounts', 'record CurrentCount : Longint; MaximumCount: Longint; end
8925:   TTimerInfo', 'record Remaining : TLargeInteger; Signaled : LongBool; end
8926:  Function QueryCriticalSection( CS : TJclCriticalSection; var Info : TRTLCriticalSection) : Boolean
8927:  Function QueryEvent( Handle : THandle; var Info : TEventInfo) : Boolean
8928:  Function QueryMutex( Handle : THandle; var Info : TMutexInfo) : Boolean
8929:  Function QuerySemaphore( Handle : THandle; var Info : TSemaphoreCounts) : Boolean
8930:  Function QueryTimer( Handle : THandle; var Info : TTimerInfo) : Boolean
8931:   FindClass('TOBJECT'),'EJclWin32HandleObjectError
8932:   FindClass('TOBJECT'),'EJclDispatcherObjectError
8933:   FindClass('TOBJECT'),'EJclCriticalSectionError
8934:   FindClass('TOBJECT'),'EJclEventError
8935:   FindClass('TOBJECT'),'EJclWaitableTimerError
8936:   FindClass('TOBJECT'),'EJclSemaphoreError
8937:   FindClass('TOBJECT'),'EJclMutexError
8938:   FindClass('TOBJECT'),'EJclMeteredSectionError
8939: end;
8940:
8941:
8942: //*************************unit uPSI_mORMotReport;
8943: Procedure SetCurrentPrinterAsDefault
8944: Function CurrentPrinterName : string
8945: Function mCurrentPrinterPaperSize : string
8946: Procedure UseDefaultPrinter
8947:
8948: procedure SIRegisterTSTREAM(Cl: TPSPascalCompiler);
8949: begin
8950:   with FindClass('TOBJECT'), 'TStream') do begin
8951:     IsAbstract := True;
8952:    //RegisterMethod('Function Read( var Buffer, Count : Longint) : Longint
8953:    // RegisterMethod('Function Write( const Buffer, Count : Longint) : Longint
8954:     function Read(Buffer:String;Count:LongInt):LongInt
8955:     function Write(Buffer:String;Count:LongInt):LongInt
8956:     function ReadString(Buffer:String;Count:LongInt):LongInt    //FileStream
8957:     function WriteString(Buffer:String;Count:LongInt):LongInt
8958:     function ReadInt(Buffer:integer;Count:LongInt):LongInt
8959:     function WriteInt(Buffer:integer;Count:LongInt):LongInt
8960:     function ReadByteArray(Buffer:TByteArray;Count:LongInt):LongInt');
8961:     function WriteByteArray(Buffer:TByteArray;Count:LongInt):LongInt');
8962:
8963:     procedure ReadAB(Buffer: TByteArray;Count:LongInt)
8964:     procedure WriteAB(Buffer: TByteArray;Count:LongInt)
8965:     procedure ReadABD(Buffer: TByteDynArray;Count:LongInt)
8966:     procedure WriteABD(Buffer: TByteDynArray;Count:LongInt)
8967:     procedure ReadAC(Buffer: TCharArray;Count:LongInt)
8968:     procedure WriteAC(Buffer: TCharArray;Count:LongInt)
8969:     procedure ReadACD(Buffer: TCharDynArray;Count:LongInt)
8970:     procedure WriteACD(Buffer: TCharDynArray;Count:LongInt)
8971:
8972:     function Seek(Offset:LongInt;Origin:Word):LongInt
8973:     procedure ReadBuffer(Buffer:String;Count:LongInt)
8974:     procedure WriteBuffer(Buffer:String;Count:LongInt)
8975:     procedure ReadBufferInt(Buffer:Integer;Count:LongInt)');
8976:     procedure WriteBufferInt(Buffer:Integer;Count:LongInt)');
8977:     procedure ReadBufferFloat(Buffer:Double;Count:LongInt)');
8978:     Procedure WriteBufferFloat(Buffer:Double;Count:LongInt)');
8979:
8980:     procedure ReadBufferAB(Buffer: TByteArray;Count:LongInt)
8981:     procedure WriteBufferAB(Buffer: TByteArray;Count:LongInt)
8982:     procedure ReadBufferABD(Buffer: TByteDynArray;Count:LongInt)
8983:     procedure WriteBufferABD(Buffer: TByteDynArray;Count:LongInt)
8984:     procedure ReadBufferAW(Buffer: TWordArray;Count:LongInt)
```

```
8985:     procedure WriteBufferAW(Buffer: TWordArray;Count:LongInt)
8986:     procedure ReadBufferAWD(Buffer: TWordDynArray;Count:LongInt)
8987:     procedure WriteBufferAWD(Buffer: TWordDynArray;Count:LongInt)
8988:     procedure ReadBufferAW(Buffer: TWordArray;Count:LongInt)
8989:     procedure WriteBufferAW(Buffer: TWordArray;Count:LongInt)
8990:     procedure ReadBufferAC(Buffer: TCharArray;Count:LongInt)
8991:     procedure WriteBufferAC(Buffer: TCharArray;Count:LongInt)
8992:     procedure ReadBufferACD(Buffer: TCharDynArray;Count:LongInt)
8993:     procedure WriteBufferACD(Buffer: TCharDynArray;Count:LongInt)
8994:
8995:     procedure ReadBufferP(Buffer: PChar;Count:LongInt)
8996:     procedure WriteBufferP(Buffer: PChar;Count:LongInt)
8997:     procedure ReadBufferO(Buffer: TObject;Count:LongInt)');
8998:     procedure WriteBufferO(Buffer: TObject;Count:LongInt)');
8999:     //READBUFFERAC
9000:     function InstanceSize: Longint
9001:     Procedure FixupResourceHeader( FixupInfo : Integer)
9002:     Procedure ReadResHeader
9003:
9004:     {$IFDEF DELPHI4UP}
9005:     function CopyFrom(Source:TStream;Count:Int64):LongInt
9006:     {$ELSE}
9007:     function CopyFrom(Source:TStream;Count:Integer):LongInt
9008:     {$ENDIF}
9009:     RegisterProperty('Position', 'LongInt', iptrw);
9010:     RegisterProperty('Size', 'LongInt', iptrw);
9011:   end;
9012: end;
9013:
9014:
9015: { ************************************************************
9016:   Unit DMATH - Interface for DMATH.DLL
9017:   ************************************************************ }
9018: // see more docs/dmath_manual.pdf
9019:
9020: Function InitEval : Integer
9021: Procedure SetVariable( VarName : Char; Value : Float)
9022: Procedure SetFunction( FuncName : String; Wrapper : TWrapper)
9023: Function Eval( ExpressionString : String) : Float
9024:
9025: unit dmath; //types are in built, others are external in DLL
9026: interface
9027: {$IFDEF DELPHI}
9028: uses
9029:   StdCtrls, Graphics;
9030: {$ENDIF}
9031: { ------------------------------------------------------------
9032:   Types and constants
9033:   ------------------------------------------------------------ }
9034: {$i types.inc}
9035: { ------------------------------------------------------------
9036:   Error handling
9037:   ------------------------------------------------------------ }
9038: procedure SetErrCode(ErrCode : Integer); external 'dmath';
9039: { Sets the error code }
9040: function DefaultVal(ErrCode : Integer; DefVal : Float) : Float; external 'dmath';
9041: { Sets error code and default function value }
9042: function MathErr : Integer; external 'dmath';
9043: { Returns the error code }
9044: { ------------------------------------------------------------
9045:   Dynamic arrays
9046:   ------------------------------------------------------------ }
9047: procedure SetAutoInit(AutoInit : Boolean); external 'dmath';
9048: { Sets the auto-initialization of arrays }
9049: procedure DimVector(var V : TVector; Ub : Integer); external 'dmath';
9050: { Creates floating point vector V[0..Ub] }
9051: procedure DimIntVector(var V : TIntVector; Ub : Integer); external 'dmath';
9052: { Creates integer vector V[0..Ub] }
9053: procedure DimCompVector(var V : TCompVector; Ub : Integer); external 'dmath';
9054: { Creates complex vector V[0..Ub] }
9055: procedure DimBoolVector(var V : TBoolVector; Ub : Integer); external 'dmath';
9056: { Creates boolean vector V[0..Ub] }
9057: procedure DimStrVector(var V : TStrVector; Ub : Integer); external 'dmath';
9058: { Creates string vector V[0..Ub] }
9059: procedure DimMatrix(var A : TMatrix; Ub1, Ub2 : Integer); external 'dmath';
9060: { Creates floating point matrix A[0..Ub1, 0..Ub2] }
9061: procedure DimIntMatrix(var A : TIntMatrix; Ub1, Ub2 : Integer); external 'dmath';
9062: { Creates integer matrix A[0..Ub1, 0..Ub2] }
9063: procedure DimCompMatrix(var A : TCompMatrix; Ub1, Ub2 : Integer); external 'dmath';
9064: { Creates complex matrix A[0..Ub1, 0..Ub2] }
9065: procedure DimBoolMatrix(var A : TBoolMatrix; Ub1, Ub2 : Integer); external 'dmath';
9066: { Creates boolean matrix A[0..Ub1, 0..Ub2] }
9067: procedure DimStrMatrix(var A : TStrMatrix; Ub1, Ub2 : Integer); external 'dmath';
9068: { Creates string matrix A[0..Ub1, 0..Ub2] }
9069: { ------------------------------------------------------------
9070:   Minimum, maximum, sign and exchange
9071:   ------------------------------------------------------------ }
9072: function FMin(X, Y : Float) : Float; external 'dmath';
9073: { Minimum of 2 reals }
```

```
9074: function FMax(X, Y : Float) : Float; external 'dmath';
9075: { Maximum of 2 reals }
9076: function IMin(X, Y : Integer) : Integer; external 'dmath';
9077: { Minimum of 2 integers }
9078: function IMax(X, Y : Integer) : Integer; external 'dmath';
9079: { Maximum of 2 integers }
9080: function Sgn(X : Float) : Integer; external 'dmath';
9081: { Sign (returns 1 if X = 0) }
9082: function Sgn0(X : Float) : Integer; external 'dmath';
9083: { Sign (returns 0 if X = 0) }
9084: function DSgn(A, B : Float) : Float; external 'dmath';
9085: { Sgn(B) * |A| }
9086: procedure FSwap(var X, Y : Float); external 'dmath';
9087: { Exchange 2 reals }
9088: procedure ISwap(var X, Y : Integer); external 'dmath';
9089: { Exchange 2 integers }
9090: { ------------------------------------------------------------------
9091:   Rounding functions
9092:   ------------------------------------------------------------------ }
9093: function RoundN(X : Float; N : Integer) : Float; external 'dmath';
9094: { Rounds X to N decimal places }
9095: function Ceil(X : Float) : Integer; external 'dmath';
9096: { Ceiling function }
9097: function Floor(X : Float) : Integer; external 'dmath';
9098: { Floor function }
9099: { ------------------------------------------------------------------
9100:   Logarithms, exponentials and power
9101:   ------------------------------------------------------------------ }
9102: function Expo(X : Float) : Float; external 'dmath';
9103: { Exponential }
9104: function Exp2(X : Float) : Float; external 'dmath';
9105: { 2^X }
9106: function Exp10(X : Float) : Float; external 'dmath';
9107: { 10^X }
9108: function Log(X : Float) : Float; external 'dmath';
9109: { Natural log }
9110: function Log2(X : Float) : Float; external 'dmath';
9111: { Log, base 2 }
9112: function Log10(X : Float) : Float; external 'dmath';
9113: { Decimal log }
9114: function LogA(X, A : Float) : Float; external 'dmath';
9115: { Log, base A }
9116: function IntPower(X : Float; N : Integer) : Float; external 'dmath';
9117: { X^N }
9118: function Power(X, Y : Float) : Float; external 'dmath';
9119: { X^Y, X >= 0 }
9120: { ------------------------------------------------------------------
9121:   Trigonometric functions
9122:   ------------------------------------------------------------------ }
9123: function Pythag(X, Y : Float) : Float; external 'dmath';
9124: { Sqrt(X^2 + Y^2) }
9125: function FixAngle(Theta : Float) : Float; external 'dmath';
9126: { Set Theta in -Pi..Pi }
9127: function Tan(X : Float) : Float; external 'dmath';
9128: { Tangent }
9129: function ArcSin(X : Float) : Float; external 'dmath';
9130: { Arc sinus }
9131: function ArcCos(X : Float) : Float; external 'dmath';
9132: { Arc cosinus }
9133: function ArcTan2(Y, X : Float) : Float; external 'dmath';
9134: { Angle (Ox, OM) with M(X,Y) }
9135: { ------------------------------------------------------------------
9136:   Hyperbolic functions
9137:   ------------------------------------------------------------------ }
9138: function Sinh(X : Float) : Float; external 'dmath';
9139: { Hyperbolic sine }
9140: function Cosh(X : Float) : Float; external 'dmath';
9141: { Hyperbolic cosine }
9142: function Tanh(X : Float) : Float; external 'dmath';
9143: { Hyperbolic tangent }
9144: function ArcSinh(X : Float) : Float; external 'dmath';
9145: { Inverse hyperbolic sine }
9146: function ArcCosh(X : Float) : Float; external 'dmath';
9147: { Inverse hyperbolic cosine }
9148: function ArcTanh(X : Float) : Float; external 'dmath';
9149: { Inverse hyperbolic tangent }
9150: procedure SinhCosh(X : Float; var SinhX, CoshX : Float); external 'dmath';
9151: { Sinh & Cosh }
9152: { ------------------------------------------------------------------
9153:   Gamma function and related functions
9154:   ------------------------------------------------------------------ }
9155: function Fact(N : Integer) : Float; external 'dmath';
9156: { Factorial }
9157: function SgnGamma(X : Float) : Integer; external 'dmath';
9158: { Sign of Gamma function }
9159: function Gamma(X : Float) : Float; external 'dmath';
9160: { Gamma function }
9161: function LnGamma(X : Float) : Float; external 'dmath';
9162: { Logarithm of Gamma function }
```

```
9163: function Stirling(X : Float) : Float; external 'dmath';
9164: { Stirling's formula for the Gamma function }
9165: function StirLog(X : Float) : Float; external 'dmath';
9166: { Approximate Ln(Gamma) by Stirling's formula, for X >= 13 }
9167: function DiGamma(X : Float ) : Float; external 'dmath';
9168: { Digamma function }
9169: function TriGamma(X : Float ) : Float; external 'dmath';
9170: { Trigamma function }
9171: function IGamma(A, X : Float) : Float; external 'dmath';
9172: { Incomplete Gamma function}
9173: function JGamma(A, X : Float) : Float; external 'dmath';
9174: { Complement of incomplete Gamma function }
9175: function InvGamma(A, P : Float) : Float; external 'dmath';
9176: { Inverse of incomplete Gamma function }
9177: function Erf(X : Float) : Float; external 'dmath';
9178: { Error function }
9179: function Erfc(X : Float) : Float; external 'dmath';
9180: { Complement of error function }
9181: { ------------------------------------------------------------
9182:   Beta function and related functions
9183:   ------------------------------------------------------------ }
9184: function Beta(X, Y : Float) : Float; external 'dmath';
9185: { Beta function }
9186: function IBeta(A, B, X : Float) : Float; external 'dmath';
9187: { Incomplete Beta function }
9188: function InvBeta(A, B, Y : Float) : Float; external 'dmath';
9189: { Inverse of incomplete Beta function }
9190: { ------------------------------------------------------------
9191:   Lambert's function
9192:   ------------------------------------------------------------ }
9193: function LambertW(X : Float; UBranch, Offset : Boolean) : Float; external 'dmath';
9194:  ------------------------------------------------------------
9195:   Binomial distribution
9196:   ------------------------------------------------------------ }
9197: function Binomial(N, K : Integer) : Float; external 'dmath';
9198: { Binomial coefficient C(N,K) }
9199: function PBinom(N : Integer; P : Float; K : Integer) : Float; external 'dmath';
9200: { Probability of binomial distribution }
9201: function FBinom(N : Integer; P : Float; K : Integer) : Float; external 'dmath';
9202: { Cumulative probability for binomial distrib. }
9203: { ------------------------------------------------------------
9204:   Poisson distribution
9205:   ------------------------------------------------------------ }
9206: function PPoisson(Mu : Float; K : Integer) : Float; external 'dmath';
9207: { Probability of Poisson distribution }
9208: function FPoisson(Mu : Float; K : Integer) : Float; external 'dmath';
9209: { Cumulative probability for Poisson distrib. }
9210: { ------------------------------------------------------------
9211:   Exponential distribution
9212:   ------------------------------------------------------------ }
9213: function DExpo(A, X : Float) : Float; external 'dmath';
9214: { Density of exponential distribution with parameter A }
9215: function FExpo(A, X : Float) : Float; external 'dmath';
9216: { Cumulative probability function for exponential dist. with parameter A }
9217: { ------------------------------------------------------------
9218:   Standard normal distribution
9219:   ------------------------------------------------------------ }
9220: function DNorm(X : Float) : Float; external 'dmath';
9221: { Density of standard normal distribution }
9222: function FNorm(X : Float) : Float; external 'dmath';
9223: { Cumulative probability for standard normal distrib. }
9224: function PNorm(X : Float) : Float; external 'dmath';
9225: { Prob(|U| > X) for standard normal distrib. }
9226: function InvNorm(P : Float) : Float; external 'dmath';
9227: { Inverse of standard normal distribution }
9228: { ------------------------------------------------------------
9229:   Student's distribution
9230:   ------------------------------------------------------------ }
9231: function DStudent(Nu : Integer; X : Float) : Float; external 'dmath';
9232: { Density of Student distribution with Nu d.o.f. }
9233: function FStudent(Nu : Integer; X : Float) : Float; external 'dmath';
9234: { Cumulative probability for Student distrib. with Nu d.o.f. }
9235: function PStudent(Nu : Integer; X : Float) : Float; external 'dmath';
9236: { Prob(|t| > X) for Student distrib. with Nu d.o.f. }
9237: function InvStudent(Nu : Integer; P : Float) : Float; external 'dmath';
9238: { Inverse of Student's t-distribution function }
9239: { ------------------------------------------------------------
9240:   Khi-2 distribution
9241:   ------------------------------------------------------------ }
9242: function DKhi2(Nu : Integer; X : Float) : Float; external 'dmath';
9243: { Density of Khi-2 distribution with Nu d.o.f. }
9244: function FKhi2(Nu : Integer; X : Float) : Float; external 'dmath';
9245: { Cumulative prob. for Khi-2 distrib. with Nu d.o.f. }
9246: function PKhi2(Nu : Integer; X : Float) : Float; external 'dmath';
9247: { Prob(Khi2 > X) for Khi-2 distrib. with Nu d.o.f. }
9248: function InvKhi2(Nu : Integer; P : Float) : Float; external 'dmath';
9249: { Inverse of Khi-2 distribution function }
9250: { ------------------------------------------------------------
9251:   Fisher-Snedecor distribution
```

```
9252:   ---------------------------------------------------------------- }
9253: function DSnedecor(Nu1, Nu2 : Integer; X : Float) : Float; external 'dmath';
9254: { Density of Fisher-Snedecor distribution with Nu1 and Nu2 d.o.f. }
9255: function FSnedecor(Nu1, Nu2 : Integer; X : Float) : Float; external 'dmath';
9256: { Cumulative prob. for Fisher-Snedecor distrib. with Nu1 and Nu2 d.o.f. }
9257: function PSnedecor(Nu1, Nu2 : Integer; X : Float) : Float; external 'dmath';
9258: { Prob(F > X) for Fisher-Snedecor distrib. with Nu1 and Nu2 d.o.f. }
9259: function InvSnedecor(Nu1, Nu2 : Integer; P : Float) : Float; external 'dmath';
9260: { Inverse of Snedecor's F-distribution function }
9261: { ----------------------------------------------------------------
9262:   Beta distribution
9263:   ---------------------------------------------------------------- }
9264: function DBeta(A, B, X : Float) : Float; external 'dmath';
9265: { Density of Beta distribution with parameters A and B }
9266: function FBeta(A, B, X : Float) : Float; external 'dmath';
9267: { Cumulative probability for Beta distrib. with param. A and B }
9268: { ----------------------------------------------------------------
9269:   Gamma distribution
9270:   ---------------------------------------------------------------- }
9271: function DGamma(A, B, X : Float) : Float; external 'dmath';
9272: { Density of Gamma distribution with parameters A and B }
9273: function FGamma(A, B, X : Float) : Float; external 'dmath';
9274: { Cumulative probability for Gamma distrib. with param. A and B }
9275: { ----------------------------------------------------------------
9276:   Expression evaluation
9277:   ---------------------------------------------------------------- }
9278: function InitEval : Integer; external 'dmath';
9279: { Initializes built-in functions and returns their number }
9280: function Eval(ExpressionString : String) : Float; external 'dmath';
9281: { Evaluates an expression at run-time }
9282: procedure SetVariable(VarName : Char; Value : Float); external 'dmath';
9283: { Assigns a value to a variable }
9284: procedure SetFunction(FuncName : String; Wrapper : TWrapper); external 'dmath';
9285: { Adds a function to the parser }
9286: { ----------------------------------------------------------------
9287:   Matrices and linear equations
9288:   ---------------------------------------------------------------- }
9289: procedure GaussJordan(A           : TMatrix;
9290:                       Lb, Ub1, Ub2 : Integer;
9291:                       var Det      : Float); external 'dmath';
9292: { Transforms a matrix according to the Gauss-Jordan method }
9293: procedure LinEq(A       : TMatrix;
9294:                 B       : TVector;
9295:                 Lb, Ub  : Integer;
9296:                 var Det : Float); external 'dmath';
9297: { Solves a linear system according to the Gauss-Jordan method }
9298: procedure Cholesky(A, L : TMatrix; Lb, Ub : Integer); external 'dmath';
9299: { Cholesky factorization of a positive definite symmetric matrix }
9300: procedure LU_Decomp(A : TMatrix; Lb, Ub : Integer); external 'dmath';
9301: { LU decomposition }
9302: procedure LU_Solve(A      : TMatrix;
9303:                    B      : TVector;
9304:                    Lb, Ub : Integer;
9305:                    X      : TVector); external 'dmath';
9306: { Solution of linear system from LU decomposition }
9307: procedure QR_Decomp(A           : TMatrix;
9308:                     Lb, Ub1, Ub2 : Integer;
9309:                     R           : TMatrix); external 'dmath';
9310: { QR decomposition }
9311: procedure QR_Solve(Q, R         : TMatrix;
9312:                    B           : TVector;
9313:                    Lb, Ub1, Ub2 : Integer;
9314:                    X           : TVector); external 'dmath';
9315: { Solution of linear system from QR decomposition }
9316: procedure SV_Decomp(A           : TMatrix;
9317:                     Lb, Ub1, Ub2 : Integer;
9318:                     S           : TVector;
9319:                     V           : TMatrix); external 'dmath';
9320: { Singular value decomposition }
9321: procedure SV_SetZero(S      : TVector;
9322:                      Lb, Ub : Integer;
9323:                      Tol    : Float); external 'dmath';
9324: { Set lowest singular values to zero }
9325: procedure SV_Solve(U           : TMatrix;
9326:                    S           : TVector;
9327:                    V           : TMatrix;
9328:                    B           : TVector;
9329:                    Lb, Ub1, Ub2 : Integer;
9330:                    X           : TVector); external 'dmath';
9331: { Solution of linear system from SVD }
9332: procedure SV_Approx(U           : TMatrix;
9333:                     S           : TVector;
9334:                     V           : TMatrix;
9335:                     Lb, Ub1, Ub2 : Integer;
9336:                     A           : TMatrix); external 'dmath';
9337: { Matrix approximation from SVD }
9338: procedure EigenVals(A      : TMatrix;
9339:                     Lb, Ub : Integer;
9340:                     Lambda : TCompVector); external 'dmath';
```

```
9341: { Eigenvalues of a general square matrix }
9342: procedure EigenVect(A      : TMatrix;
9343:                     Lb, Ub : Integer;
9344:                     Lambda : TCompVector;
9345:                     V      : TMatrix); external 'dmath';
9346: { Eigenvalues and eigenvectors of a general square matrix }
9347: procedure EigenSym(A      : TMatrix;
9348:                    Lb, Ub : Integer;
9349:                    Lambda : TVector;
9350:                    V      : TMatrix); external 'dmath';
9351: { Eigenvalues and eigenvectors of a symmetric matrix (SVD method) }
9352: procedure Jacobi(A              : TMatrix;
9353:                  Lb, Ub, MaxIter : Integer;
9354:                  Tol            : Float;
9355:                  Lambda         : TVector;
9356:                  V              : TMatrix); external 'dmath';
9357: { Eigenvalues and eigenvectors of a symmetric matrix (Jacobi method) }
9358: { ---------------------------------------------------------------
9359:   Optimization
9360:   --------------------------------------------------------------- }
9361: procedure MinBrack(Func                    : TFunc;
9362:                    var A, B, C, Fa, Fb, Fc : Float); external 'dmath';
9363: { Brackets a minimum of a function }
9364: procedure GoldSearch(Func           : TFunc;
9365:                      A, B           : Float;
9366:                      MaxIter        : Integer;
9367:                      Tol            : Float;
9368:                      var Xmin, Ymin : Float); external 'dmath';
9369: { Minimization of a function of one variable (golden search) }
9370: procedure LinMin(Func      : TFuncNVar;
9371:                  X, DeltaX : TVector;
9372:                  Lb, Ub    : Integer;
9373:                  var R     : Float;
9374:                  MaxIter   : Integer;
9375:                  Tol       : Float;
9376:                  var F_min : Float); external 'dmath';
9377: { Minimization of a function of several variables along a line }
9378: procedure Newton(Func      : TFuncNVar;
9379:                  HessGrad  : THessGrad;
9380:                  X         : TVector;
9381:                  Lb, Ub    : Integer;
9382:                  MaxIter   : Integer;
9383:                  Tol       : Float;
9384:                  var F_min : Float;
9385:                  G         : TVector;
9386:                  H_inv     : TMatrix;
9387:                  var Det   : Float); external 'dmath';
9388: { Minimization of a function of several variables (Newton's method) }
9389: procedure SaveNewton(FileName : string); external 'dmath';
9390: { Save Newton iterations in a file }
9391: procedure Marquardt(Func      : TFuncNVar;
9392:                     HessGrad  : THessGrad;
9393:                     X         : TVector;
9394:                     Lb, Ub    : Integer;
9395:                     MaxIter   : Integer;
9396:                     Tol       : Float;
9397:                     var F_min : Float;
9398:                     G         : TVector;
9399:                     H_inv     : TMatrix;
9400:                     var Det   : Float); external 'dmath';
9401: { Minimization of a function of several variables (Marquardt's method) }
9402: procedure SaveMarquardt(FileName : string); external 'dmath';
9403: { Save Marquardt iterations in a file }
9404: procedure BFGS(Func      : TFuncNVar;
9405:                Gradient  : TGradient;
9406:                X         : TVector;
9407:                Lb, Ub    : Integer;
9408:                MaxIter   : Integer;
9409:                Tol       : Float;
9410:                var F_min : Float;
9411:                G         : TVector;
9412:                H_inv     : TMatrix); external 'dmath';
9413: { Minimization of a function of several variables (BFGS method) }
9414: procedure SaveBFGS(FileName : string); external 'dmath';
9415: { Save BFGS iterations in a file }
9416: procedure Simplex(Func      : TFuncNVar;
9417:                   X         : TVector;
9418:                   Lb, Ub    : Integer;
9419:                   MaxIter   : Integer;
9420:                   Tol       : Float;
9421:                   var F_min : Float); external 'dmath';
9422: { Minimization of a function of several variables (Simplex) }
9423: procedure SaveSimplex(FileName : string); external 'dmath';
9424: { Save Simplex iterations in a file }
9425: { ---------------------------------------------------------------
9426:   Nonlinear equations
9427:   --------------------------------------------------------------- }
9428: procedure RootBrack(Func             : TFunc;
9429:                     var X, Y, FX, FY : Float); external 'dmath';
```

```
9430: { Brackets a root of function Func between X and Y }
9431: procedure Bisect(Func     : TFunc;
9432:                  var X, Y : Float;
9433:                  MaxIter  : Integer;
9434:                  Tol      : Float;
9435:                  var F    : Float); external 'dmath';
9436: { Bisection method }
9437: procedure Secant(Func     : TFunc;
9438:                  var X, Y : Float;
9439:                  MaxIter  : Integer;
9440:                  Tol      : Float;
9441:                  var F    : Float); external 'dmath';
9442: { Secant method }
9443: procedure NewtEq(Func, Deriv : TFunc;
9444:                  var X       : Float;
9445:                  MaxIter     : Integer;
9446:                  Tol         : Float;
9447:                  var F       : Float); external 'dmath';
9448: { Newton-Raphson method for a single nonlinear equation }
9449: procedure NewtEqs(Equations : TEquations;
9450:                   Jacobian  : TJacobian;
9451:                   X, F      : TVector;
9452:                   Lb, Ub    : Integer;
9453:                   MaxIter   : Integer;
9454:                   Tol       : Float); external 'dmath';
9455: { Newton-Raphson method for a system of nonlinear equations }
9456: procedure Broyden(Equations : TEquations;
9457:                   X, F      : TVector;
9458:                   Lb, Ub    : Integer;
9459:                   MaxIter   : Integer;
9460:                   Tol       : Float); external 'dmath';
9461: { Broyden's method for a system of nonlinear equations }
9462: { ---------------------------------------------------------------
9463:   Polynomials and rational fractions
9464:   --------------------------------------------------------------- }
9465: function Poly(X    : Float;
9466:               Coef : TVector;
9467:               Deg  : Integer) : Float; external 'dmath';
9468: { Evaluates a polynomial }
9469: function RFrac(X          : Float;
9470:                Coef       : TVector;
9471:                Deg1, Deg2 : Integer) : Float; external 'dmath';
9472: { Evaluates a rational fraction }
9473: function RootPol1(A, B  : Float;
9474:                   var X : Float) : Integer; external 'dmath';
9475: { Solves the linear equation A + B * X = 0 }
9476: function RootPol2(Coef : TVector;
9477:                   Z    : TCompVector) : Integer; external 'dmath';
9478: { Solves a quadratic equation }
9479: function RootPol3(Coef : TVector;
9480:                   Z    : TCompVector) : Integer; external 'dmath';
9481: { Solves a cubic equation }
9482: function RootPol4(Coef : TVector;
9483:                   Z    : TCompVector) : Integer; external 'dmath';
9484: { Solves a quartic equation }
9485: function RootPol(Coef : TVector;
9486:                  Deg  : Integer;
9487:                  Z    : TCompVector) : Integer; external 'dmath';
9488: { Solves a polynomial equation }
9489: function SetRealRoots(Deg : Integer;
9490:                       Z   : TCompVector;
9491:                       Tol : Float) : Integer; external 'dmath';
9492: { Set the imaginary part of a root to zero }
9493: procedure SortRoots(Deg : Integer;
9494:                     Z   : TCompVector); external 'dmath';
9495: { Sorts the roots of a polynomial }
9496: { ---------------------------------------------------------------
9497:   Numerical integration and differential equations
9498:   --------------------------------------------------------------- }
9499: function TrapInt(X, Y : TVector; N : Integer) : Float; external 'dmath';
9500: { Integration by trapezoidal rule }
9501: function GausLeg(Func : TFunc; A, B : Float) : Float; external 'dmath';
9502: { Integral from A to B }
9503: function GausLeg0(Func : TFunc; B : Float) : Float; external 'dmath';
9504: { Integral from 0 to B }
9505: function Convol(Func1, Func2 : TFunc; T : Float) : Float; external 'dmath';
9506: { Convolution product at time T }
9507: procedure ConvTrap(Func1,Func2:TFunc; T,Y:TVector; N:Integer);external 'dmath';
9508: { Convolution by trapezoidal rule }
9509: procedure RKF45(F                    : TDiffEqs;
9510:                 Neqn                 : Integer;
9511:                 Y, Yp                : TVector;
9512:                 var T                : Float;
9513:                 Tout, RelErr, AbsErr : Float;
9514:                 var Flag             : Integer); external 'dmath';
9515: { Integration of a system of differential equations }
9516: { ---------------------------------------------------------------
9517:   Fast Fourier Transform
9518:   --------------------------------------------------------------- }
```

```
9519: procedure FFT(NumSamples        : Integer;
9520:               InArray, OutArray : TCompVector); external 'dmath';
9521: { Fast Fourier Transform }
9522: procedure IFFT(NumSamples        : Integer;
9523:                InArray, OutArray : TCompVector); external 'dmath';
9524: { Inverse Fast Fourier Transform }
9525: procedure FFT_Integer(NumSamples     : Integer;
9526:                       RealIn, ImagIn : TIntVector;
9527:                       OutArray       : TCompVector); external 'dmath';
9528: { Fast Fourier Transform for integer data }
9529: procedure FFT_Integer_Cleanup; external 'dmath';
9530: { Clear memory after a call to FFT_Integer }
9531: procedure CalcFrequency(NumSamples,
9532:                         FrequencyIndex : Integer;
9533:                         InArray        : TCompVector;
9534:                         var FFT        : Complex); external 'dmath';
9535: { Direct computation of Fourier transform }
9536: { ---------------------------------------------------------------
9537:   Random numbers
9538:   --------------------------------------------------------------- }
9539: procedure SetRNG(RNG : RNG_Type); external 'dmath';
9540: { Select generator }
9541: procedure InitGen(Seed : RNG_IntType); external 'dmath';
9542: { Initialize generator }
9543: function IRanGen : RNG_IntType; external 'dmath';
9544: { 32-bit random integer in [-2^31 .. 2^31 - 1] }
9545: function IRanGen31 : RNG_IntType; external 'dmath';
9546: { 31-bit random integer in [0 .. 2^31 - 1] }
9547: function RanGen1 : Float; external 'dmath';
9548: { 32-bit random real in [0,1] }
9549: function RanGen2 : Float; external 'dmath';
9550: { 32-bit random real in [0,1) }
9551: function RanGen3 : Float; external 'dmath';
9552: { 32-bit random real in (0,1) }
9553: function RanGen53 : Float; external 'dmath';
9554: { 53-bit random real in [0,1) }
9555: procedure InitMWC(Seed : RNG_IntType); external 'dmath';
9556: { Initializes the 'Multiply with carry' random number generator }
9557: function IRanMWC : RNG_IntType; external 'dmath';
9558: { Returns a 32 bit random number in [-2^31 ; 2^31-1] }
9559: procedure InitMT(Seed : RNG_IntType); external 'dmath';
9560: { Initializes Mersenne Twister generator with a seed }
9561: procedure InitMTbyArray(InitKey   : array of RNG_LongType;
9562:                         KeyLength : Word); external 'dmath';
9563: { Initialize MT generator with an array InitKey[0..(KeyLength - 1)] }
9564: function IRanMT : RNG_IntType; external 'dmath';
9565: { Random integer from MT generator }
9566: procedure InitUVAGbyString(KeyPhrase : string); external 'dmath';
9567: { Initializes the UVAG generator with a string }
9568: procedure InitUVAG(Seed : RNG_IntType); external 'dmath';
9569: { Initializes the UVAG generator with an integer }
9570: function IRanUVAG : RNG_IntType; external 'dmath';
9571: { Random integer from UVAG generator }
9572: function RanGaussStd : Float; external 'dmath';
9573: { Random number from standard normal distribution }
9574: function RanGauss(Mu, Sigma : Float) : Float; external 'dmath';
9575: { Random number from normal distrib. with mean Mu and S. D. Sigma }
9576: procedure RanMult(M      : TVector; L      : TMatrix;
9577:                   Lb, Ub : Integer;
9578:                   X      : TVector); external 'dmath';
9579: { Random vector from multinormal distribution (correlated) }
9580: procedure RanMultIndep(M, S   : TVector;
9581:                        Lb, Ub : Integer;
9582:                        X      : TVector); external 'dmath';
9583: { Random vector from multinormal distribution (uncorrelated) }
9584: procedure InitMHParams(NCycles, MaxSim, SavedSim : Integer); external 'dmath';
9585: { Initializes Metropolis-Hastings parameters }
9586: procedure GetMHParams(var NCycles, MaxSim,SavedSim:Integer); external 'dmath';
9587: { Returns Metropolis-Hastings parameters }
9588: procedure Hastings(Func      : TFuncNVar;
9589:                    T         : Float;
9590:                    X         : TVector;
9591:                    V         : TMatrix;
9592:                    Lb, Ub    : Integer;
9593:                    Xmat      : TMatrix;
9594:                    X_min     : TVector;
9595:                    var F_min : Float); external 'dmath';
9596: { Simulation of a probability density function by Metropolis-Hastings }
9597: procedure InitSAParams(NT, NS, NCycles : Integer; RT : Float); external 'dmath';
9598: { Initializes Simulated Annealing parameters }
9599: procedure SA_CreateLogFile(FileName : String); external 'dmath';
9600: { Initializes log file }
9601: procedure SimAnn(Func          : TFuncNVar;
9602:                  X, Xmin, Xmax : TVector;
9603:                  Lb, Ub        : Integer;
9604:                  var F_min     : Float); external 'dmath';
9605: { Minimization of a function of several var. by simulated annealing }
9606: procedure InitGAParams(NP, NG : Integer; SR, MR, HR : Float); external 'dmath';
9607: { Initializes Genetic Algorithm parameters }
```

```
9608: procedure GA_CreateLogFile(FileName : String); external 'dmath';
9609: { Initializes log file }
9610: procedure GenAlg(Func          : TFuncNVar;
9611:                  X, Xmin, Xmax : TVector;
9612:                  Lb, Ub        : Integer;
9613:                  var F_min     : Float); external 'dmath';
9614: { Minimization of a function of several var. by genetic algorithm }
9615: { ---------------------------------------------------------------
9616:   Statistics
9617:   --------------------------------------------------------------- }
9618: function Mean(X : TVector; Lb, Ub : Integer) : Float; external 'dmath';
9619: { Mean of sample X }
9620: function Min(X : TVector; Lb, Ub : Integer) : Float; external 'dmath';
9621: { Minimum of sample X }
9622: function Max(X : TVector; Lb, Ub : Integer) : Float; external 'dmath';
9623: { Maximum of sample X }
9624: function Median(X : TVector; Lb, Ub : Integer; Sorted : Boolean) : Float; external 'dmath';
9625: { Median of sample X }
9626: function StDev(X : TVector; Lb, Ub : Integer; M : Float) : Float; external 'dmath';
9627: { Standard deviation estimated from sample X }
9628: function StDevP(X : TVector; Lb, Ub : Integer; M : Float) : Float; external 'dmath';
9629: { Standard deviation of population }
9630: function Correl(X, Y : TVector; Lb, Ub : Integer) : Float; external 'dmath';
9631: { Correlation coefficient }
9632: function Skewness(X : TVector; Lb, Ub : Integer; M,Sigma: Float): Float; external 'dmath';
9633: { Skewness of sample X }
9634: function Kurtosis(X : TVector; Lb, Ub : Integer; M,Sigma: Float): Float; external 'dmath';
9635: { Kurtosis of sample X }
9636: procedure QSort(X : TVector; Lb, Ub : Integer); external 'dmath';
9637: { Quick sort (ascending order) }
9638: procedure DQSort(X : TVector; Lb, Ub : Integer); external 'dmath';
9639: { Quick sort (descending order) }
9640: procedure Interval(X1, X2             : Float;
9641:                    MinDiv, MaxDiv     : Integer;
9642:                    var Min, Max, Step : Float); external 'dmath';
9643: { Determines an interval for a set of values }
9644: procedure AutoScale(X : TVector; Lb, Ub : Integer; Scale : TScale;
9645:                     var XMin, XMax, XStep : Float); external 'dmath';
9646: { Finds an appropriate scale for plotting the data in X[Lb..Ub] }
9647: procedure StudIndep(N1, N2          : Integer;
9648:                     M1, M2, S1, S2 : Float;
9649:                     var T          : Float;
9650:                     var DoF        : Integer); external 'dmath';
9651: { Student t-test for independent samples }
9652: procedure StudPaired(X, Y    : TVector;
9653:                      Lb, Ub  : Integer;
9654:                      var T   : Float;
9655:                      var DoF : Integer); external 'dmath';
9656: { Student t-test for paired samples }
9657: procedure AnOVa1(Ns               : Integer;
9658:                  N                : TIntVector;
9659:                  M, S             : TVector;
9660:                  var V_f, V_r, F  : Float;
9661:                  var DoF_f, DoF_r : Integer); external 'dmath';
9662: { One-way analysis of variance }
9663: procedure AnOVa2(NA, NB, Nobs : Integer;
9664:                  M, S         : TMatrix;
9665:                  V, F         : TVector;
9666:                  DoF          : TIntVector); external 'dmath';
9667: { Two-way analysis of variance }
9668: procedure Snedecor(N1, N2         : Integer;
9669:                    S1, S2         : Float;
9670:                    var F          : Float;
9671:                    var DoF1, DoF2 : Integer); external 'dmath';
9672: { Snedecor's F-test (comparison of two variances) }
9673: procedure Bartlett(Ns       : Integer;
9674:                    N        : TIntVector;
9675:                    S        : TVector;
9676:                    var Khi2 : Float;
9677:                    var DoF  : Integer); external 'dmath';
9678: { Bartlett's test (comparison of several variances) }
9679: procedure Mann_Whitney(N1, N2     : Integer;
9680:                        X1, X2     : TVector;
9681:                        var U, Eps : Float); external 'dmath';
9682: { Mann-Whitney test}
9683: procedure Wilcoxon(X, Y       : TVector;
9684:                    Lb, Ub     : Integer;
9685:                    var Ndiff  : Integer;
9686:                    var T, Eps : Float); external 'dmath';
9687: { Wilcoxon test }
9688: procedure Kruskal_Wallis(Ns      : Integer;
9689:                          N       : TIntVector;
9690:                          X       : TMatrix;
9691:                          var H   : Float;
9692:                          var DoF : Integer); external 'dmath';
9693: { Kruskal-Wallis test }
9694: procedure Khi2_Conform(N_cls    : Integer;
9695:                        N_estim  : Integer;
9696:                        Obs      : TIntVector;
```

```
9697:                       Calc     : TVector;
9698:                       var Khi2 : Float;
9699:                       var DoF  : Integer); external 'dmath';
9700: { Khi-2 test for conformity }
9701: procedure Khi2_Indep(N_lin    : Integer;
9702:                      N_col    : Integer;
9703:                      Obs      : TIntMatrix;
9704:                      var Khi2 : Float;
9705:                      var DoF  : Integer); external 'dmath';
9706: { Khi-2 test for independence }
9707: procedure Woolf_Conform(N_cls   : Integer;
9708:                         N_estim : Integer;
9709:                         Obs     : TIntVector;
9710:                         Calc    : TVector;
9711:                         var G   : Float;
9712:                         var DoF : Integer); external 'dmath';
9713: { Woolf's test for conformity }
9714: procedure Woolf_Indep(N_lin   : Integer;
9715:                       N_col   : Integer;
9716:                       Obs     : TIntMatrix;
9717:                       var G   : Float;
9718:                       var DoF : Integer); external 'dmath';
9719: { Woolf's test for independence }
9720: procedure DimStatClassVector(var C : TStatClassVector;
9721:                              Ub    : Integer); external 'dmath';
9722: { Allocates an array of statistical classes: C[0..Ub] }
9723: procedure Distrib(X       : TVector;
9724:                   Lb, Ub  : Integer;
9725:                   A, B, H : Float;
9726:                   C       : TStatClassVector); external 'dmath';
9727: { Distributes an array X[Lb..Ub] into statistical classes }
9728: { ---------------------------------------------------------------
9729:   Linear / polynomial regression
9730:   --------------------------------------------------------------- }
9731: procedure LinFit(X, Y   : TVector;
9732:                  Lb, Ub : Integer;
9733:                  B      : TVector;
9734:                  V      : TMatrix); external 'dmath';
9735: { Linear regression : Y = B(0) + B(1) * X }
9736: procedure WLinFit(X, Y, S : TVector;
9737:                   Lb, Ub  : Integer;
9738:                   B       : TVector;
9739:                   V       : TMatrix); external 'dmath';
9740: { Weighted linear regression : Y = B(0) + B(1) * X }
9741: procedure SVDLinFit(X, Y   : TVector;
9742:                     Lb, Ub : Integer;
9743:                     SVDTol : Float;
9744:                     B      : TVector;
9745:                     V      : TMatrix); external 'dmath';
9746: { Unweighted linear regression by singular value decomposition }
9747: procedure WSVDLinFit(X, Y, S : TVector;
9748:                      Lb, Ub  : Integer;
9749:                      SVDTol  : Float;
9750:                      B       : TVector;
9751:                      V       : TMatrix); external 'dmath';
9752: { Weighted linear regression by singular value decomposition }
9753: procedure MulFit(X            : TMatrix;
9754:                  Y            : TVector;
9755:                  Lb, Ub, Nvar : Integer;
9756:                  ConsTerm     : Boolean;
9757:                  B            : TVector;
9758:                  V            : TMatrix); external 'dmath';
9759: { Multiple linear regression by Gauss-Jordan method }
9760: procedure WMulFit(X            : TMatrix;
9761:                   Y, S         : TVector;
9762:                   Lb, Ub, Nvar : Integer;
9763:                   ConsTerm     : Boolean;
9764:                   B            : TVector;
9765:                   V            : TMatrix); external 'dmath';
9766: { Weighted multiple linear regression by Gauss-Jordan method }
9767: procedure SVDFit(X            : TMatrix;
9768:                  Y            : TVector;
9769:                  Lb, Ub, Nvar : Integer;
9770:                  ConsTerm     : Boolean;
9771:                  SVDTol       : Float;
9772:                  B            : TVector;
9773:                  V            : TMatrix); external 'dmath';
9774: { Multiple linear regression by singular value decomposition }
9775: procedure WSVDFit(X            : TMatrix;
9776:                   Y, S         : TVector;
9777:                   Lb, Ub, Nvar : Integer;
9778:                   ConsTerm     : Boolean;
9779:                   SVDTol       : Float;
9780:                   B            : TVector;
9781:                   V            : TMatrix); external 'dmath';
9782: { Weighted multiple linear regression by singular value decomposition }
9783: procedure PolFit(X, Y       : TVector;
9784:                  Lb, Ub, Deg : Integer;
9785:                  B           : TVector;
```

```
9786:                 V           : TMatrix); external 'dmath';
9787: { Polynomial regression by Gauss-Jordan method }
9788: procedure WPolFit(X, Y, S     : TVector;
9789:                   Lb, Ub, Deg : Integer;
9790:                   B           : TVector;
9791:                   V           : TMatrix); external 'dmath';
9792: { Weighted polynomial regression by Gauss-Jordan method }
9793: procedure SVDPolFit(X, Y        : TVector;
9794:                     Lb, Ub, Deg : Integer;
9795:                     SVDTol      : Float;
9796:                     B           : TVector;
9797:                     V           : TMatrix); external 'dmath';
9798: { Unweighted polynomial regression by singular value decomposition }
9799: procedure WSVDPolFit(X, Y, S     : TVector;
9800:                      Lb, Ub, Deg : Integer;
9801:                      SVDTol      : Float;
9802:                      B           : TVector;
9803:                      V           : TMatrix); external 'dmath';
9804: { Weighted polynomial regression by singular value decomposition }
9805: procedure RegTest(Y, Ycalc : TVector;
9806:                   LbY, UbY : Integer;
9807:                   V        : TMatrix;
9808:                   LbV, UbV : Integer;
9809:                   var Test : TRegTest); external 'dmath';
9810: { Test of unweighted regression }
9811: procedure WRegTest(Y, Ycalc, S : TVector;
9812:                    LbY, UbY    : Integer;
9813:                    V           : TMatrix;
9814:                    LbV, UbV    : Integer;
9815:                    var Test    : TRegTest); external 'dmath';
9816: { Test of weighted regression }
9817: { ------------------------------------------------------------------
9818:   Nonlinear regression
9819:   ------------------------------------------------------------------ }
9820: procedure SetOptAlgo(Algo : TOptAlgo); external 'dmath';
9821: { Sets the optimization algorithm for nonlinear regression }
9822: function GetOptAlgo : TOptAlgo; external 'dmath';
9823: { Returns the optimization algorithm }
9824: procedure SetMaxParam(N : Byte); external 'dmath';
9825: { Sets the maximum number of regression parameters for nonlinear regression }
9826: function GetMaxParam : Byte; external 'dmath';
9827: { Returns the maximum number of regression parameters for nonlinear regression }
9828: procedure SetParamBounds(I : Byte; ParamMin, ParamMax : Float); external 'dmath';
9829: { Sets the bounds on the I-th regression parameter }
9830: procedure GetParamBounds(I : Byte; var ParamMin,ParamMax:Float); external 'dmath';
9831: { Returns the bounds on the I-th regression parameter }
9832: procedure NLFit(RegFunc   : TRegFunc;
9833:                 DerivProc : TDerivProc;
9834:                 X, Y      : TVector;
9835:                 Lb, Ub    : Integer;
9836:                 MaxIter   : Integer;
9837:                 Tol       : Float;
9838:                 B         : TVector;
9839:                 FirstPar,
9840:                 LastPar   : Integer;
9841:                 V         : TMatrix); external 'dmath';
9842: { Unweighted nonlinear regression }
9843: procedure WNLFit(RegFunc   : TRegFunc;
9844:                  DerivProc : TDerivProc;
9845:                  X, Y, S   : TVector;
9846:                  Lb, Ub    : Integer;
9847:                  MaxIter   : Integer;
9848:                  Tol       : Float;
9849:                  B         : TVector;
9850:                  FirstPar,
9851:                  LastPar   : Integer;
9852:                  V         : TMatrix); external 'dmath';
9853: { Weighted nonlinear regression }
9854: procedure SetMCFile(FileName : String); external 'dmath';
9855: { Set file for saving MCMC simulations }
9856: procedure SimFit(RegFunc   : TRegFunc;
9857:                  X, Y      : TVector;
9858:                  Lb, Ub    : Integer;
9859:                  B         : TVector;
9860:                  FirstPar,
9861:                  LastPar   : Integer;
9862:                  V         : TMatrix); external 'dmath';
9863: { Simulation of unweighted nonlinear regression by MCMC }
9864: procedure WSimFit(RegFunc   : TRegFunc;
9865:                   X, Y, S   : TVector;
9866:                   Lb, Ub    : Integer;
9867:                   B         : TVector;
9868:                   FirstPar,
9869:                   LastPar   : Integer;
9870:                   V         : TMatrix); external 'dmath';
9871: { Simulation of weighted nonlinear regression by MCMC }
9872: { ------------------------------------------------------------------
9873:   Nonlinear regression models
9874:   ------------------------------------------------------------------ }
```

```
9875: procedure FracFit(X, Y       : TVector;
9876:                   Lb, Ub     : Integer;
9877:                   Deg1, Deg2 : Integer;
9878:                   ConsTerm   : Boolean;
9879:                   MaxIter    : Integer;
9880:                   Tol        : Float;
9881:                   B          : TVector;
9882:                   V          : TMatrix); external 'dmath';
9883: { Unweighted fit of rational fraction }
9884: procedure WFracFit(X, Y, S    : TVector;
9885:                    Lb, Ub     : Integer;
9886:                    Deg1, Deg2 : Integer;
9887:                    ConsTerm   : Boolean;
9888:                    MaxIter    : Integer;
9889:                    Tol        : Float;
9890:                    B          : TVector;
9891:                    V          : TMatrix); external 'dmath';
9892: { Weighted fit of rational fraction }
9893:
9894: function FracFit_Func(X : Float; B : TVector) : Float; external 'dmath';
9895: { Returns the value of the rational fraction at point X }
9896: procedure ExpFit(X, Y         : TVector;
9897:                  Lb, Ub, Nexp : Integer;
9898:                  ConsTerm     : Boolean;
9899:                  MaxIter      : Integer;
9900:                  Tol          : Float;
9901:                  B            : TVector;
9902:                  V            : TMatrix); external 'dmath';
9903: { Unweighted fit of sum of exponentials }
9904: procedure WExpFit(X, Y, S      : TVector;
9905:                   Lb, Ub, Nexp : Integer;
9906:                   ConsTerm     : Boolean;
9907:                   MaxIter      : Integer;
9908:                   Tol          : Float;
9909:                   B            : TVector;
9910:                   V            : TMatrix); external 'dmath';
9911: { Weighted fit of sum of exponentials }
9912: function ExpFit_Func(X : Float; B : TVector) : Float; external 'dmath';
9913: { Returns the value of the regression function at point X }
9914: procedure IncExpFit(X, Y     : TVector;
9915:                     Lb, Ub   : Integer;
9916:                     ConsTerm : Boolean;
9917:                     MaxIter  : Integer;
9918:                     Tol      : Float;
9919:                     B        : TVector;
9920:                     V        : TMatrix); external 'dmath';
9921: { Unweighted fit of model of increasing exponential }
9922: procedure WIncExpFit(X, Y, S  : TVector;
9923:                      Lb, Ub   : Integer;
9924:                      ConsTerm : Boolean;
9925:                      MaxIter  : Integer;
9926:                      Tol      : Float;
9927:                      B        : TVector;
9928:                      V        : TMatrix); external 'dmath';
9929: { Weighted fit of increasing exponential }
9930: function IncExpFit_Func(X : Float; B : TVector) : Float; external 'dmath';
9931: { Returns the value of the regression function at point X }
9932: procedure ExpLinFit(X, Y    : TVector;
9933:                     Lb, Ub  : Integer;
9934:                     MaxIter : Integer;
9935:                     Tol     : Float;
9936:                     B       : TVector;
9937:                     V       : TMatrix); external 'dmath';
9938: { Unweighted fit of the "exponential + linear" model }
9939: procedure WExpLinFit(X, Y, S : TVector;
9940:                      Lb, Ub  : Integer;
9941:                      MaxIter : Integer;
9942:                      Tol     : Float;
9943:                      B       : TVector;
9944:                      V       : TMatrix); external 'dmath';
9945: { Weighted fit of the "exponential + linear" model }
9946:
9947: function ExpLinFit_Func(X : Float; B : TVector) : Float; external 'dmath';
9948: { Returns the value of the regression function at point X }
9949: procedure MichFit(X, Y    : TVector;
9950:                   Lb, Ub  : Integer;
9951:                   MaxIter : Integer;
9952:                   Tol     : Float;
9953:                   B       : TVector;
9954:                   V       : TMatrix); external 'dmath';
9955: { Unweighted fit of Michaelis equation }
9956: procedure WMichFit(X, Y, S : TVector;
9957:                    Lb, Ub  : Integer;
9958:                    MaxIter : Integer;
9959:                    Tol     : Float;
9960:                    B       : TVector;
9961:                    V       : TMatrix); external 'dmath';
9962: { Weighted fit of Michaelis equation }
9963: function MichFit_Func(X : Float; B : TVector) : Float; external 'dmath';
```

```
 9964: { Returns the value of the Michaelis equation at point X }
 9965: procedure MintFit(X, Y    : TVector;
 9966:                   Lb, Ub  : Integer;
 9967:                   MintVar : TMintVar;
 9968:                   Fit_S0  : Boolean;
 9969:                   MaxIter : Integer;
 9970:                   Tol     : Float;
 9971:                   B       : TVector;
 9972:                   V       : TMatrix); external 'dmath';
 9973: { Unweighted fit of the integrated Michaelis equation }
 9974: procedure WMintFit(X, Y, S : TVector;
 9975:                    Lb, Ub  : Integer;
 9976:                    MintVar : TMintVar;
 9977:                    Fit_S0  : Boolean;
 9978:                    MaxIter : Integer;
 9979:                    Tol     : Float;
 9980:                    B       : TVector;
 9981:                    V       : TMatrix); external 'dmath';
 9982: { Weighted fit of the integrated Michaelis equation }
 9983: function MintFit_Func(X : Float; B : TVector) : Float; external 'dmath';
 9984: { Returns the value of the integrated Michaelis equation at point X }
 9985: procedure HillFit(X, Y    : TVector;
 9986:                   Lb, Ub  : Integer;
 9987:                   MaxIter : Integer;
 9988:                   Tol     : Float;
 9989:                   B       : TVector;
 9990:                   V       : TMatrix); external 'dmath';
 9991: { Unweighted fit of Hill equation }
 9992: procedure WHillFit(X, Y, S : TVector;
 9993:                    Lb, Ub  : Integer;
 9994:                    MaxIter : Integer;
 9995:                    Tol     : Float;
 9996:                    B       : TVector;
 9997:                    V       : TMatrix); external 'dmath';
 9998: { Weighted fit of Hill equation }
 9999: function HillFit_Func(X : Float; B : TVector) : Float; external 'dmath';
10000: { Returns the value of the Hill equation at point X }
10001: procedure LogiFit(X, Y     : TVector;
10002:                   Lb, Ub   : Integer;
10003:                   ConsTerm : Boolean;
10004:                   General  : Boolean;
10005:                   MaxIter  : Integer;
10006:                   Tol      : Float;
10007:                   B        : TVector;
10008:                   V        : TMatrix); external 'dmath';
10009: { Unweighted fit of logistic function }
10010: procedure WLogiFit(X, Y, S  : TVector;
10011:                    Lb, Ub   : Integer;
10012:                    ConsTerm : Boolean;
10013:                    General  : Boolean;
10014:                    MaxIter  : Integer;
10015:                    Tol      : Float;
10016:                    B        : TVector;
10017:                    V        : TMatrix); external 'dmath';
10018: { Weighted fit of logistic function }
10019: function LogiFit_Func(X : Float; B : TVector) : Float; external 'dmath';
10020: { Returns the value of the logistic function at point X }
10021: procedure PKFit(X, Y    : TVector;
10022:                 Lb, Ub  : Integer;
10023:                 MaxIter : Integer;
10024:                 Tol     : Float;
10025:                 B       : TVector;
10026:                 V       : TMatrix); external 'dmath';
10027: { Unweighted fit of the acid-base titration curve }
10028: procedure WPKFit(X, Y, S : TVector;
10029:                  Lb, Ub  : Integer;
10030:                  MaxIter : Integer;
10031:                  Tol     : Float;
10032:                  B       : TVector;
10033:                  V       : TMatrix); external 'dmath';
10034: { Weighted fit of the acid-base titration curve }
10035: function PKFit_Func(X : Float; B : TVector) : Float; external 'dmath';
10036: { Returns the value of the acid-base titration function at point X }
10037: procedure PowFit(X, Y    : TVector;
10038:                  Lb, Ub  : Integer;
10039:                  MaxIter : Integer;
10040:                  Tol     : Float;
10041:                  B       : TVector;
10042:                  V       : TMatrix); external 'dmath';
10043: { Unweighted fit of power function }
10044: procedure WPowFit(X, Y, S : TVector;
10045:                   Lb, Ub  : Integer;
10046:                   MaxIter : Integer;
10047:                   Tol     : Float;
10048:                   B       : TVector;
10049:                   V       : TMatrix); external 'dmath';
10050: { Weighted fit of power function }
10051:
10052: function PowFit_Func(X : Float; B : TVector) : Float; external 'dmath';
```

```
10053: { Returns the value of the power function at point X }
10054: procedure GammaFit(X, Y    : TVector;
10055:                    Lb, Ub  : Integer;
10056:                    MaxIter : Integer;
10057:                    Tol     : Float;
10058:                    B       : TVector;
10059:                    V       : TMatrix); external 'dmath';
10060: { Unweighted fit of gamma distribution function }
10061: procedure WGammaFit(X, Y, S : TVector;
10062:                     Lb, Ub  : Integer;
10063:                     MaxIter : Integer;
10064:                     Tol     : Float;
10065:                     B       : TVector;
10066:                     V       : TMatrix); external 'dmath';
10067: { Weighted fit of gamma distribution function }
10068: function GammaFit_Func(X : Float; B : TVector) : Float; external 'dmath';
10069: { Returns the value of the gamma distribution function at point X }
10070: { ---------------------------------------------------------------
10071:   Principal component analysis
10072:   --------------------------------------------------------------- }
10073: procedure VecMean(X            : TMatrix;
10074:                   Lb, Ub, Nvar : Integer;
10075:                   M            : TVector); external 'dmath';
10076: { Computes the mean vector M from matrix X }
10077: procedure VecSD(X            : TMatrix;
10078:                 Lb, Ub, Nvar : Integer;
10079:                 M, S         : TVector); external 'dmath';
10080: { Computes the vector of standard deviations S from matrix X }
10081: procedure MatVarCov(X            : TMatrix;
10082:                     Lb, Ub, Nvar : Integer;
10083:                     M            : TVector;
10084:                     V            : TMatrix); external 'dmath';
10085: { Computes the variance-covariance matrix V from matrix X }
10086: procedure MatCorrel(V    : TMatrix;
10087:                     Nvar : Integer;
10088:                     R    : TMatrix); external 'dmath';
10089: { Computes the correlation matrix R from the var-cov matrix V }
10090: procedure PCA(R      : TMatrix;
10091:               Nvar   : Integer;
10092:               Lambda : TVector;
10093:               C, Rc  : TMatrix); external 'dmath';
10094: { Performs a principal component analysis of the correlation matrix R }
10095: procedure ScaleVar(X            : TMatrix;
10096:                    Lb, Ub, Nvar : Integer;
10097:                    M, S         : TVector;
10098:                    Z            : TMatrix); external 'dmath';
10099: { Scales a set of variables by subtracting means and dividing by SD's }
10100: procedure PrinFac(Z            : TMatrix;
10101:                   Lb, Ub, Nvar : Integer;
10102:                   C, F         : TMatrix); external 'dmath';
10103: { Computes principal factors }
10104: { ---------------------------------------------------------------
10105:   Strings
10106:   --------------------------------------------------------------- }
10107: function LTrim(S : String) : String; external 'dmath';
10108: { Removes leading blanks }
10109: function RTrim(S : String) : String; external 'dmath';
10110: { Removes trailing blanks }
10111: function Trim(S : String) : String; external 'dmath';
10112: { Removes leading and trailing blanks }
10113: function StrChar(N : Byte; C : Char) : String; external 'dmath';
10114: { Returns a string made of character C repeated N times }
10115: function RFill(S : String; L : Byte) : String; external 'dmath';
10116: { Completes string S with trailing blanks for a total length L }
10117: function LFill(S : String; L : Byte) : String; external 'dmath';
10118: { Completes string S with leading blanks for a total length L }
10119: function CFill(S : String; L : Byte) : String; external 'dmath';
10120: { Centers string S on a total length L }
10121: function Replace(S : String; C1, C2 : Char) : String; external 'dmath';
10122: { Replaces in string S all the occurences of C1 by C2 }
10123: function Extract(S : String; var Index : Byte; Delim : Char) : String; external 'dmath';
10124: { Extracts a field from a string }
10125: procedure Parse(S : String; Delim:Char; Field:TStrVector; var N:Byte); external 'dmath';
10126: { Parses a string into its constitutive fields }
10127: procedure SetFormat(NumLength,MaxDec:Integer;FloatPoint,NSZero:Bool); external 'dmath';
10128: { Sets the numeric format }
10129: function FloatStr(X : Float) : String; external 'dmath';
10130: { Converts a real to a string according to the numeric format }
10131: function IntStr(N : LongInt) : String; external 'dmath';
10132: { Converts an integer to a string }
10133: function CompStr(Z : Complex) : String; external 'dmath';
10134: { Converts a complex number to a string }
10135: {$IFDEF DELPHI}
10136: function StrDec(S : String) : String; external 'dmath';
10137: { Set decimal separator to the symbol defined in SysUtils }
10138: function IsNumeric(var S : String; var X : Float) : Boolean; external 'dmath';
10139: { Test if a string represents a number and returns it in X }
10140: function ReadNumFromEdit(Edit : TEdit) : Float; external 'dmath';
10141: { Reads a floating point number from an Edit control }
```

```
10142: procedure WriteNumToFile(var F : Text; X : Float); external 'dmath';
10143: { Writes a floating point number in a text file }
10144: {$ENDIF}
10145: { ---------------------------------------------------------------
10146:   BGI / Delphi graphics
10147:   --------------------------------------------------------------- }
10148: function InitGraphics
10149: {$IFDEF DELPHI}
10150: (Width, Height : Integer) : Boolean;
10151: {$ELSE}
10152: (Pilot, Mode : Integer; BGIPath : String) : Boolean; {$ENDIF} external 'dmath';
10153: { Enters graphic mode }
10154: procedure SetWindow({$IFDEF DELPHI}Canvas : TCanvas;{$ENDIF}
10155:                     X1, X2, Y1,Y2 : Integer; GraphBorder:Boolean); external 'dmath';
10156: { Sets the graphic window }
10157: procedure SetOxScale(Scale               : TScale;
10158:                      OxMin, OxMax, OxStep : Float); external 'dmath';
10159: { Sets the scale on the Ox axis }
10160: procedure SetOyScale(Scale               : TScale;
10161:                      OyMin, OyMax, OyStep : Float); external 'dmath';
10162: { Sets the scale on the Oy axis }
10163: procedure GetOxScale(var Scale               : TScale;
10164:                      var OxMin, OxMax, OxStep : Float); external 'dmath';
10165: { Returns the scale on the Ox axis }
10166: procedure GetOyScale(var Scale               : TScale;
10167:                      var OyMin, OyMax, OyStep : Float); external 'dmath';
10168: { Returns the scale on the Oy axis }
10169: procedure SetGraphTitle(Title : String); external 'dmath'; { Sets the title for the graph }
10170: procedure SetOxTitle(Title : String); external 'dmath'; { Sets the title for the Ox axis }
10171: procedure SetOyTitle(Title : String); external 'dmath'; { Sets the title for the Oy axis }
10172: function GetGraphTitle : String; external 'dmath'; { Returns the title for the graph }
10173: function GetOxTitle : String; external 'dmath'; { Returns the title for the Ox axis }
10174: function GetOyTitle : String; external 'dmath'; { Returns the title for the Oy axis }
10175: {$IFNDEF DELPHI}
10176: procedure SetTitleFont(FontIndex, Width, Height : Integer); external 'dmath';
10177: { Sets the font for the main graph title }
10178: procedure SetOxFont(FontIndex, Width, Height : Integer); external 'dmath';
10179: { Sets the font for the Ox axis (title and labels) }
10180: procedure SetOyFont(FontIndex, Width, Height : Integer); external 'dmath';
10181: { Sets the font for the Oy axis (title and labels) }
10182: procedure SetLgdFont(FontIndex, Width, Height : Integer); external 'dmath';
10183: { Sets the font for the legends }
10184: procedure SetClipping(Clip : Boolean); external 'dmath';
10185: { Determines whether drawings are clipped at the current viewport
10186:   boundaries, according to the value of the Boolean parameter Clip }
10187: {$ENDIF}
10188: procedure PlotOxAxis{$IFDEF DELPHI}(Canvas : TCanvas){$ENDIF}; external 'dmath';
10189: { Plots the horizontal axis }
10190: procedure PlotOyAxis{$IFDEF DELPHI}(Canvas : TCanvas){$ENDIF}; external 'dmath';
10191: { Plots the vertical axis }
10192: procedure PlotGrid({$IFDEF DELPHI}Canvas:TCanvas;{$ENDIF} Grid:TGrid); external 'dmath';
10193: { Plots a grid on the graph }
10194: procedure WriteGraphTitle{$IFDEF DELPHI}(Canvas : TCanvas){$ENDIF}; external 'dmath';
10195: { Writes the title of the graph }
10196: procedure SetMaxCurv(NCurv : Byte); external 'dmath';
10197: { Sets the maximum number of curves and re-initializes their parameters }
10198: procedure SetPointParam
10199: {$IFDEF DELPHI}
10200: (CurvIndex, Symbol, Size : Integer; Color : TColor);
10201: {$ELSE}
10202: (CurvIndex, Symbol, Size, Color : Integer); {$ENDIF} external 'dmath';
10203: { Sets the point parameters for curve # CurvIndex }
10204: procedure SetLineParam
10205: {$IFDEF DELPHI}
10206: (CurvIndex : Integer; Style : TPenStyle; Width : Integer; Color : TColor);
10207: {$ELSE}
10208: (CurvIndex, Style, Width, Color : Integer); {$ENDIF} external 'dmath';
10209: { Sets the line parameters for curve # CurvIndex }
10210: procedure SetCurvLegend(CurvIndex : Integer; Legend : String); external 'dmath';
10211: { Sets the legend for curve # CurvIndex }
10212: procedure SetCurvStep(CurvIndex, Step : Integer); external 'dmath';
10213: { Sets the step for curve # CurvIndex }
10214: function GetMaxCurv : Byte; external 'dmath'; { Returns the maximum number of curves }
10215: procedure GetPointParam
10216: {$IFDEF DELPHI}
10217: (CurvIndex : Integer; var Symbol, Size : Integer; var Color : TColor);
10218: {$ELSE}
10219: (CurvIndex : Integer; var Symbol, Size, Color : Integer); {$ENDIF} external 'dmath';
10220: { Returns the point parameters for curve # CurvIndex }
10221: procedure GetLineParam
10222: {$IFDEF DELPHI}
10223: (CurvIndex : Integer; var Style : TPenStyle; var Width : Integer; var Color : TColor);
10224: {$ELSE}
10225: (CurvIndex : Integer; var Style, Width, Color : Integer); {$ENDIF} external 'dmath';
10226: { Returns the line parameters for curve # CurvIndex }
10227: function GetCurvLegend(CurvIndex : Integer) : String; external 'dmath';
10228: { Returns the legend for curve # CurvIndex }
10229: function GetCurvStep(CurvIndex : Integer) : Integer; external 'dmath';
10230: { Returns the step for curve # CurvIndex }
```

```
10231: {$IFDEF DELPHI}
10232: procedure PlotPoint(Canvas    : TCanvas;
10233:                     X, Y      : Float; CurvIndex : Integer); external 'dmath';
10234: {$ELSE}
10235: procedure PlotPoint(Xp, Yp, CurvIndex : Integer); external 'dmath';
10236: {$ENDIF}
10237: { Plots a point on the screen }
10238: procedure PlotCurve({$IFDEF DELPHI}Canvas : TCanvas;{$ENDIF}
10239:                     X, Y                : TVector;
10240:                    Lb, Ub, CurvIndex    : Integer); external 'dmath';
10241: { Plots a curve }
10242: procedure PlotCurveWithErrorBars({$IFDEF DELPHI}Canvas : TCanvas;{$ENDIF}
10243:                                  X, Y, S             : TVector;
10244:                                  Ns, Lb, Ub, CurvIndex : Integer); external 'dmath';
10245: { Plots a curve with error bars }
10246: procedure PlotFunc({$IFDEF DELPHI}Canvas : TCanvas;{$ENDIF}
10247:                    Func                : TFunc;
10248:                    Xmin, Xmax          : Float;
10249:                    {$IFDEF DELPHI}Npt    : Integer;{$ENDIF}
10250:                    CurvIndex           : Integer); external 'dmath';
10251: { Plots a function }
10252: procedure WriteLegend({$IFDEF DELPHI}Canvas : TCanvas;{$ENDIF}
10253:                       NCurv             : Integer;
10254:                       ShowPoints, ShowLines : Boolean); external 'dmath';
10255: { Writes the legends for the plotted curves }
10256: procedure ConRec({$IFDEF DELPHI}Canvas : TCanvas;{$ENDIF}
10257:                  Nx, Ny, Nc          : Integer;
10258:                  X, Y, Z             : TVector;
10259:                  F                   : TMatrix); external 'dmath';
10260: { Contour plot }
10261: function Xpixel(X : Float):Integer; external 'dmath'; {Converts user abscissa X to screen coordinate }
10262: function Ypixel(Y : Float):Integer; external 'dmath'; {Converts user ordinate Y to screen coordinate }
10263: function Xuser(X : Integer):Float; external 'dmath';  {Converts screen coordinate X to user abscissa }
10264: function Yuser(Y : Integer):Float; external 'dmath';  {Converts screen coordinate Y to user ordinate }
10265: {$IFNDEF DELPHI}
10266: procedure LeaveGraphics; external 'dmath';
10267: { Quits graphic mode }
10268: {$ENDIF}
10269: { ------------------------------------------------------------------
10270:   LaTeX graphics
10271:   ------------------------------------------------------------------ }
10272: function TeX_InitGraphics(FileName          : String; PgWidth, PgHeight : Integer;
10273:                           Header            : Boolean) : Boolean; external 'dmath';
10274: { Initializes the LaTeX file }
10275: procedure TeX_SetWindow(X1, X2, Y1, Y2 : Integer; GraphBorder : Boolean); external 'dmath';
10276: { Sets the graphic window }
10277: procedure TeX_LeaveGraphics(Footer : Boolean); external 'dmath'; { Close the LaTeX file }
10278: procedure TeX_SetOxScale(Scale : TScale; OxMin, OxMax, OxStep : Float); external 'dmath';
10279: { Sets the scale on the Ox axis }
10280: procedure TeX_SetOyScale(Scale : TScale; OyMin, OyMax, OyStep : Float); external 'dmath';
10281: { Sets the scale on the Oy axis }
10282: procedure TeX_SetGraphTitle(Title : String); external 'dmath'; { Sets the title for the graph }
10283: procedure TeX_SetOxTitle(Title : String); external 'dmath'; { Sets the title for the Ox axis }
10284: procedure TeX_SetOyTitle(Title : String); external 'dmath'; { Sets the title for the Oy axis }
10285: procedure TeX_PlotOxAxis; external 'dmath'; { Plots the horizontal axis }
10286: procedure TeX_PlotOyAxis; external 'dmath'; { Plots the vertical axis }
10287: procedure TeX_PlotGrid(Grid : TGrid); external 'dmath'; { Plots a grid on the graph }
10288: procedure TeX_WriteGraphTitle; external 'dmath'; Writes the title of the graph }
10289: procedure TeX_SetMaxCurv(NCurv : Byte); external 'dmath';
10290: { Sets the maximum number of curves and re-initializes their parameters }
10291: procedure TeX_SetPointParam(CurvIndex, Symbol, Size : Integer); external 'dmath';
10292: { Sets the point parameters for curve # CurvIndex }
10293: procedure TeX_SetLineParam(CurvIndex, Style : Integer;
10294:                            Width : Float; Smooth : Boolean); external 'dmath';
10295: { Sets the line parameters for curve # CurvIndex }
10296: procedure TeX_SetCurvLegend(CurvIndex : Integer; Legend : String); external 'dmath';
10297: { Sets the legend for curve # CurvIndex }
10298: procedure TeX_SetCurvStep(CurvIndex, Step : Integer); external 'dmath';
10299: { Sets the step for curve # CurvIndex }
10300: procedure TeX_PlotCurve(X, Y : TVector; Lb, Ub, CurvIndex : Integer); external 'dmath';
10301: { Plots a curve }
10302: procedure TeX_PlotCurveWithErrorBars(X, Y, S : TVector;
10303:                                      Ns, Lb, Ub, CurvIndex : Integer); external 'dmath';
10304: { Plots a curve with error bars }
10305: procedure TeX_PlotFunc(Func : TFunc; X1, X2 : Float;
10306:                        Npt : Integer; CurvIndex : Integer); external 'dmath';
10307: { Plots a function }
10308: procedure TeX_WriteLegend(NCurv : Integer; ShowPoints, ShowLines : Boolean); external 'dmath';
10309: { Writes the legends for the plotted curves }
10310: procedure TeX_ConRec(Nx, Ny, Nc : Integer; X, Y, Z  : TVector; F : TMatrix); external 'dmath';
10311: { Contour plot }
10312: function Xcm(X : Float) : Float; external 'dmath'; { Converts user coordinate X to cm }
10313: function Ycm(Y : Float) : Float; external 'dmath'; { Converts user coordinate Y to cm }
10314:
10315: //*****************************************************unit uPSI_SynPdf;
10316:  Function RawUTF8ToPDFString( const Value : RawUTF8) : PDFString
10317:  Function _DateTimeToPdfDate( ADate : TDateTime) : TPdfDate
10318:  Function _PdfDateToDateTime( const AText : TPdfDate) : TDateTime
10319:  Function PdfRect( Left, Top, Right, Bottom : Single) : TPdfRect;
```

```
10320:  Function PdfRect1( const Box : TPdfBox) : TPdfRect;
10321:  Function PdfBox( Left, Top, Width, Height : Single) : TPdfBox
10322:  //Function _GetCharCount( Text : PAnsiChar) : integer
10323:  //Procedure L2R( W : PWideChar; L : integer)
10324:  Function PdfCoord( MM : single) : integer
10325:  Function CurrentPrinterPaperSize : TPDFPaperSize
10326:  Function CurrentPrinterRes : TPoint
10327:  Procedure GDICommentBookmark( MetaHandle : HDC; const aBookmarkName : RawUTF8)
10328:  Procedure GDICommentOutline( MetaHandle : HDC; const aTitle : RawUTF8; aLevel : Integer)
10329:  Procedure GDICommentLink( MetaHandle:HDC; const aBookmarkName:RawUTF8; const aRect : TRect)
10330:  Const('Usp10','String 'usp10.dll
10331:   AddTypeS('TScriptState_enum', '( r0, r1, r2, r3, r4, fOverrideDirection, fInhibitSymSwap,
10332:    'fCharShape, fDigitSubstitute,fInhibitLigate,fDisplayZWG, fArabicNumContext, fGcpClusters )
10333:   AddTypeS('TScriptState_set', 'set of TScriptState_enum
10334: //*********************************************************************
10335:
10336: procedure SIRegister_PMrand(CL: TPSPascalCompiler);  //ParkMiller
10337: begin
10338:  Procedure PMrandomize( I : word)
10339:  Function PMrandom : longint
10340:  Function Rrand : extended
10341:  Function Irand( N : word) : word
10342:  Function Brand( P : extended) : boolean
10343:  Function Nrand : extended
10344: end;
10345:
10346: procedure SIRegister_Spring_Cryptography_Utils(CL: TPSPascalCompiler);
10347: begin
10348:   Function Endian( x : LongWord) : LongWord
10349:   Function Endian64( x : Int64) : Int64
10350:   Function spRol( x : LongWord; y : Byte) : LongWord
10351:   Function spRor( x : LongWord; y : Byte) : LongWord
10352:   Function Ror64( x : Int64; y : Byte) : Int64
10353: end;
10354:
10355: procedure SIRegister_MapReader(CL: TPSPascalCompiler);
10356: begin
10357:  Procedure ClearModules
10358:  Procedure ReadMapFile( Fname : string)
10359:  Function AddressInfo( Address : dword) : string
10360: end;
10361:
10362: procedure SIRegister_LibTar(CL: TPSPascalCompiler);
10363: begin
10364:   TTarPermission', '( tpReadByOwner, tpWriteByOwner, tpExecuteByOw'
10365:    +'ner, tpReadByGroup, tpWriteByGroup, tpExecuteByGroup, tpReadByOther, tpWri'
10366:    +'teByOther, tpExecuteByOther )
10367:   TTarPermissions', 'set of TTarPermission
10368:   TFileType', '( ftNormal, ftLink, ftSymbolicLink, ftCharacter, ft'
10369:    +'Block, ftDirectory, ftFifo, ftContiguous, ftDumpDir, ftMultiVolume, ftVolumeHeader;
10370:   TTarMode', '( tmSetUid, tmSetGid, tmSaveText )
10371:   TTarModes', 'set of TTarMode
10372:   TTarDirRec', 'record Name : STRING; Size : INT64; DateTime : TDa'
10373:    +'teTime; Permissions : TTarPermissions; FileType : TFileType; LinkName : ST'
10374:    +'RING; UID : INTEGER; GID : INTEGER; UserName : STRING; GroupName : STRING;'
10375:    +' ChecksumOK : BOOLEAN; Mode : TTarModes; Magic : STRING; MajorDevNo : INTE'
10376:    +'GER; MinorDevNo : INTEGER; FilePos : INT64; end
10377:   SIRegister_TTarArchive(CL);
10378:   SIRegister_TTarWriter(CL);
10379:  Function PermissionString( Permissions : TTarPermissions) : STRING
10380:  Function ConvertFilename( Filename : STRING) : STRING
10381:  Function FileTimeGMT( FileName : STRING) : TDateTime;
10382:  Function FileTimeGMT1( SearchRec : TSearchRec) : TDateTime;
10383:  Procedure ClearDirRec( var DirRec : TTarDirRec)
10384: end;
10385:
10386:
10387: //*************************************************unit uPSI_TlHelp32;
10388: procedure SIRegister_TlHelp32(CL: TPSPascalCompiler);
10389: begin
10390:  Const('MAX_MODULE_NAME32','LongInt'( 255);
10391:  Function CreateToolhelp32Snapshot( dwFlags, th32ProcessID : DWORD) : THandle
10392:  Const('TH32CS_SNAPHEAPLIST','LongWord( $00000001);
10393:  Const('TH32CS_SNAPPROCESS','LongWord').SetUInt( $00000002);
10394:  Const('TH32CS_SNAPTHREAD','LongWord').SetUInt( $00000004);
10395:  Const('TH32CS_SNAPMODULE','LongWord').SetUInt( $00000008);
10396:  Const('TH32CS_INHERIT','LongWord').SetUInt( $80000000);
10397:   tagHEAPLIST32','record dwSize:DWORD;th32ProcessID:DWORD;th32HeapID:DWORD;dwFlags:DWORD;end';
10398:   AddTypeS('HEAPLIST32', 'tagHEAPLIST32
10399:   AddTypeS('THeapList32', 'tagHEAPLIST32
10400:  Const('HF32_DEFAULT','LongInt'( 1);
10401:  Const('HF32_SHARED','LongInt'( 2);
10402:  Function Heap32ListFirst( hSnapshot : THandle; var lphl : THeapList32) : BOOL
10403:  Function Heap32ListNext( hSnapshot : THandle; var lphl : THeapList32) : BOOL
10404:  AddTypeS('tagHEAPENTRY32', 'record dwSize : DWORD; hHandle : THandle; dwAd'
10405:    +'dress : DWORD; dwBlockSize : DWORD; dwFlags : DWORD; dwLockCount : DWORD; '
10406:    +'dwResvd : DWORD; th32ProcessID : DWORD; th32HeapID : DWORD; end
10407:   AddTypeS('HEAPENTRY32', 'tagHEAPENTRY32
10408:   AddTypeS('THeapEntry32', 'tagHEAPENTRY32
```

```
10409:  Const('LF32_FIXED','LongWord').SetUInt( $00000001);
10410:  Const('LF32_FREE','LongWord').SetUInt( $00000002);
10411:  Const('LF32_MOVEABLE','LongWord').SetUInt( $00000004);
10412:  Function Heap32First( var lphe : THeapEntry32; th32ProcessID, th32HeapID : DWORD) : BOOL
10413:  Function Heap32Next( var lphe : THeapEntry32) : BOOL
10414:  DWORD; var lpNumberOfBytesRead : DWORD) : BOOL
10415:   AddTypeS('tagTHREADENTRY32', 'record dwSize : DWORD; cntUsage : DWORD; th3'
10416:    +'2ThreadID : DWORD; th32OwnerProcessID : DWORD; tpBasePri : Longint; tpDelt'
10417:    +'aPri : Longint; dwFlags : DWORD; end
10418:   AddTypeS('THREADENTRY32', 'tagTHREADENTRY32
10419:   AddTypeS('TThreadEntry32', 'tagTHREADENTRY32
10420:  Function Thread32First( hSnapshot : THandle; var lpte : TThreadEntry32) : BOOL
10421:  Function Thread32Next( hSnapshot : THandle; var lpte : TThreadENtry32) : BOOL
10422: end;
10423:  Const('EW_RESTARTWINDOWS','LongWord').SetUInt( $0042);
10424:  Const('EW_REBOOTSYSTEM','LongWord( $0043);
10425:  Const('EW_EXITANDEXECAPP','LongWord( $0044);
10426:  Const('ENDSESSION_LOGOFF','LongWord').SetUInt( DWORD ( $80000000 ));
10427:  Const('EWX_LOGOFF','LongInt'( 0);
10428:  Const('EWX_SHUTDOWN','LongInt'( 1);
10429:  Const('EWX_REBOOT','LongInt'( 2);
10430:  Const('EWX_FORCE','LongInt'( 4);
10431:  Const('EWX_POWEROFF','LongInt'( 8);
10432:  Const('EWX_FORCEIFHUNG','LongWord').SetUInt( $10);
10433:  Function GET_APPCOMMAND_LPARAM( const lParam : LongInt) : Shortint
10434:  Function GET_DEVICE_LPARAM( const lParam : LongInt) : Word
10435:  Function GET_MOUSEORKEY_LPARAM( const lParam : LongInt) : Word
10436:  Function GET_FLAGS_LPARAM( const lParam : LongInt) : Word
10437:  Function GET_KEYSTATE_LPARAM( const lParam : LongInt) : Word
10438:  Function GetWindowWord( hWnd : HWND; nIndex : Integer) : Word
10439:  Function SetWindowWord( hWnd : HWND; nIndex : Integer; wNewWord : Word) : Word
10440:  Function GetWindowLong( hWnd : HWND; nIndex : Integer) : Longint
10441:  Function SetWindowLong( hWnd : HWND; nIndex : Integer; dwNewLong : Longint) : Longint
10442:  Function GetClassWord( hWnd : HWND; nIndex : Integer) : Word
10443:  Function SetClassWord( hWnd : HWND; nIndex : Integer; wNewWord : Word) : Word
10444:  Function GetClassLong( hWnd : HWND; nIndex : Integer) : DWORD
10445:  Function SetClassLong( hWnd : HWND; nIndex : Integer; dwNewLong : Longint) : DWORD
10446:  Function GetDesktopWindow : HWND
10447:  Function GetParent( hWnd : HWND) : HWND
10448:  Function SetParent( hWndChild, hWndNewParent : HWND) : HWND
10449:  Function GetTopWindow( hWnd : HWND) : HWND
10450:  Function GetNextWindow( hWnd : HWND; uCmd : UINT) : HWND
10451:  Function GetWindow( hWnd : HWND; uCmd : UINT) : HWND
10452:  //Delphi DFM
10453:  Function LoadDFMFile2Strings(const AFile:string; AStrings:TStrings; var WasText:boolean):integer
10454:  Function SaveStrings2DFMFile( AStrings : TStrings; const AFile : string) : integer
10455:  procedure GetHighlighters(AOwner: TComponent; AHighlighters: TStringList; AppendToList: boolean);
10456:  function GetHighlightersFilter(AHighlighters: TStringList): string;
10457:  function GetHighlighterFromFileExt(AHighlighters: TStringList;Extension: string):TSynCustomHighlighter;
10458:  Function ShowOwnedPopups( hWnd : HWND; fShow : BOOL) : BOOL
10459:  Function OpenIcon( hWnd : HWND) : BOOL
10460:  Function CloseWindow( hWnd : HWND) : BOOL
10461:  Function MoveWindow( hWnd : HWND; X, Y, nWidth, nHeight : Integer; bRepaint : BOOL) : BOOL
10462:  Function SetWindowPos(hWnd: HWND;hWndInsertAfter:HWND; X,Y,cx,cy : Integer; uFlags : UINT) : BOOL
10463:  Function IsWindowVisible( hWnd : HWND) : BOOL
10464:  Function IsIconic( hWnd : HWND) : BOOL
10465:  Function AnyPopup : BOOL
10466:  Function BringWindowToTop( hWnd : HWND) : BOOL
10467:  Function IsZoomed( hWnd : HWND) : BOOL
10468:  Function IsWindow( hWnd : HWND) : BOOL
10469:  Function IsMenu( hMenu : HMENU) : BOOL
10470:  Function IsChild( hWndParent, hWnd : HWND) : BOOL
10471:  Function DestroyWindow( hWnd : HWND) : BOOL
10472:  Function ShowWindow( hWnd : HWND; nCmdShow : Integer) : BOOL
10473:  Function AnimateWindow( hWnd : HWND; dwTime : DWORD; dwFlags : DWORD) : BOOL
10474:  Function ShowWindowAsync( hWnd : HWND; nCmdShow : Integer) : BOOL
10475:  Function FlashWindow( hWnd : HWND; bInvert : BOOL) : BOOL
10476:  Function IsWindowUnicode( hWnd : HWND) : BOOL
10477:  Function EnableWindow( hWnd : HWND; bEnable : BOOL) : BOOL
10478:  Function IsWindowEnabled( hWnd : HWND) : BOOL
10479:
10480: procedure SIRegister_IDECmdLine(CL: TPSPascalCompiler);
10481: begin
10482:  const('ShowSetupDialogOptLong','String '--setup
10483:  PrimaryConfPathOptLong','String '--primary-config-path=
10484:  PrimaryConfPathOptShort','String '--pcp=
10485:  SecondaryConfPathOptLong','String '--secondary-config-path=
10486:  SecondaryConfPathOptShort','String '--scp=
10487:  NoSplashScreenOptLong','String '--no-splash-screen
10488:  NoSplashScreenOptShort','String '--nsc
10489:  StartedByStartLazarusOpt','String '--started-by-startlazarus
10490:  SkipLastProjectOpt','String '--skip-last-project
10491:  DebugLogOpt','String '--debug-log=
10492:  DebugLogOptEnable','String '--debug-enable=
10493:  LanguageOpt','String '--language=
10494:  LazarusDirOpt','String '--lazarusdir=
10495:  Procedure ParseCommandLine(aCmdLineParams:TStrings;out IDEPid:Int;out ShowSplashScreen:boolean);
10496:  Function GetCommandLineParameters( aCmdLineParams : TStrings; isStartLazarus:Boolean) : string
10497:  Function ExtractPrimaryConfigPath( aCmdLineParams : TStrings) : string
```

```
10498:  Function IsHelpRequested : Boolean
10499:  Function IsVersionRequested : boolean
10500:  Function GetLanguageSpecified : string
10501:  Function ParamIsOption( ParamIndex : integer; const Option : string) : boolean
10502:  Function ParamIsOptionPlusValue(ParamIndex:integer;const Option:string;out AValue:string):bool;
10503:  Procedure ParseNoGuiCmdLineParams
10504:  Function ExtractCmdLineFilenames : TStrings
10505: end;
10506:
10507:
10508: procedure SIRegister_LazFileUtils(CL: TPSPascalCompiler);
10509: begin
10510:  Function CompareFilenames( const Filename1, Filename2 : string) : integer
10511:  Function CompareFilenamesIgnoreCase( const Filename1, Filename2 : string) : integer
10512:  Function CompareFileExt( const Filename, Ext : string; CaseSensitive : boolean) : integer;
10513:  Function CompareFileExt1( const Filename, Ext : string) : integer;
10514:  Function CompareFilenameStarts( const Filename1, Filename2 : string) : integer
10515:  Function CompareFilenames(Filename1:PChar;Len1:integer; Filename2:PChar;Len2:integer):integer
10516:  Function CompareFilenamesP( Filename1, Filename2 : PChar; IgnoreCase : boolean) : integer
10517:  Function DirPathExists( DirectoryName : string) : boolean
10518:  Function DirectoryIsWritable( const DirectoryName : string) : boolean
10519:  Function ExtractFileNameOnly( const AFilename : string) : string
10520:  Function FilenameIsAbsolute( const TheFilename : string) : boolean
10521:  Function FilenameIsWinAbsolute( const TheFilename : string) : boolean
10522:  Function FilenameIsUnixAbsolute( const TheFilename : string) : boolean
10523:  Function ForceDirectory( DirectoryName : string) : boolean
10524:  Procedure CheckIfFileIsExecutable( const AFilename : string)
10525:  Procedure CheckIfFileIsSymlink( const AFilename : string)
10526:  Function FileIsText( const AFilename : string) : boolean
10527:  Function FileIsText2( const AFilename : string; out FileReadable : boolean) : boolean
10528:  Function FilenameIsTrimmed( const TheFilename : string) : boolean
10529:  Function FilenameIsTrimmed2( StartPos : PChar; NameLen : integer) : boolean
10530:  Function TrimFilename( const AFilename : string) : string
10531:  Function ResolveDots( const AFilename : string) : string
10532:  Procedure ForcePathDelims( var FileName : string)
10533:  Function GetForcedPathDelims( const FileName : string) : String
10534:  Function CleanAndExpandFilename( const Filename : string) : string
10535:  Function CleanAndExpandDirectory( const Filename : string) : string
10536:  Function TrimAndExpandFilename( const Filename : string; const BaseDir : string) : string
10537:  Function TrimAndExpandDirectory( const Filename : string; const BaseDir : string) : string
10538:  Function TryCreateRelativePath(const Dest,Source:String; UsePointDirectory:bool;
      AlwaysRequireSharedBaseFolder : Boolean; out RelPath : String) : Boolean
10539:  Function CreateRelativePath( const Filename,BaseDirectory:string; UsePointDirectory:boolean;
      AlwaysRequireSharedBaseFolder: Boolean) : string
10540:  Function FileIsInPath( const Filename, Path : string) : boolean
10541:  Function AppendPathDelim( const Path : string) : string
10542:  Function ChompPathDelim( const Path : string) : string
10543:  Function CreateAbsoluteSearchPath( const SearchPath, BaseDirectory : string) : string
10544:  Function CreateRelativeSearchPath( const SearchPath, BaseDirectory : string) : string
10545:  Function MinimizeSearchPath( const SearchPath : string) : string
10546:  Function FindPathInSearchPath(APath:PChar;APathLen:int;SearchPath:PChar;SearchPathLen:int):PChar;
10547:  (*Function FileExistsUTF8( const Filename : string) : boolean
10548:  Function FileAgeUTF8( const FileName : string) : Longint
10549:  Function DirectoryExistsUTF8( const Directory : string) : Boolean
10550:  Function ExpandFileNameUTF8( const FileName : string; BaseDir : string) : string
10551:  Function FindFirstUTF8(const Path:string; Attr: Longint; out Rslt : TSearchRec) : Longint
10552:  Function FindNextUTF8( var Rslt : TSearchRec) : Longint
10553:  Procedure FindCloseUTF8( var F : TSearchrec)
10554:  Function FileSetDateUTF8( const FileName : String; Age : Longint) : Longint
10555:  Function FileGetAttrUTF8( const FileName : String) : Longint
10556:  Function FileSetAttrUTF8( const Filename : String; Attr : longint) : Longint
10557:  Function DeleteFileUTF8( const FileName : String) : Boolean
10558:  Function RenameFileUTF8( const OldName, NewName : String) : Boolean
10559:  Function FileSearchUTF8( const Name, DirList : String; ImplicitCurrentDir : Boolean) : String
10560:  Function FileIsReadOnlyUTF8( const FileName : String) : Boolean
10561:  Function GetCurrentDirUTF8 : String
10562:  Function SetCurrentDirUTF8( const NewDir : String) : Boolean
10563:  Function CreateDirUTF8( const NewDir : String) : Boolean
10564:  Function RemoveDirUTF8( const Dir : String) : Boolean
10565:  Function ForceDirectoriesUTF8( const Dir : string) : Boolean
10566:  Function FileOpenUTF8( const FileName : string; Mode : Integer) : THandle
10567:  Function FileCreateUTF8( const FileName : string) : THandle;
10568:  Function FileCreateUTF81( const FileName : string; Rights : Cardinal) : THandle;
10569:  Function FileCreateUtf82( const FileName : String; ShareMode : Integer; Rights : Cardinal) : THandle;
10570:  Function FileSizeUtf8( const Filename : string) : int64
10571:  Function GetFileDescription( const AFilename : string) : string
10572:  Function GetAppConfigDirUTF8( Global : Boolean; Create : boolean) : string
10573:  Function GetAppConfigFileUTF8( Global : Boolean; SubDir : boolean; CreateDir : boolean) : string
10574:  Function GetTempFileNameUTF8( const Dir, Prefix : String) : String*)
10575:  Function IsUNCPath( const Path : String) : Boolean
10576:  Function ExtractUNCVolume( const Path : String) : String
10577:  Function ExtractFileRoot( FileName : String) : String
10578:  Function GetDarwinSystemFilename( Filename : string) : string
10579:  Procedure SplitCmdLineParams( const Params : string; ParamList : TStrings; ReadBackslash : boolean)
10580:  Function StrToCmdLineParam( const Param : string) : string
10581:  Function MergeCmdLineParams( ParamList : TStrings) : string
10582:  Procedure InvalidateFileStateCache( const Filename : string)
10583:  Function FindAllFiles(const SearchPath:String;SearchMask:String;SearchSubDirs:Boolean):TStringList);
10584:  Function FindAllDirectories( const SearchPath : string; SearchSubDirs : Boolean) : TStringList
```

```
10585:  Function ReadFileToString( const Filename : string) : string
10586:  type
10587:   TCopyFileFlag = ( cffOverwriteFile,
10588:     cffCreateDestDirectory, cffPreserveTime );
10589:   TCopyFileFlags = set of TCopyFileFlag;*)
10590:   TCopyFileFlag', '(cffOverwriteFile, cffCreateDestDirectory, cffPreserveTime)
10591:   TCopyFileFlags', 'set of TCopyFileFlag
10592:   Function CopyDirTree( const SourceDir, TargetDir : string; Flags : TCopyFileFlags) : Boolean
10593: end;
10594:
10595: procedure SIRegister_lazMasks(CL: TPSPascalCompiler);
10596: begin
10597:   TMaskCharType', '( mcChar, mcCharSet, mcAnyChar, mcAnyText )
10598:   SIRegister_TMask(CL);
10599:   SIRegister_TParseStringList(CL);
10600:   SIRegister_TMaskList(CL);
10601:  Function MatchesMask( const FileName, Mask : String; const CaseSensitive : Boolean) : Boolean
10602:  Function MatchesWindowsMask( const FileName, Mask : String; const CaseSensitive : Boolean) : Bool;
10603:  Function MatchesMaskList(const FileName,Mask:String;Separator:Char;const CaseSensitive:Boolean):Bool;
10604:  Function MatchesWindowsMaskList(const FileName,Mask:String;Separat:Char;const CaseSensitive:Bool):Bool;
10605: end;
10606:
10607: procedure SIRegister_JvShellHook(CL: TPSPascalCompiler);
10608: begin
10609:   //PShellHookInfo', '^TShellHookInfo // will not work
10610:   TShellHookInfo', 'record hwnd : THandle; rc : TRect; end
10611:   SHELLHOOKINFO', 'TShellHookInfo
10612:   LPSHELLHOOKINFO', 'PShellHookInfo
10613:   TJvShellHookEvent', 'Procedure ( Sender : TObject; var Msg : TMessage)
10614:   SIRegister_TJvShellHook(CL);
10615:  Function InitJvShellHooks : Boolean
10616:  Procedure UnInitJvShellHooks
10617: end;
10618:
10619: procedure SIRegister_JvExControls(CL: TPSPascalCompiler);
10620: begin
10621:   TDlgCode', '( dcWantAllKeys, dcWantArrows, dcWantChars, dcButton'
10622:    +', dcHasSetSel, dcWantTab, dcNative )
10623:   TDlgCodes', 'set of TDlgCode
10624:  'dcWantMessage',' dcWantAllKeys);
10625:   SIRegister_IJvExControl(CL);
10626:   SIRegister_IJvDenySubClassing(CL);
10627:   SIRegister_TStructPtrMessage(CL);
10628:  Procedure SetDotNetFrameColors( FocusedColor, UnfocusedColor : TColor)
10629:  Procedure DrawDotNetControl( Control : TWinControl; AColor : TColor; InControl : Boolean);
10630:  Procedure DrawDotNetControl1( DC : HDC; R : TRect; AColor : TColor; UseFocusedColor : Boolean);
10631:  Procedure HandleDotNetHighlighting(Control:TWinControl;const Msg:TMessage;MouseOver:Boolean;Color:TColor);
10632:  Function CreateWMMessage( Msg : Integer; WParam : Integer; LParam : Longint) : TMessage;
10633:  Function CreateWMMessage1( Msg : Integer; WParam : Integer; LParam : TControl) : TMessage;
10634:  Function SmallPointToLong( const Pt : TSmallPoint) : Longint
10635:  Function ShiftStateToKeyData( Shift : TShiftState) : Longint
10636:  Function GetFocusedControl( AControl : TControl) : TWinControl
10637:  Function DlgcToDlgCodes( Value : Longint) : TDlgCodes
10638:  Function DlgCodesToDlgc( Value : TDlgCodes) : Longint
10639:  Procedure GetHintColor( var HintInfo : THintInfo; AControl : TControl; HintColor : TColor)
10640:  Function DispatchIsDesignMsg( Control : TControl; var Msg : TMessage) : Boolean
10641:   SIRegister_TJvExControl(CL);
10642:   SIRegister_TJvExWinControl(CL);
10643:   SIRegister_TJvExCustomControl(CL);
10644:   SIRegister_TJvExGraphicControl(CL);
10645:   SIRegister_TJvExHintWindow(CL);
10646:   SIRegister_TJvExPubGraphicControl(CL);
10647: end;
10648:
10649: (*----------------------------------------------------------------------------*)
10650: procedure SIRegister_EncdDecd(CL: TPSPascalCompiler);
10651: begin
10652:  Procedure EncodeStream( Input, Output : TStream)
10653:  Procedure DecodeStream( Input, Output : TStream)
10654:  Function EncodeString1( const Input : string) : string
10655:  Function DecodeString1( const Input : string) : string
10656: end;
10657:
10658: (*----------------------------------------------------------------------------*)
10659: procedure SIRegister_SockAppReg(CL: TPSPascalCompiler);
10660: begin
10661:   SIRegister_TWebAppRegInfo(CL);
10662:   SIRegister_TWebAppRegList(CL);
10663:  Procedure GetRegisteredWebApps( AList : TWebAppRegList)
10664:  Procedure RegisterWebApp( const AFileName, AProgID : string)
10665:  Procedure UnregisterWebApp( const AProgID : string)
10666:  Function FindRegisteredWebApp( const AProgID : string) : string
10667:  Function CreateRegistry( InitializeNewFile : Boolean) : TCustomIniFile
10668:  'sUDPPort','String 'UDPPort
10669: end;
10670:
10671: procedure SIRegister_PJEnvVars(CL: TPSPascalCompiler);
10672: begin
10673:  // TStringDynArray', 'array of string
```

```
10674:  Function GetEnvVarValue( const VarName : string) : string
10675:  Function SetEnvVarValue( const VarName, VarValue : string) : Integer
10676:  Function DeleteEnvVar( const VarName : string) : Integer
10677:  Function CreateEnvBlock(const NewEnv:TStrings;const IncludeCurrent:Bool;const Buffer:string;const
        BufSize:Int):Int;
10678:  Function ExpandEnvVars( const Str : string) : string
10679:  Function GetAllEnvVars( const Vars : TStrings) : Integer
10680:  Procedure GetAllEnvVarNames( const Names : TStrings);
10681:  Function GetAllEnvVarNames1 : TStringDynArray;
10682:  Function EnvBlockSize : Integer
10683:   TPJEnvVarsEnum', 'Procedure ( const VarName : string; Data : TObject)
10684:   SIRegister_TPJEnvVarsEnumerator(CL);
10685:   SIRegister_TPJEnvVars(CL);
10686:   FindClass('TOBJECT'),'EPJEnvVars
10687:   FindClass('TOBJECT'),'EPJEnvVars
10688:  //Procedure Register
10689: end;
10690:
10691: (*----------------------------------------------------------------------------*)
10692: procedure SIRegister_PJConsoleApp(CL: TPSPascalCompiler);
10693: begin
10694:  'cOneSecInMS','LongInt'( 1000);
10695:  //'cDefTimeSlice','LongInt'( 50);
10696:  //'cDefMaxExecTime',' cOneMinInMS);
10697:  'cAppErrorMask','LongInt'( 1 shl 29);
10698:  Function IsApplicationError( const ErrCode : LongWord) : Boolean
10699:   TPJConsoleAppPriority', '( cpDefault, cpHigh, cpNormal, cpIdle, cpRealTime )
10700:   TPJConsoleColors', 'record Foreground : TPJConsoleColor; Background:TPJConsoleColor; end;
10701:  Function MakeConsoleColors( const AForeground, ABackground : TPJConsoleColor):TPJConsoleColors;
10702:  Function MakeConsoleColors1( const AForeground, ABackground : TColor) : TPJConsoleColors;
10703:  Function MakeConsoleColors2( const AForeground, ABackground : TAlphaColor) : TPJConsoleColors;
10704:  Function MakeSize( const ACX, ACY : LongInt) : TSize
10705:   SIRegister_TPJCustomConsoleApp(CL);
10706:   SIRegister_TPJConsoleApp(CL);
10707: end;
10708:
10709: procedure SIRegister_ip_misc(CL: TPSPascalCompiler);
10710: begin
10711:  INVALID_IP_ADDRESS','LongWord').SetUInt( $ffffffff);
10712:   t_encoding', '( uuencode, base64, mime )
10713:  Function internet_date( date : TDateTime) : string
10714:  Function lookup_hostname( const hostname : string) : longint
10715:  Function my_hostname : string
10716:  Function my_ip_address : longint
10717:  Function ip2string( ip_address : longint) : string
10718:  Function resolve_hostname( ip : longint) : string
10719:  Function address_from( const s : string; count : integer) : string
10720:  Function encode_base64( data : TStream) : TStringList
10721:  Function decode_base64( source : TStringList) : TMemoryStream
10722:  Function posn( const s, t : string; count : integer) : integer
10723:  Function poscn( c : char; const s : string; n : integer) : integer
10724:  Function filename_of( const s : string) : string
10725:  //Function trim( const s : string) : string
10726:  //Procedure setlength( var s : string; l : byte)
10727:  Function TimeZoneBias : longint
10728:  Function eight2seven_quoteprint( const s : string) : string
10729:  Function eight2seven_german( const s : string) : string
10730:  Function seven2eight_quoteprint( const s : string) : string end;
10731:   type in_addr', 'record s_bytes : array[1..4] of byte; end;
10732:  Function socketerror : cint
10733:  Function fpsocket( domain : cint; xtype : cint; protocol : cint) : cint
10734:  Function fprecv( s : cint; buf : ___pointer; len : size_t; flags : cint) : ssize_t
10735:  Function fpsend( s : cint; msg : ___pointer; len : size_t; flags : cint) : ssize_t
10736:  //Function fpbind( s : cint; addrx : psockaddr; addrlen : tsocklen) : cint
10737:  Function fplisten( s : cint; backlog : cint) : cint
10738:  //Function fpaccept( s : cint; addrx : psockaddr; addrlen : plongint) : cint
10739:  //Function fpconnect( s : cint; name : psockaddr; namelen : tsocklen) : cint
10740:  //Function fpgetsockname( s : cint; name : psockaddr; namelen : psocklen) : cint
10741:  Function NetAddrToStr( Entry : in_addr) : String
10742:  Function HostAddrToStr( Entry : in_addr) : String
10743:  Function StrToHostAddr( IP : String) : in_addr
10744:  Function StrToNetAddr( IP : String) : in_addr
10745:  SOL_SOCKET','LongWord').SetUInt( $ffff);
10746:   cint8', 'shortint
10747:   cuint8', 'byte
10748:   cchar', 'cint8
10749:   cschar', 'cint8
10750:   cuchar', 'cuint8
10751:   cint16', 'smallint
10752:   cuint16', 'word
10753:   cshort', 'cint16
10754:   csshort', 'cint16
10755:   cushort', 'cuint16
10756:   cint32', 'longint
10757:   cuint32', 'longword
10758:   cint', 'cint32
10759:   csint', 'cint32
10760:   cuint', 'cuint32
10761:   csigned', 'cint
```

```
10762:   cunsigned', 'cuint
10763:   cint64', 'int64
10764:   clonglong', 'cint64
10765:   cslonglong', 'cint64
10766:   cbool', 'longbool
10767:   cfloat', 'single
10768:   cdouble', 'double
10769:   clongdouble', 'extended
10770:
10771: procedure SIRegister_uLkJSON(CL: TPSPascalCompiler);
10772: begin
10773:   TlkJSONtypes','(jsBase,jsNumber,jsString,jsBoolean,jsNull,jsList,jsObject )
10774:   SIRegister_TlkJSONdotnetclass(CL);
10775:   SIRegister_TlkJSONbase(CL);
10776:   SIRegister_TlkJSONnumber(CL);
10777:   SIRegister_TlkJSONstring(CL);
10778:   SIRegister_TlkJSONboolean(CL);
10779:   SIRegister_TlkJSONnull(CL);
10780:   TlkJSONFuncEnum', 'Procedure ( ElName : string; Elem : TlkJSONba'
10781:    +'se; data : TObject; var Continue : Boolean)
10782:   SIRegister_TlkJSONcustomlist(CL);
10783:   SIRegister_TlkJSONlist(CL);
10784:   SIRegister_TlkJSONobjectmethod(CL);
10785:   TlkHashItem', 'record hash : cardinal; index : Integer; end
10786:   TlkHashFunction', 'Function ( const ws : WideString) : cardinal
10787:   SIRegister_TlkHashTable(CL);
10788:   SIRegister_TlkBalTree(CL);
10789:   SIRegister_TlkJSONobject(CL);
10790:   SIRegister_TlkJSON(CL);
10791:   SIRegister_TlkJSONstreamed(CL);
10792:  Function GenerateReadableText( vObj : TlkJSONbase; var vLevel : Integer): string
10793: end;
10794:
10795: procedure SIRegister_ZSysUtils(CL: TPSPascalCompiler);
10796: begin
10797:   TZListSortCompare', 'Function (Item1, Item2 : TObject): Integer
10798:   SIRegister_TZSortedList(CL);
10799:  Function zFirstDelimiter( const Delimiters, Str : string) : Integer
10800:  Function zLastDelimiter( const Delimiters, Str : string) : Integer
10801:  //Function MemLCompUnicode( P1, P2 : PWideChar; Len : Integer) : Boolean
10802:  //Function MemLCompAnsi( P1, P2 : PAnsiChar; Len : Integer) : Boolean
10803:  Function zStartsWith( const Str, SubStr : WideString) : Boolean;
10804:  Function StartsWith1( const Str, SubStr : RawByteString) : Boolean;
10805:  Function EndsWith( const Str, SubStr : WideString) : Boolean;
10806:  Function EndsWith1( const Str, SubStr : RawByteString) : Boolean;
10807:  Function SQLStrToFloatDef( Str : RawByteString; Def : Extended) : Extended;
10808:  Function SQLStrToFloatDef1( Str : String; Def : Extended) : Extended;
10809:  Function SQLStrToFloat( const Str : AnsiString) : Extended
10810:  //Function BufferToStr( Buffer : PWideChar; Length : LongInt) : string;
10811:  //Function BufferToStr1( Buffer : PAnsiChar; Length : LongInt) : string;
10812:  Function BufferToBytes( Buffer : TObject; Length : LongInt) : TByteDynArray
10813:  Function StrToBoolEx( Str : string) : Boolean
10814:  Function BoolToStrEx( Bool : Boolean) : String
10815:  Function IsIpAddr( const Str : string) : Boolean
10816:  Function zSplitString( const Str, Delimiters : string) : TStrings
10817:  Procedure PutSplitString( List : TStrings; const Str, Delimiters : string)
10818:  Procedure AppendSplitString( List : TStrings; const Str, Delimiters : string)
10819:  Function ComposeString( List : TStrings; const Delimiter : string) : string
10820:  Function FloatToSQLStr( Value : Extended) : string
10821:  Procedure PutSplitStringEx( List : TStrings; const Str, Delimiter : string)
10822:  Function SplitStringEx( const Str, Delimiter : string) : TStrings
10823:  Procedure AppendSplitStringEx( List : TStrings; const Str, Delimiter : string)
10824:  Function zBytesToStr( const Value : TByteDynArray) : AnsiString
10825:  Function zStrToBytes( const Value : AnsiString) : TByteDynArray;
10826:  Function StrToBytes1( const Value : UTF8String) : TByteDynArray;
10827:  Function StrToBytes2( const Value : RawByteString) : TByteDynArray;
10828:  Function StrToBytes3( const Value : WideString) : TByteDynArray;
10829:  Function StrToBytes4( const Value : UnicodeString) : TByteDynArray;
10830:  Function BytesToVar( const Value : TByteDynArray) : Variant
10831:  Function VarToBytes( const Value : Variant) : TByteDynArray
10832:  Function AnsiSQLDateToDateTime( const Value : string) : TDateTime
10833:  Function TimestampStrToDateTime( const Value : string) : TDateTime
10834:  Function DateTimeToAnsiSQLDate( Value : TDateTime; WithMMSec : Boolean) : string
10835:  Function EncodeCString( const Value : string) : string
10836:  Function DecodeCString( const Value : string) : string
10837:  Function zReplaceChar( const Source, Target : Char; const Str : string) : string
10838:  Function MemPas( Buffer : PChar; Length : LongInt) : string
10839:  Procedure DecodeSQLVersioning(const FullVersion:Int;out MajorVersion:Int;out MinorVersion:Int;out
      SubVersion:Int);
10840:  Function EncodeSQLVersioning(const MajorVersion:Integer;const MinorVersion:Integer;const
      SubVersion:Integer):Int;
10841:  Function FormatSQLVersion( const SQLVersion : Integer) : String
10842:  Function ZStrToFloat( Value : AnsiChar) : Extended;
10843:  Function ZStrToFloat1( Value : AnsiString) : Extended;
10844:  Procedure ZSetString( const Src : AnsiChar; var Dest : AnsiString);
10845:  Procedure ZSetString1( const Src : AnsiChar; const Len : Cardinal; var Dest : AnsiString);
10846:  Procedure ZSetString2( const Src : AnsiChar; var Dest : UTF8String);
10847:  Procedure ZSetString3( const Src : AnsiChar; const Len : Cardinal; var Dest : UTF8String);
10848:  Procedure ZSetString4( const Src : AnsiChar; const Len : Cardinal; var Dest : WideString);
```

```
10849:  Procedure ZSetString5( const Src : AnsiChar; var Dest : RawByteString);
10850:  Procedure ZSetString6( const Src : AnsiChar; const Len : Cardinal; var Dest : RawByteString);
10851: end;
10852:
10853: unit uPSI_ZEncoding;
10854:  Function StringToAnsiEx( const s : String; const FromCP, ToCP : Word) : RawByteString
10855:  Function AnsiToStringEx( const s : RawByteString; const FromCP, ToCP : Word) : String
10856:  Function ZRawToUnicode( const S : RawByteString; const CP : Word) : WideString
10857:  Function ZUnicodeToRaw( const US : WideString; CP : Word) : RawByteString
10858:  Function ZConvertAnsiToRaw( const Src : AnsiString; const RawCP : Word) : RawByteString
10859:  Function ZConvertRawToAnsi( const Src : RawByteString; const RawCP : Word) : AnsiString
10860:  Function ZConvertAnsiToUTF8( const Src : AnsiString) : UTF8String
10861:  Function ZConvertUTF8ToAnsi( const Src : UTF8String) : AnsiString
10862:  Function ZConvertRawToUTF8( const Src : RawByteString; const CP : Word) : UTF8String
10863:  Function ZConvertUTF8ToRaw( const Src : UTF8String; const CP : Word) : RawByteString
10864:  Function ZConvertRawToString( const Src : RawByteString; const RawCP, StringCP : Word) : String
10865:  Function ZConvertStringToRaw( const Src : String; const StringCP, RawCP : Word) : RawByteString
10866:  Function ZConvertStringToRawWithAutoEncode(const Src:String;const StringCP,RawCP:Word):RawByteString;
10867:  Function ZConvertUTF8ToString( const Src : UTF8String; const StringCP : Word) : String
10868:  Function ZConvertStringToUTF8( const Src : String; const StringCP : Word) : UTF8String
10869:  Function ZConvertStringToUTF8WithAutoEncode( const Src : String; const StringCP: Word): UTF8String
10870:  Function ZConvertStringToAnsi( const Src : String; const StringCP : Word) : AnsiString
10871:  Function ZConvertStringToAnsiWithAutoEncode( const Src : String; const StringCP: Word): AnsiString
10872:  Function ZConvertAnsiToString( const Src : AnsiString; const StringCP : Word) : String
10873:  Function ZConvertUnicodeToString( const Src : WideString; const StringCP : Word) : String
10874:  Function ZConvertUnicodeToString_CPUTF8( const Src : WideString; const StringCP : Word) : String
10875:  Function ZConvertStringToUnicode( const Src : String; const StringCP : Word) : WideString
10876:  Function ZConvertString_CPUTF8ToUnicode( const Src : String; const StringCP : Word) : WideString
10877:  Function ZConvertStringToUnicodeWithAutoEncode( const Src: String; const StringCP:Word):WideString
10878:  Function ZMoveAnsiToRaw( const Src : AnsiString; const RawCP : Word) : RawByteString
10879:  Function ZMoveRawToAnsi( const Src : RawByteString; const RawCP : Word) : AnsiString
10880:  Function ZMoveAnsiToUTF8( const Src : AnsiString) : UTF8String
10881:  Function ZMoveUTF8ToAnsi( const Src : UTF8String) : AnsiString
10882:  Function ZMoveRawToUTF8( const Src : RawByteString; const CP : Word) : UTF8String
10883:  Function ZMoveUTF8ToRaw( const Src : UTF8String; const CP : Word) : RawByteString
10884:  Function ZMoveStringToAnsi( const Src : String; const StringCP : Word) : AnsiString
10885:  Function ZMoveAnsiToString( const Src : AnsiString; const StringCP : Word) : String
10886:  Function ZMoveRawToString( const Src : RawByteString; const RawCP, StringCP : Word) : String
10887:  Function ZMoveStringToRaw( const Src : String; const StringCP, RawCP : Word) : RawByteString
10888:  Function ZMoveUTF8ToString( const Src : UTF8String; StringCP : Word) : String
10889:  Function ZMoveStringToUTF8( const Src : String; const StringCP : Word) : UTF8String
10890:  Function ZUnknownRawToUnicode( const S : RawByteString; const CP : Word) : WideString
10891:  Function ZUnknownRawToUnicodeWithAutoEncode( const S : RawByteString; const CP : Word) : WideString
10892:  Function ZUnicodeToUnknownRaw( const US : WideString; CP : Word) : RawByteString
10893:  Function ZDefaultSystemCodePage : Word
10894:  Function ZCompatibleCodePages( const CP1, CP2 : Word) : Boolean
10895:
10896:
10897: procedure SIRegister_BoldComUtils(CL: TPSPascalCompiler);
10898: begin
10899:  'RPC_C_AUTHN_LEVEL_DEFAULT','LongInt'( 0);
10900:  ('RPC_C_AUTHN_LEVEL_NONE','LongInt'( 1);
10901:  ('RPC_C_AUTHN_LEVEL_CONNECT','LongInt'( 2);
10902:  ('RPC_C_AUTHN_LEVEL_CALL','LongInt'( 3);
10903:  ('RPC_C_AUTHN_LEVEL_PKT','LongInt'( 4);
10904:  ('RPC_C_AUTHN_LEVEL_PKT_INTEGRITY','LongInt'( 5);
10905:  ('RPC_C_AUTHN_LEVEL_PKT_PRIVACY','LongInt'( 6);
10906:  {('alDefault','1 RPC_C_AUTHN_LEVEL_DEFAULT);
10907:  ('alNone','2 RPC_C_AUTHN_LEVEL_NONE);
10908:  ('alConnect','3 RPC_C_AUTHN_LEVEL_CONNECT);
10909:  ('alCall','4 RPC_C_AUTHN_LEVEL_CALL);
10910:  ('alPacket','5 RPC_C_AUTHN_LEVEL_PKT);
10911:  ('alPacketIntegrity','6 RPC_C_AUTHN_LEVEL_PKT_INTEGRITY);
10912:  ('alPacketPrivacy','7 RPC_C_AUTHN_LEVEL_PKT_PRIVACY);}
10913:  ('RPC_C_IMP_LEVEL_DEFAULT','LongInt'( 0);
10914:  ('RPC_C_IMP_LEVEL_ANONYMOUS','LongInt'( 1);
10915:  ('RPC_C_IMP_LEVEL_IDENTIFY','LongInt'( 2);
10916:  ('RPC_C_IMP_LEVEL_IMPERSONATE','LongInt'( 3);
10917:  ('RPC_C_IMP_LEVEL_DELEGATE','LongInt'( 4);
10918:  {('ilDefault','0 RPC_C_IMP_LEVEL_DEFAULT);
10919:  ('ilAnonymous','1 RPC_C_IMP_LEVEL_ANONYMOUS);
10920:  ('ilIdentity','2 RPC_C_IMP_LEVEL_IDENTIFY);
10921:  ('ilImpersonate','3 RPC_C_IMP_LEVEL_IMPERSONATE);
10922:  ('ilDelegate','4 RPC_C_IMP_LEVEL_DELEGATE);}
10923:  ('EOAC_NONE','LongWord').SetUInt( $0);
10924:  ('EOAC_DEFAULT','LongWord').SetUInt( $800);
10925:  ('EOAC_MUTUAL_AUTH','LongWord').SetUInt( $1);
10926:  ('EOAC_STATIC_CLOACKING','LongWord').SetUInt( $20);
10927:  ('EOAC_DYNAMIC_CLOAKING','LongWord').SetUInt( $40);
10928:  ('EOAC_ANY_AUTHORITY','LongWord').SetUInt( $80);
10929:  ('RPC_C_AUTHN_WINNT','LongInt'( 10);
10930:  ('RPC_C_AUTHNZ_NONE','LongInt'( 0);
10931:  ('RPC_C_AUTHNZ_NAME','LongInt'( 1);
10932:  ('RPC_C_AUTHNZ_DCE','LongInt'( 2);
10933:   FindClass('TOBJECT'),'EBoldCom
10934:  Function BoldVariantIsType( V : OleVariant; TypeCode : Integer) : Boolean
10935:  Function BoldMemoryToVariant( const Buffer, BufSize : Integer) : OleVariant
10936:  Function BoldStreamToVariant( Stream : TStream) : OleVariant
10937:  Function BoldStringsToVariant( Strings : TStrings) : OleVariant
```

```
10938:  Function BoldVariantToMemory( V : OleVariant; var Buffer, BufSize : Integer) : Integer
10939:  Function BoldVariantToStream( V : OleVariant; Stream : TStream) : Integer
10940:  Function BoldVariantArrayOfArraysOfStringToStrings( V : OleVariant; Strings : TStrings) : Integer
10941:  Function BoldVariantIsNamedValues( V : OleVariant) : Boolean
10942:  Function BoldCreateNamedValues(const Names:array of string;const Values:array of OleVariant):OleVariant;
10943:  Function BoldGetNamedValue( Data : OleVariant; const Name : string) : OleVariant
10944:  Procedure BoldSetNamedValue( Data : OleVariant; const Name : string; Value : OleVariant)
10945:  Function BoldCreateGUID : TGUID
10946:  Function BoldCreateComObject( const ClsId, IId : TGUID; out Obj : variant; out Res : HResult) : Boolean
10947:  Function BoldCreateRemoteComObject(const HostName:string;const ClsId,IId:TGUID;out Obj:variant;out
       Res:HRes):Bool;
10948:  Procedure BoldInitializeComSecurity( AuthenticationLevel, ImpersonationLevel : longint)
10949:  Procedure BoldSetSecurityForInterface(AuthenticationLevel,ImpersonationLevel:longint;Unk:IUnknown);
10950: end;
10951:
10952: (*----------------------------------------------------------------------------*)
10953: procedure SIRegister_BoldIsoDateTime(CL: TPSPascalCompiler);
10954: begin
10955:  Function ParseISODate( s : string) : TDateTime
10956:  Function ParseISODateTime( s : string) : TDateTime
10957:  Function ParseISOTime( str : string) : TDateTime
10958: end;
10959:
10960: (*----------------------------------------------------------------------------*)
10961: procedure SIRegister_BoldGUIDUtils(CL: TPSPascalCompiler);
10962: begin
10963:  Function BoldCreateGUIDAsString( StripBrackets : Boolean) : string
10964:  Function BoldCreateGUIDWithBracketsAsString : string
10965: end;
10966:
10967: procedure SIRegister_BoldFileHandler(CL: TPSPascalCompiler);
10968: begin
10969:   FindClass('TOBJECT'),'TBoldFileHandler
10970:   FindClass('TOBJECT'),'TBoldDiskFileHandler
10971:   //TBoldFileHandlerClass', 'class of TBoldFileHandler
10972:   TBoldInitializeFileContents', 'Procedure ( StringList : TStringList)
10973:   SIRegister_TBoldFileHandler(CL);
10974:   SIRegister_TBoldDiskFileHandler(CL);
10975:  Procedure BoldCloseAllFilehandlers
10976:  Procedure BoldRemoveUnchangedFilesFromEditor
10977:  Function BoldFileHandlerList : TBoldObjectArray
10978:  Function BoldFileHandlerForFile(path,FileName:String; ModuleType:TBoldModuleType;ShowInEditor:Bool;
       OnInitializeFileContents : TBoldInitializeFileContents) : TBoldFileHandler
10979: end;
10980:
10981: procedure SIRegister_BoldWinINet(CL: TPSPascalCompiler);
10982: begin
10983:   PCharArr', 'array of PChar
10984:  Function BoldInternetOpen(Agent:String;
       AccessType:integer;Proxy:string;ProxyByPass:String;Flags:integer):ptr);
10985:  Function BoldInternetOpenUrl(iNet:Pointer;URL: string; Headers:String;Flags,Context:cardinal):Pointer
10986:  Function BoldInternetReadFile(hFile:Pointer;Buff:Ptr;NumbOfBytesToRead:Card;var
       NumberOfBytesRead:Card):LongBool;
10987:  Function BoldInternetCloseHandle( HINet : Pointer) : LongBool
10988:  Function BoldHttpQueryInfo( hRequest : Pointer; InfoLevel : Cardinal; Buffer : Pointer; BufferLength :
       Cardinal; Reserved : Cardinal) : LongBool
10989:  Function BoldInternetQueryDataAvailable( hFile : Pointer; var NumberOfBytesAvailable : Cardinal; flags :
       Cardinal; Context : Cardinal) : LongBool
10990:  Function BoldHttpOpenRequest(hConnect: Pointer; Verb, ObjectName, Version, Referrer : String; AcceptTypes
       : PCharArr; Flags, Context : Cardinal) : Pointer
10991:  Function BoldHttpSendRequest(hRequest:Ptr;Headers:string;Optional:Ptr;OptionalLength:Cardinal): LongBool
10992:  Function BoldInternetErrorDlg(hWnd:HWND;hRequest:HINTERNET;dwError,dwFlags:DWORD;var lppvData:Ptr):DWORD
10993:  Function BoldInternetAttemptConnect( dwReserved : DWORD) : DWORD
10994:  Function BoldInternetConnect(hInet: HINTERNET;ServerName:string; nServerPort:INTERNET_PORT;
       Username:string; Password : string; dwService : DWORD; dwFlags : DWORD; dwContext : DWORD):HINTERNET
10995:  Function BoldInternetCrackUrl(Url:PChar;UrlLength,dwFlags:DWORD;var lpUrlComponents:TURLComponents):BOOL;
10996: end;
10997:
10998: procedure SIRegister_BoldQueryUserDlg(CL: TPSPascalCompiler);
10999: begin
11000:   TBoldQueryResult', '( qrYesAll, qrYes, qrNo, qrNoAll )
11001:   SIRegister_TfrmBoldQueryUser(CL);
11002:  Function QueryUser( const Title, Query : string) : TBoldQueryResult
11003: end;
11004:
11005: (*----------------------------------------------------------------------------*)
11006: procedure SIRegister_BoldQueue(CL: TPSPascalCompiler);
11007: begin
11008:  //('befIsInDisplayList',' BoldElementFlag0);
11009:  //('befStronglyDependedOfPrioritized',' BoldElementFlag1);
11010:  //('befFollowerSelected',' BoldElementFlag2);
11011:   FindClass('TOBJECT'),'TBoldQueue
11012:   FindClass('TOBJECT'),'TBoldQueueable
11013:   TBoldQueueDisplayMode', '( dmDisplayOne, dmDisplayAll )
11014:   SIRegister_TBoldQueueable(CL);
11015:   SIRegister_TBoldQueue(CL);
11016:  Function BoldQueueFinalized : Boolean
11017:  Function BoldInstalledQueue : TBoldQueue
11018: end;
```

```
11019:
11020: procedure SIRegister_Barcode(CL: TPSPascalCompiler);
11021: begin
11022:  const mmPerInch','Extended').setExtended( 25.4);
11023:   TBarcodeType', '( bcCode_2_5_interleaved, bcCode_2_5_industrial,'
11024:    +' bcCode_2_5_matrix, bcCode39, bcCode39Extended, bcCode128A, bcCode128B, bc'
11025:    +'Code128C, bcCode93, bcCode93Extended, bcCodeMSI, bcCodePostNet, bcCodeCoda'
11026:    +'bar, bcCodeEAN8, bcCodeEAN13, bcCodeUPC_A, bcCodeUPC_E0, bcCodeUPC_E1, bcC'
11027:    +'odeUPC_Supp2, bcCodeUPC_Supp5, bcCodeEAN128A, bcCodeEAN128B, bcCodeEAN128C
11028:   TBarLineType', '( white, black, black_half )
11029:   TBarcodeOption', '( bcoNone, bcoCode, bcoTyp, bcoBoth )
11030:   TShowTextPosition', '( stpTopLeft, stpTopRight, stpTopCenter, st'
11031:    +'pBottomLeft, stpBottomRight, stpBottomCenter )
11032:   TCheckSumMethod', '( csmNone, csmModulo10 )
11033:   SIRegister_TAsBarcode(CL);
11034:  Function CheckSumModulo10( const data : string) : string
11035:  Function ConvertMmToPixelsX( const Value : Double) : Integer
11036:  Function ConvertMmToPixelsY( const Value : Double) : Integer
11037:  Function ConvertInchToPixelsX( const Value : Double) : Integer
11038:  Function ConvertInchToPixelsY( const Value : Double) : Integer
11039: end;
11040:
11041: procedure SIRegister_Geometry(CL: TPSPascalCompiler);  //OpenGL
11042: begin
11043:    THomogeneousByteVector', 'array[0..3] of Byte
11044:   THomogeneousWordVector', 'array[0..3] of Word
11045:   THomogeneousIntVector', 'array[0..3] of Integer
11046:   THomogeneousFltVector', 'array[0..3] of single
11047:   THomogeneousDblVector', 'array[0..3] of double
11048:   THomogeneousExtVector', 'array[0..3] of extended
11049:   TAffineByteVector', 'array[0..2] of Byte
11050:   TAffineWordVector', 'array[0..2] of Word
11051:   TAffineIntVector', 'array[0..2] of Integer
11052:   TAffineFltVector', 'array[0..2] of single
11053:   TAffineDblVector', 'array[0..2] of double
11054:   TAffineExtVector', 'array[0..2] of extended
11055:   THomogeneousByteMatrix', 'array[0..3] of THomogeneousByteVector
11056:   THomogeneousWordMatrix', 'array[0..3] of THomogeneousWordVector
11057:   THomogeneousIntMatrix', 'array[0..3] of THomogeneousIntVector
11058:   THomogeneousFltMatrix', 'array[0..3] of THomogeneousFltVector
11059:   THomogeneousDblMatrix', 'array[0..3] of THomogeneousDblVector
11060:   THomogeneousExtMatrix', 'array[0..3] of THomogeneousExtVector
11061:   TAffineByteMatrix', 'array[0..2] of TAffineByteVector
11062:   TAffineWordMatrix', 'array[0..2] of TAffineWordVector
11063:   TAffineIntMatrix', 'array[0..2] of TAffineIntVector
11064:   TAffineFltMatrix', 'array[0..3] of TAffineFltVector
11065:   TAffineDblMatrix', 'array[0..3] of TAffineDblVector
11066:   TAffineExtMatrix', 'array[0..3] of TAffineExtVector
11067:   TMatrix4b', 'THomogeneousByteMatrix
11068:   TMatrix4w', 'THomogeneousWordMatrix
11069:   TMatrix4i', 'THomogeneousIntMatrix
11070:   TMatrix4f', 'THomogeneousFltMatrix
11071:   TMatrix4d', 'THomogeneousDblMatrix
11072:   TMatrix4e', 'THomogeneousExtMatrix
11073:   TMatrix3b', 'TAffineByteMatrix
11074:   TMatrix3w', 'TAffineWordMatrix
11075:   TMatrix3i', 'TAffineIntMatrix
11076:   TMatrix3f', 'TAffineFltMatrix
11077:   TMatrix3d', 'TAffineDblMatrix
11078:   TMatrix3e', 'TAffineExtMatrix
11079:   //'PMatrix', '^TMatrix // will not work
11080:   TMatrixGL', 'THomogeneousFltMatrix
11081:   THomogeneousMatrix', 'THomogeneousFltMatrix
11082:   TAffineMatrix', 'TAffineFltMatrix
11083:   TQuaternion', 'record Vector : TVector4f; end
11084:   TRectangle', 'record Left : integer; Top : integer; Width : inte'
11085:   +'ger; Height : Integer; end
11086:   TTransType', '( ttScaleX, ttScaleY, ttScaleZ, ttShearXY, ttShear'
11087:    +'XZ, ttShearYZ, ttRotateX, ttRotateY, ttRotateZ, ttTranslateX, ttTranslateY'
11088:    +', ttTranslateZ, ttPerspectiveX, ttPerspectiveY, ttPerspectiveZ, ttPerspectiveW )
11089:  'EPSILON','Extended').setExtended( 1E-100);
11090:  'EPSILON2','Extended').setExtended( 1E-50);
11091:  Function VectorAddGL( V1, V2 : TVectorGL) : TVectorGL
11092:  Function VectorAffineAdd( V1, V2 : TAffineVector) : TAffineVector
11093:  Function VectorAffineCombine(V1,V2:TAffineVector; F1, F2 : Single) : TAffineVector
11094:  Function VectorAffineDotProduct( V1, V2 : TAffineVector) : Single
11095:  Function VectorAffineLerp( V1, V2 : TAffineVector; t : Single) : TAffineVector
11096:  Function VectorAffineSubtract( V1, V2 : TAffineVector) : TAffineVector
11097:  Function VectorAngle( V1, V2 : TAffineVector) : Single
11098:  Function VectorCombine( V1, V2 : TVectorGL; F1, F2 : Single) : TVectorGL
11099:  Function VectorCrossProduct( V1, V2 : TAffineVector) : TAffineVector
11100:  Function VectorDotProduct( V1, V2 : TVectorGL) : Single
11101:  Function VectorLength( V : array of Single) : Single
11102:  Function VectorLerp( V1, V2 : TVectorGL; t : Single) : TVectorGL
11103:  Procedure VectorNegate( V : array of Single)
11104:  Function VectorNorm( V : array of Single) : Single
11105:  Function VectorNormalize( V : array of Single) : Single
11106:  Function VectorPerpendicular( V, N : TAffineVector) : TAffineVector
11107:  Function VectorReflect( V, N : TAffineVector) : TAffineVector
```

```
11108:  Procedure VectorRotate( var Vector : TVector4f; Axis : TVector3f; Angle : Single)
11109:  Procedure VectorScale( V : array of Single; Factor : Single)
11110:  Function VectorSubtractGL( V1, V2 : TVectorGL) : TVectorGL
11111:  Function CreateRotationMatrixX( Sine, Cosine : Single) : TMatrixGL
11112:  Function CreateRotationMatrixY( Sine, Cosine : Single) : TMatrixGL
11113:  Function CreateRotationMatrixZ( Sine, Cosine : Single) : TMatrixGL
11114:  Function CreateScaleMatrix( V : TAffineVector) : TMatrixGL
11115:  Function CreateTranslationMatrix( V : TVectorGL) : TMatrixGL
11116:  Procedure MatrixAdjoint( var M : TMatrixGL)
11117:  Function MatrixAffineDeterminant( M : TAffineMatrix) : Single
11118:  Procedure MatrixAffineTranspose( var M : TAffineMatrix)
11119:  Function MatrixDeterminant( M : TMatrixGL) : Single
11120:  Procedure MatrixInvert( var M : TMatrixGL)
11121:  Function MatrixMultiply( M1, M2 : TMatrixGL) : TMatrixGL
11122:  Procedure MatrixScale( var M : TMatrixGL; Factor : Single)
11123:  Procedure MatrixTranspose( var M : TMatrixGL)
11124:  Function QuaternionConjugate( Q : TQuaternion) : TQuaternion
11125:  Function QuaternionFromPoints( V1, V2 : TAffineVector) : TQuaternion
11126:  Function QuaternionMultiply( qL, qR : TQuaternion) : TQuaternion
11127:  Function QuaternionSlerp( QStart,QEnd:TQuaternion; Spin:Integer; t:Single):TQuaternion
11128:  Function QuaternionToMatrix( Q : TQuaternion) : TMatrixGL
11129:  Procedure QuaternionToPoints( Q : TQuaternion; var ArcFrom, ArcTo : TAffineVector)
11130:  Function ConvertRotation( Angles : TAffineVector) : TVectorGL
11131:  Function CreateRotationMatrix( Axis : TVector3f; Angle : Single) : TMatrixGL
11132:  //Function MatrixDecompose( M : TMatrixGL; var Tran : TTransformations) : Boolean
11133:  Function VectorAffineTransform( V : TAffineVector; M : TAffineMatrix) : TAffineVector
11134:  Function VectorTransform( V : TVector4f; M : TMatrixGL) : TVector4f;
11135:  Function VectorTransform1( V : TVector3f; M : TMatrixGL) : TVector3f;
11136:  Function MakeAffineDblVector( V : array of Double) : TAffineDblVector
11137:  Function MakeDblVector( V : array of Double) : THomogeneousDblVector
11138:  Function MakeAffineVector( V : array of Single) : TAffineVector
11139:  Function MakeQuaternion( Imag : array of Single; Real : Single) : TQuaternion
11140:  Function MakeVector( V : array of Single) : TVectorGL
11141:  Function PointInPolygonGL( xp, yp : array of Single; x, y : Single) : Boolean
11142:  Function VectorAffineDblToFlt( V : TAffineDblVector) : TAffineVector
11143:  Function VectorDblToFlt( V : THomogeneousDblVector) : THomogeneousVector
11144:  Function VectorAffineFltToDbl( V : TAffineVector) : TAffineDblVector
11145:  Function VectorFltToDbl( V : TVectorGL) : THomogeneousDblVector
11146:  Function ArcCosGL( X : Extended) : Extended
11147:  Function ArcSinGL( X : Extended) : Extended
11148:  Function ArcTan2GL( Y, X : Extended) : Extended
11149:  Function CoTanGL( X : Extended) : Extended
11150:  Function DegToRadGL( Degrees : Extended) : Extended
11151:  Function RadToDegGL( Radians : Extended) : Extended
11152:  Procedure SinCosGL( Theta : Extended; var Sin, Cos : Extended)
11153:  Function TanGL( X : Extended) : Extended
11154:  Function Turn( Matrix : TMatrixGL; Angle : Single) : TMatrixGL;
11155:  Function Turn1( Matrix : TMatrixGL; MasterUp : TAffineVector; Angle: Single): TMatrixGL;
11156:  Function Pitch( Matrix : TMatrixGL; Angle : Single) : TMatrixGL;
11157:  Function Pitch1( Matrix : TMatrixGL; MasterRight:TAffineVector;Angle:Single):TMatrixGL;
11158:  Function Roll( Matrix : TMatrixGL; Angle : Single) : TMatrixGL;
11159:  Function Roll1( Matrix:TMatrixGL; MasterDirection:TAffineVector;Angle:Single):TMatrixGL;
11160: end;
11161:
11162:
11163: procedure SIRegister_JclRegistry(CL: TPSPascalCompiler);
11164: begin
11165:  Function RegCreateKey( const RootKey : HKEY; const Key, Value : string) : Longint
11166:  Function RegDeleteEntry( const RootKey : HKEY; const Key, Name : string) : Boolean
11167:  Function RegDeleteKeyTree( const RootKey : HKEY; const Key : string) : Boolean
11168:  Function RegReadBool( const RootKey : HKEY; const Key, Name : string) : Boolean
11169:  Function RegReadBoolDef( const RootKey : HKEY; const Key, Name : string; Def : Boolean) : Boolean
11170:  Function RegReadInteger( const RootKey : HKEY; const Key, Name : string) : Integer
11171:  Function RegReadIntegerDef( const RootKey : HKEY; const Key, Name : string; Def : Integer) : Integer
11172:  Function RegReadString( const RootKey : HKEY; const Key, Name : string) : string
11173:  Function RegReadStringDef( const RootKey : HKEY; const Key, Name, Def : string) : string
11174:  Function RegReadDWORD( const RootKey : HKEY; const Key, Name : string) : Int64
11175:  Function RegReadDWORDDef( const RootKey : HKEY; const Key, Name : string; Def : Int64) : Int64
11176:  Procedure RegWriteBool( const RootKey : HKEY; const Key, Name : string; Value : Boolean)
11177:  Procedure RegWriteInteger( const RootKey : HKEY; const Key, Name : string; Value : Integer)
11178:  Procedure RegWriteString( const RootKey : HKEY; const Key, Name, Value : string)
11179:  Procedure RegWriteDWORD( const RootKey : HKEY; const Key, Name : string; Value : Int64)
11180:  Function RegGetValueNames( const RootKey : HKEY; const Key : string; const List : TStrings) : Boolean
11181:  Function RegGetKeyNames( const RootKey : HKEY; const Key : string; const List : TStrings) : Boolean
11182:  Function RegHasSubKeys( const RootKey : HKEY; const Key : string) : Boolean
11183:  Function RegKeyExists( const RootKey : HKEY; const Key : string) : Boolean
11184:   AddTypeS('TExecKind', '( ekMachineRun, ekMachineRunOnce, ekUserRun, ekUser'
11185:    +'RunOnce, ekServiceRun, ekServiceRunOnce )
11186:   AddClassN(FindClass('TOBJECT'),'EJclRegistryError
11187:  Function UnregisterAutoExec( ExecKind : TExecKind; const Name : string) : Boolean
11188:  Function RegisterAutoExec( ExecKind : TExecKind; const Name, Cmdline : string) : Boolean
11189:  Function RegSaveList(const RootKey:HKEY;const Key:string; const ListName:string;const
      Items:TStrings):Bool;
11190:  Function RegLoadList(const RootKey:HKEY;const Key:string;const ListName:string;const
      SaveTo:TStrings):Bool;
11191:  Function RegDelList( const RootKey:HKEY;const Key:string; const ListName:string): Boolean
11192: end;
11193:
11194: procedure SIRegister_JclCOM(CL: TPSPascalCompiler);
```

```
11195: begin
11196:  CLSID_StdComponentCategoriesMgr','TGUID '{0002E005-0000-0000-C000-000000000046}
11197:  CATID_SafeForInitializing','TGUID '{7DD95802-9882-11CF-9FA9-00AA006C42C4}
11198:  CATID_SafeForScripting','TGUID '{7DD95801-9882-11CF-9FA9-00AA006C42C4}
11199:  icMAX_CATEGORY_DESC_LEN','LongInt'( 128);
11200:   FindClass('TOBJECT'),'EInvalidParam
11201:  Function IsDCOMInstalled : Boolean
11202:  Function IsDCOMEnabled : Boolean
11203:  Function GetDCOMVersion : string
11204:  Function GetMDACVersion : string
11205:  Function GetMDACVersion2 : string
11206:  Function MarshalInterThreadInterfaceInVarArray(const iid:TIID;unk:IUnknown;var
       VarArray:OleVariant):HResult;
11207:  Function MarshalInterProcessInterfaceInStream(const iid:TIID;unk:IUnknown;var stm:IStream):HResult;
11208:  Function MarshalInterProcessInterfaceInVarArray(const iid:TIID;unk:IUnknown;var
       VarArray:OleVariant):HResult;
11209:  Function MarshalInterMachineInterfaceInStream( const iid:TIID;unk:IUnknown;var stm:IStream):HResult;
11210:  Function MarshalInterMachineInterfaceInVarArray(const iid:TIID;unk:IUnknown;var
       VarArray:OleVariant):HResult;
11211:  Function CreateComponentCategory( const CatID : TGUID; const sDescription : string) : HResult
11212:  Function RegisterCLSIDInCategory( const ClassID : TGUID; const CatID : TGUID) : HResult
11213:  Function UnRegisterCLSIDInCategory( const ClassID : TGUID; const CatID : TGUID) : HResult
11214:  Function ResetIStreamToStart( Stream : IStream) : Boolean
11215:  Function SizeOfIStreamContents( Stream : IStream) : Largeint
11216:  Function StreamToVariantArray( Stream : TStream) : OleVariant;
11217:  Function StreamToVariantArray1( Stream : IStream) : OleVariant;
11218:  Procedure VariantArrayToStream( VarArray : OleVariant; var Stream : TStream);
11219:  Procedure VariantArrayToStream1( VarArray : OleVariant; var Stream : IStream);
11220: end;
11221:
11222:
11223: procedure SIRegister_JclUnitConv_mX2(CL: TPSPascalCompiler);
11224: begin
11225:  Const('CelsiusFreezingPoint','Extended').setExtended( 0.0);
11226:  FahrenheitFreezingPoint','Extended').setExtended( 32.0);
11227:  KelvinFreezingPoint','Extended').setExtended( 273.15);
11228:  CelsiusAbsoluteZero','Extended').setExtended( - 273.15);
11229:  FahrenheitAbsoluteZero','Extended').setExtended( - 459.67);
11230:  KelvinAbsoluteZero','Extended').setExtended( 0.0);
11231:  DegPerCycle','Extended').setExtended( 360.0);
11232:  DegPerGrad','Extended').setExtended( 0.9);
11233:  DegPerRad','Extended').setExtended( 57.295779513082320876798154814105);
11234:  GradPerCycle','Extended').setExtended( 400.0);
11235:  GradPerDeg','Extended').setExtended( 1.1111111111111111111111111111111);
11236:  GradPerRad','Extended').setExtended( 63.661977236758134307553505349006);
11237:  RadPerCycle','Extended').setExtended( 6.2831853071795864769252867665590);
11238:  RadPerDeg','Extended').setExtended( 0.017453292519943295769236907684886);
11239:  RadPerGrad','Extended').setExtended( 0.015707963267948966192313216916398);
11240:  CyclePerDeg','Extended').setExtended( 0.002777777777777777777777777777778);
11241:  CyclePerGrad','Extended').setExtended( 0.0025);
11242:  CyclePerRad','Extended').setExtended( 0.15915494309189533576888376337251);
11243:  ArcMinutesPerDeg','Extended').setExtended( 60.0);
11244:  ArcSecondsPerArcMinute','Extended').setExtended( 60.0);
11245:  Function HowAOneLinerCanBiteYou( const Step, Max : Longint) : Longint
11246:  Function MakePercentage( const Step, Max : Longint) : Longint
11247:  Function CelsiusToKelvin( const T : double) : double
11248:  Function CelsiusToFahrenheit( const T : double) : double
11249:  Function KelvinToCelsius( const T : double) : double
11250:  Function KelvinToFahrenheit( const T : double) : double
11251:  Function FahrenheitToCelsius( const T : double) : double
11252:  Function FahrenheitToKelvin( const T : double) : double
11253:  Function CycleToDeg( const Cycles : double) : double
11254:  Function CycleToGrad( const Cycles : double) : double
11255:  Function CycleToRad( const Cycles : double) : double
11256:  Function DegToCycle( const Degrees : double) : double
11257:  Function DegToGrad( const Degrees : double) : double
11258:  Function DegToRad( const Degrees : double) : double
11259:  Function GradToCycle( const Grads : double) : double
11260:  Function GradToDeg( const Grads : double) : double
11261:  Function GradToRad( const Grads : double) : double
11262:  Function RadToCycle( const Radians : double) : double
11263:  Function RadToDeg( const Radians : double) : double
11264:  Function RadToGrad( const Radians : double) : double
11265:  Function DmsToDeg( const D, M : Integer; const S : double) : double
11266:  Function DmsToRad( const D, M : Integer; const S : double) : double
11267:  Procedure DegToDms( const Degrees : double; out D, M : Integer; out S : double)
11268:  Function DegToDmsStr( const Degrees : double; const SecondPrecision : Cardinal) : string
11269:  Procedure CartesianToPolar( const X, Y : double; out R, Phi : double)
11270:  Procedure PolarToCartesian( const R, Phi : double; out X, Y : double)
11271:  Procedure CartesianToCylinder( const X, Y, Z : double; out R, Phi, Zeta : double)
11272:  Procedure CartesianToSpheric( const X, Y, Z : double; out Rho, Phi, Theta : double)
11273:  Procedure CylinderToCartesian( const R, Phi, Zeta : double; out X, Y, Z : double)
11274:  Procedure SphericToCartesian( const Rho, Theta, Phi : double; out X, Y, Z : double)
11275:  Function CmToInch( const Cm : double) : double
11276:  Function InchToCm( const Inch : double) : double
11277:  Function FeetToMetre( const Feet : double) : double
11278:  Function MetreToFeet( const Metre : double) : double
11279:  Function YardToMetre( const Yard : double) : double
11280:  Function MetreToYard( const Metre : double) : double
```

```
11281:  Function NmToKm( const Nm : double) : double
11282:  Function KmToNm( const Km : double) : double
11283:  Function KmToSm( const Km : double) : double
11284:  Function SmToKm( const Sm : double) : double
11285:  Function LitreToGalUs( const Litre : double) : double
11286:  Function GalUsToLitre( const GalUs : double) : double
11287:  Function GalUsToGalCan( const GalUs : double) : double
11288:  Function GalCanToGalUs( const GalCan : double) : double
11289:  Function GalUsToGalUk( const GalUs : double) : double
11290:  Function GalUkToGalUs( const GalUk : double) : double
11291:  Function LitreToGalCan( const Litre : double) : double
11292:  Function GalCanToLitre( const GalCan : double) : double
11293:  Function LitreToGalUk( const Litre : double) : double
11294:  Function GalUkToLitre( const GalUk : double) : double
11295:  Function KgToLb( const Kg : double) : double
11296:  Function LbToKg( const Lb : double) : double
11297:  Function KgToOz( const Kg : double) : double
11298:  Function OzToKg( const Oz : double) : double
11299:  Function CwtUsToKg( const Cwt : double) : double
11300:  Function CwtUkToKg( const Cwt : double) : double
11301:  Function KaratToKg( const Karat : double) : double
11302:  Function KgToCwtUs( const Kg : double) : double
11303:  Function KgToCwtUk( const Kg : double) : double
11304:  Function KgToKarat( const Kg : double) : double
11305:  Function KgToSton( const Kg : double) : double
11306:  Function KgToLton( const Kg : double) : double
11307:  Function StonToKg( const STon : double) : double
11308:  Function LtonToKg( const Lton : double) : double
11309:  Function QrUsToKg( const Qr : double) : double
11310:  Function QrUkToKg( const Qr : double) : double
11311:  Function KgToQrUs( const Kg : double) : double
11312:  Function KgToQrUk( const Kg : double) : double
11313:  Function PascalToBar( const Pa : double) : double
11314:  Function PascalToAt( const Pa : double) : double
11315:  Function PascalToTorr( const Pa : double) : double
11316:  Function BarToPascal( const Bar : double) : double
11317:  Function AtToPascal( const At : double) : double
11318:  Function TorrToPascal( const Torr : double) : double
11319:  Function KnotToMs( const Knot : double) : double
11320:  Function HpElectricToWatt( const HpE : double) : double
11321:  Function HpMetricToWatt( const HpM : double) : double
11322:  Function MsToKnot( const ms : double) : double
11323:  Function WattToHpElectric( const W : double) : double
11324:  Function WattToHpMetric( const W : double) : double
11325:  function getBigPI: string;    //PI of 1000 numbers
11326:
11327: procedure SIRegister_devcutils(CL: TPSPascalCompiler);
11328: begin
11329:  Function CDExecuteFile( const FileName, Params, DefaultDir : string; ShowCmd : Integer) : THandle
11330:  Procedure CDCopyFile( const FileName, DestName : string)
11331:  Procedure CDMoveFile( const FileName, DestName : string)
11332:  Function MakeCommaTextToColor( Text : string; Index : Integer; DefaultColor : TColor) : TColor
11333:  Procedure CDDeleteFiles( Sender : TObject; s : string)
11334:  Function CDGetTempDir : string
11335:  Function CDGetFileSize( FileName : string) : longint
11336:  Function GetFileTime( FileName : string) : longint
11337:  Function GetShortName( FileName : string) : string
11338:  Function GetFullName( FileName : string) : string
11339:  Function WinReboot : boolean
11340:  Function WinDir : String
11341:  Function RunFile( FileToRun : string; Params : string; Dir : string; Wait : boolean) : cardinal
11342:  Function RunFile_( Cmd, WorkDir : string; Wait : boolean) : Boolean
11343:  Function devExecutor : TdevExecutor
11344: end;
11345:
11346: procedure SIRegister_FileAssocs(CL: TPSPascalCompiler);
11347: begin
11348:  Procedure CheckAssociations // AssociationsCount','LongInt'( 7);
11349:  Procedure Associate( Index : integer)
11350:  Procedure UnAssociate( Index : integer)
11351:  Function IsAssociated( Index : integer) : boolean
11352:  Function CheckFiletype( const extension, filetype, description, verb, serverapp : string) : boolean
11353:  Procedure RegisterFiletype( const extension, filetype, description, verb, serverapp,IcoNum: string)
11354:  Procedure RegisterDDEServer( const filetype, verb, topic, servername, macro : string)
11355:  procedure RefreshIcons;
11356: function GetShadeColor(ACanvas: TCanvas; clr: TColor; Value: integer): TColor;
11357: function MergColor(Colors: Array of TColor): TColor;
11358: function NewColor(ACanvas: TCanvas; clr: TColor; Value: integer): TColor;
11359: procedure DimBitmap(ABitmap: TBitmap; Value: integer);
11360: function GrayColor(ACanvas: TCanvas; clr: TColor; Value: integer): TColor;
11361: function GetInverseColor(AColor: TColor): TColor;
11362: procedure GrayBitmap(ABitmap: TBitmap; Value: integer);
11363: procedure DrawBitmapShadow(B: TBitmap; ACanvas: TCanvas;X,Y: integer;ShadowColor: TColor);
11364: procedure DrawCheckMark(ACanvas: TCanvas; X, Y: integer);
11365: Procedure GetSystemMenuFont(Font: TFont);
11366: end;
11367:
11368: //************************unit uPSI_JvHLParser;*****************************
11369: function IsStringConstant(const St: string): Boolean;
```

```
11370: function IsIntConstant(const St: string): Boolean;
11371: function IsRealConstant(const St: string): Boolean;
11372: function IsIdentifier(const ID: string): Boolean;
11373: function GetStringValue(const St: string): string;
11374: procedure ParseString(const S: string; Ss: TStrings);
11375: function IsStringConstantW(const St: WideString): Boolean;
11376: function IsIntConstantW(const St: WideString): Boolean;
11377: function IsRealConstantW(const St: WideString): Boolean;
11378: function IsIdentifierW(const ID: WideString): Boolean;
11379: function GetStringValueW(const St: WideString): WideString;
11380: procedure ParseStringW(const S: WideString; Ss: TStrings);
11381:
11382:
11383: //************************unit uPSI_JclMapi;*****************************
11384:
11385: Function JclSimpleSendMail( const ARecipient,AName,ASubject, ABody : string; const AAttachment :
       TFileName; ShowDialog : Boolean; AParentWND : HWND) : Boolean
11386: Function JclSimpleSendFax( const ARecipient, AName,ASubject, ABody : string; const AAttachment :
       TFileName; ShowDialog : Boolean; AParentWND : HWND) : Boolean
11387: Function JclSimpleBringUpSendMailDialog(const ASubject,ABody:string;const
       AAttach:TFileName;AParentWND:HWND):Bool
11388: Function MapiCheck( const Res : DWORD; IgnoreUserAbort : Boolean) : DWORD
11389: Function MapiErrorMessage( const ErrorCode : DWORD) : string
11390:
11391: procedure SIRegister_IdNTLM(CL: TPSPascalCompiler);
11392: begin
11393:   //'Pdes_key_schedule', '^des_key_schedule // will not work
11394:  Function BuildType1Message( ADomain, AHost : String) : String
11395:  Function BuildType3Message(ADomain,AHost,AUsername:WideString;APassword,ANonce:String):String
11396:  Procedure RegisterAuthenticationMethod( MethodName : String; AuthClass : TIdAuthenticationClass)
11397:  Function FindAuthClass( AuthName : String) : TIdAuthenticationClass
11398: GBase64CodeTable','string'ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz0123456789+/
11399: GXXECodeTable','string'+-0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz
11400: GUUECodeTable','string'`!"#$%&''()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_
11401: end;
11402:
11403: procedure SIRegister_WDosSocketUtils(CL: TPSPascalCompiler);
11404: begin
11405: ('IpAny','LongWord').SetUInt( $00000000);
11406:  IpLoopBack','LongWord').SetUInt( $7F000001);
11407:  IpBroadcast','LongWord').SetUInt( $FFFFFFFF);
11408:  IpNone','LongWord').SetUInt( $FFFFFFFF);
11409:  PortAny','LongWord( $0000);
11410:  SocketMaxConnections','LongInt'( 5);
11411:  TIpAddr', 'LongWord
11412:  TIpRec', 'record IpB1 : byte; IpB2 : byte; IpB3 : byte; IpB4 : Byte; end
11413:  Function HostToNetLong( HostLong : LongWord) : LongWord
11414:  Function HostToNetShort( HostShort : Word) : Word
11415:  Function NetToHostLong( NetLong : LongWord) : LongWord
11416:  Function NetToHostShort( NetShort : Word) : Word
11417:  Function StrToIp( Ip : string) : TIpAddr
11418:  Function IpToStr( Ip : TIpAddr) : string
11419: end;
11420:
11421: (*----------------------------------------------------------------------------*)
11422: procedure SIRegister_ALSMTPClient(CL: TPSPascalCompiler);
11423: begin
11424:   TAlSmtpClientAuthType', '( AlsmtpClientAuthNone, alsmtpClientAut'
11425:    +'hPlain, AlsmtpClientAuthLogin, AlsmtpClientAuthCramMD5, AlsmtpClientAuthCr'
11426:    +'amSha1, AlsmtpClientAuthAutoSelect )
11427:   TAlSmtpClientAuthTypeSet', 'set of TAlSmtpClientAuthType
11428:   SIRegister_TAlSmtpClient(CL);
11429: end;
11430:
11431: procedure SIRegister_WDosPlcUtils(CL: TPSPascalCompiler);
11432: begin
11433: 'TBitNo', 'Integer
11434:   TStByteNo', 'Integer
11435: TStationNo', 'Integer
11436: TInOutNo', 'Integer
11437: TIo', '( EE, AA, NE, NA )
11438: TBitSet', 'set of TBitNo
11439: TAddrKind', 'set of ( akBit0, akBit1, akBit2, akOut, akNot, akBus )
11440: TBitAddrRec', 'record Kind : TAddrKind; InOutNo : TInOutNo; ByteNo : Byte; end
11441: TBitAddr', 'LongInt
11442: TByteAddrRec', 'record Kind : TAddrKind; ByteNo : Byte; end
11443: TByteAddr', 'SmallInt
11444: TInOutState', '( iosInit, iosHalt, iosRun, iosError )
11445:  Function BitAddr(aIo: TIo; aInOutNo : TInOutNo; aByteNo : Byte; aBitNo : TBitNo) : TBitAddr
11446:  Function BusBitAddr(aIo:TIo;aInOutNo:TInOutNo;aStat:TStatNo;aStByteNo:TStByteNo;aBitNo:TBitNo):TBitAddr;
11447:  Procedure BitAddrToValues(aBitAdr:TBitAdr;var aIo:TIo;var aInOutNo:TInOutNo;var aByteNo:Byte;var
       aBitNo:TBitNo);
11448:  Function BitAddrToStr( Value : TBitAddr) : string
11449:  Function StrToBitAddr( const Value : string) : TBitAddr
11450:  Function ByteAddr( aIo : TIo; aInOutNo : TInOutNo; aByteNo : Byte) : TByteAddr
11451:  Function BusByteAddr(aIo:TIo;aInOutNo:TInOutNo;aStation:TStationNo;aStByteNo: TStByteNo):TByteAddr
11452:  Procedure ByteAddrToValues(aByteAddr:TByteAddr;var aIo:TIo;var aInOutNo:TInOutNo;var aByteNo:Byte)
11453:  Function ByteAddrToStr( Value : TByteAddr) : string
11454:  Function StrToByteAddr( const Value : string) : TByteAddr
```

```
11455:  Procedure IncByteAddr( var ByteAddr : TByteAddr; Increment : Integer)
11456:  Procedure DecByteAddr( var ByteAddr : TByteAddr; Decrement : Integer)
11457:  Function InOutStateToStr( State : TInOutState) : string
11458:  Function MasterErrorToStr( ErrorCode : TErrorCode) : string
11459:  Function SlaveErrorToStr( ErrorCode : TErrorCode) : string
11460: end;
11461:
11462: procedure SIRegister_WDosTimers(CL: TPSPascalCompiler);
11463: begin
11464: TIntFreq', '( ifNone, if32768, if16384, if8192, if4096, if2048, '
11465:    +'if1024, if512, if256, if128, if64, if32, if16, if8, if4, if2 )
11466: DpmiPmVector', 'Int64
11467:  'DInterval','LongInt'( 1000);
11468:  //'DEnabled','Boolean')BoolToStr( True);
11469:  'DIntFreq','string' if64
11470:  //'DMessages','Boolean if64);
11471:   SIRegister_TwdxCustomTimer(CL);
11472:   SIRegister_TwdxTimer(CL);
11473:   SIRegister_TwdxRtcTimer(CL);
11474:   SIRegister_TCustomIntTimer(CL);
11475:   SIRegister_TIntTimer(CL);
11476:   SIRegister_TRtcIntTimer(CL);
11477:  Function RealNow : TDateTime
11478:  Function MsToDateTime( MilliSecond : LongInt) : TDateTime
11479:  Function DateTimeToMs( Time : TDateTime) : LongInt
11480: end;
11481:
11482: procedure SIRegister_IdSysLogMessage(CL: TPSPascalCompiler);
11483: begin
11484: TIdSyslogPRI', 'Integer
11485: TIdSyslogFacility', '( sfKernel, sfUserLevel, sfMailSystem, sfSy'
11486:    +'stemDaemon, sfSecurityOne, sfSysLogInternal, sfLPR, sfNNTP, sfUUCP, sfCloc'
11487:    +'kDaemonOne, sfSecurityTwo, sfFTPDaemon, sfNTP, sfLogAudit, sfLogAlert, sfC'
11488:    +'lockDaemonTwo, sfLocalUseZero, sfLocalUseOne, sfLocalUseTwo, sfLocalUseThr'
11489:    +'ee, sfLocalUseFour, sfLocalUseFive, sfLocalUseSix, sfLocalUseSeven )
11490: TIdSyslogSeverity','(slEmergency,slAlert,slCritical,slError,slWarning,slNotice,slInformational,slDebug)
11491:   SIRegister_TIdSysLogMsgPart(CL);
11492:   SIRegister_TIdSysLogMessage(CL);
11493:  Function FacilityToString( AFac : TIdSyslogFacility) : string
11494:  Function SeverityToString( ASec : TIdsyslogSeverity) : string
11495:  Function NoToSeverity( ASev : Word) : TIdSyslogSeverity
11496:  Function logSeverityToNo( ASev : TIdSyslogSeverity) : Word
11497:  Function NoToFacility( AFac : Word) : TIdSyslogFacility
11498:  Function logFacilityToNo( AFac : TIdSyslogFacility) : Word
11499: end;
11500:
11501: procedure SIRegister_TextUtils(CL: TPSPascalCompiler);
11502: begin
11503:  'UWhitespace','String '(?:\s*)
11504:  Function StripSpaces( const AText : string) : string
11505:  Function CharCount( const AText : string; Ch : Char) : Integer
11506:  Function BalancedText( const AText : string; const Ch1, Ch2 : Char; const Count : Integer) : string
11507:  Function BalancedTextReg( const AText:string; const Ch1, Ch2 : Char; const Count : Integer) : string
11508: end;
11509:
11510:
11511: procedure SIRegister_ExtPascalUtils(CL: TPSPascalCompiler);
11512: begin
11513:  ExtPascalVersion','String '0.9.8
11514:   AddTypeS('TBrowser', '( brUnknown, brIE, brFirefox, brChrome, brSafari, br'
11515:    +'Opera, brKonqueror, brMobileSafari )
11516:   AddTypeS('TCSSUnit', '( cssPX, cssPerc, cssEM, cssEX, cssIN, cssCM, cssMM, cssPT, cssPC, cssnone )
11517:   AddTypeS('TExtProcedure', 'Procedure
11518:  Function DetermineBrowser( const UserAgentStr : string) : TBrowser
11519:  Function ExtExtract(const Delims:array of string;var S:string;var Matches:TStringList;Remove:bool):bool;
11520:  Function ExtExplode( Delim : char; const S : string; Separator : char) : TStringList
11521:  Function FirstDelimiter( const Delimiters, S : string; Offset : integer) : integer
11522:  Function RPosEx( const Substr, Str : string; Offset : integer) : integer
11523:  Function CountStr( const Substr, Str : string; UntilStr : string) : integer
11524:  Function StrToJS( const S : string; UseBR : boolean) : string
11525:  Function CaseOf( const S : string; const Cases : array of string) : integer
11526:  Function RCaseOf( const S : string; const Cases : array of string) : integer
11527:  Function EnumToJSString( TypeInfo : PTypeInfo; Value : integer) : string
11528:  Function SetPaddings(Top:integer;Right:int;Bottom:intr;Left:integer;CSSUnit:TCSSUnit;Header:bool):string;
11529:  Function SetMargins(Top:integer;Right:int;Bottom:int;Left:integer;CSSUnit:TCSSUnit;Header:bool): string;
11530:  Function ExtBefore( const BeforeS, AfterS, S : string) : boolean
11531:  Function IsUpperCase( S : string) : boolean
11532:  Function BeautifyJS(const AScript:string;const StartingLevel:integer;SplitHTMLNewLine: boolean):string;
11533:  Function BeautifyCSS( const AStyle : string) : string
11534:  Function LengthRegExp( Rex : string; CountAll : Boolean) : integer
11535:  Function JSDateToDateTime( JSDate : string) : TDateTime
11536: end;
11537:
11538: procedure SIRegister_JclShell(CL: TPSPascalCompiler);
11539: begin
11540:   TSHDeleteOption', '( doSilent, doAllowUndo, doFilesOnly )
11541:   TSHDeleteOptions', 'set of TSHDeleteOption
11542:   TSHRenameOption', '( roSilent, roRenameOnCollision )
11543:   TSHRenameOptions', 'set of TSHRenameOption
```

```
11544:  Function SHDeleteFiles( Parent : HWND; const Files : string; Options : TSHDeleteOptions) : Boolean
11545:  Function SHDeleteFolder( Parent : HWND; const Folder : string; Options : TSHDeleteOptions) : Boolean
11546:  Function SHRenameFile( const Src, Dest : string; Options : TSHRenameOptions) : Boolean
11547:   TEnumFolderFlag', '( efFolders, efNonFolders, efIncludeHidden )
11548:   TEnumFolderFlags', 'set of TEnumFolderFlag
11549:   TEnumFolderRec', 'record DisplayName : string; Attributes : DWOR'
11550:    +'D; IconLarge : HICON; IconSmall : HICON; Item : PItemIdList; EnumIdList : '
11551:    +'IEnumIdList; Folder : IShellFolder; end
11552:  Function SHEnumFolderFirst(const Folder:string;Flags:TEnumFolderFlags;var F:TEnumFolderRec):Boolean;
11553:  Function SHEnumSpecialFolderFirst(SpecialFolder:DWORD;Flags:TEnumFolderFlags;var F:TEnumFolderRec):Bool;
11554:  Procedure SHEnumFolderClose( var F : TEnumFolderRec)
11555:  Function SHEnumFolderNext( var F : TEnumFolderRec) : Boolean
11556:  Function GetSpecialFolderLocation( const Folder : Integer) : string
11557:  Function DisplayPropDialog( const Handle : HWND; const FileName : string) : Boolean;
11558:  Function DisplayPropDialog1( const Handle : HWND; const Item : PItemIdList) : Boolean;
11559:  Function DisplayContextMenu( const Handle : HWND; const FileName : string; Pos : TPoint) : Boolean
11560:  Function OpenFolder( const Path : string; Parent : HWND) : Boolean
11561:  Function OpenSpecialFolder( FolderID : Integer; Parent : HWND) : Boolean
11562:  Function SHReallocMem( var P : Pointer; Count : Integer) : Boolean
11563:  Function SHAllocMem( out P : Pointer; Count : Integer) : Boolean
11564:  Function SHGetMem( var P : Pointer; Count : Integer) : Boolean
11565:  Function SHFreeMem( var P : Pointer) : Boolean
11566:  Function DriveToPidlBind( const DriveName : string; out Folder : IShellFolder) : PItemIdList
11567:  Function PathToPidl( const Path : string; Folder : IShellFolder) : PItemIdList
11568:  Function PathToPidlBind( const FileName : string; out Folder : IShellFolder) : PItemIdList
11569:  Function PidlBindToParent(const IdList:PItemIdList;out Folder:IShellFolder;out Last:PItemIdList):Bool;
11570:  Function PidlCompare( const Pidl1, Pidl2 : PItemIdList) : Boolean
11571:  Function PidlCopy( const Source : PItemIdList; out Dest : PItemIdList) : Boolean
11572:  Function PidlFree( var IdList : PItemIdList) : Boolean
11573:  Function PidlGetDepth( const Pidl : PItemIdList) : Integer
11574:  Function PidlGetLength( const Pidl : PItemIdList) : Integer
11575:  Function PidlGetNext( const Pidl : PItemIdList) : PItemIdList
11576:  Function PidlToPath( IdList : PItemIdList) : string
11577:  Function StrRetFreeMem( StrRet : TStrRet) : Boolean
11578:  Function StrRetToString( IdList : PItemIdList; StrRet : TStrRet; Free : Boolean) : string
11579:   PShellLink', '^TShellLink // will not work
11580:   TShellLink', 'record Arguments : string; ShowCmd : Integer; Work'
11581:    +'ingDirectory : string; IdList : PItemIDList; Target : string; Description '
11582:    +': string; IconLocation : string; IconIndex : Integer; HotKey : Word; end
11583:  Procedure ShellLinkFree( var Link : TShellLink)
11584:  Function ShellLinkResolve( const FileName : string; var Link : TShellLink) : HRESULT
11585:  Function ShellLinkCreate( const Link : TShellLink; const FileName : string) : HRESULT
11586:  Function ShellLinkCreateSystem(const Link:TShellLink;const Folder:Integer; const FileName:string):HRESULT;
11587:  Function ShellLinkGetIcon( const Link : TShellLink; const Icon : TIcon) : Boolean
11588:  Function SHDllGetVersion( const FileName : string; var Version : TDllVersionInfo) : Boolean
11589:  Function GetSystemIcon( IconIndex : Integer; Flags : Cardinal) : HICON
11590:  Function OverlayIcon( var Icon : HICON; Overlay : HICON; Large : Boolean) : Boolean
11591:  Function OverlayIconShortCut( var Large, Small : HICON) : Boolean
11592:  Function OverlayIconShared( var Large, Small : HICON) : Boolean
11593:  Function SHGetItemInfoTip( const Folder : IShellFolder; Item : PItemIdList) : string
11594:  Function ShellExecEx(const FileName:string;const Parameters:string;const Verb:string; CmdShow:Int):Bool;
11595:  Function ShellExec(Wnd: Integer;const Operation,FileName,Parameters,Directy:string;ShowCommand:Int):Bool;
11596:  Function ShellExecAndWait(const FileName:string;const Paramets:string;const Verb:string;CmdShow:Int):Bool;
11597:  Function ShellOpenAs( const FileName : string) : Boolean
11598:  Function ShellRasDial( const EntryName : string) : Boolean
11599:  Function ShellRunControlPanel( const NameOrFileName:string; AppletNumber:Integer):Boolean
11600:  Function GetFileNameIcon( const FileName : string; Flags : Cardinal) : HICON
11601:   TJclFileExeType', '( etError, etMsDos, etWin16, etWin32Gui, etWin32Con )
11602:  Function GetFileExeType( const FileName : TFileName) : TJclFileExeType
11603:  Function ShellFindExecutable( const FileName, DefaultDir : string) : string
11604:  Procedure keybd_event( bVk : Byte; bScan : Byte; dwFlags, dwExtraInfo : DWORD)
11605:  Function OemKeyScan( wOemChar : Word) : DWORD
11606:  Procedure mouse_event( dwFlags, dx, dy, dwData, dwExtraInfo : DWORD)
11607: end;
11608:
11609: procedure SIRegister_cXMLFunctions(CL: TPSPascalCompiler);
11610: begin
11611:  xmlVersion','String '1.0 FindClass('TOBJECT'),'Exml
11612:  //Function xmlValidChar( const Ch : AnsiChar) : Boolean;
11613:  Function xmlValidChar1( const Ch : UCS4Char) : Boolean;
11614:  Function xmlValidChar2( const Ch : WideChar) : Boolean;
11615:  Function xmlIsSpaceChar( const Ch : WideChar) : Boolean
11616:  Function xmlIsLetter( const Ch : WideChar) : Boolean
11617:  Function xmlIsDigit( const Ch : WideChar) : Boolean
11618:  Function xmlIsNameStartChar( const Ch : WideChar) : Boolean
11619:  Function xmlIsNameChar( const Ch : WideChar) : Boolean
11620:  Function xmlIsPubidChar( const Ch : WideChar) : Boolean
11621:  Function xmlValidName( const Text : UnicodeString) : Boolean
11622:  //xmlSpace','Char #$20 or  #$9 or  #$D or  #$A);
11623:  //Function xmlSkipSpace( var P : PWideChar) : Boolean
11624:  //Function xmlSkipEq( var P : PWideChar) : Boolean
11625:  //Function xmlExtractQuotedText( var P : PWideChar; var S : UnicodeString) : Boolean
11626:  //Function xmlGetEntityEncoding( const Buf : Pointer; const BufSize : Integer; out HeaderSize : Integer)
      : TUnicodeCodecClass
11627:  Function xmlResolveEntityReference( const RefName : UnicodeString) : WideChar
11628:  Function xmlTag( const Tag : UnicodeString) : UnicodeString
11629:  Function xmlEndTag( const Tag : UnicodeString) : UnicodeString
11630:  Function xmlAttrTag( const Tag : UnicodeString; const Attr : UnicodeString) : UnicodeString
11631:  Function xmlEmptyTag( const Tag, Attr : UnicodeString) : UnicodeString
```

```
11632:  Procedure xmlSafeTextInPlace( var Txt : UnicodeString)
11633:  Function xmlSafeText( const Txt : UnicodeString) : UnicodeString
11634:  Function xmlSpaceIndent( const IndentLength : Integer; const IndentLevel : Integer):UnicodeString
11635:  Function xmlTabIndent( const IndentLevel : Integer) : UnicodeString
11636:  Function xmlComment( const Comment : UnicodeString) : UnicodeString
11637:  Procedure SelfTestcXMLFunctions
11638: end;
11639:
11640: (*----------------------------------------------------------------------------*)
11641: procedure SIRegister_DepWalkUtils(CL: TPSPascalCompiler);
11642: begin
11643:  Function AWaitCursor : IUnknown
11644:  Function ChangeCursor( NewCursor : TCursor) : IUnknown
11645:  Procedure SuspendRedraw( AControl : TWinControl; Suspend : boolean)
11646:  Function YesNo( const ACaption, AMsg : string) : boolean
11647:  Procedure strTokenize( const S : string; Delims : TSysCharSet; Results : TStrings)
11648:  Function GetBorlandLibPath( Version : integer; ForDelphi : boolean) : string
11649:  Function GetExpandedLibRoot( Version : integer; ForDelphi : boolean) : string
11650:  Procedure GetPathList( Version : integer; ForDelphi : boolean; Strings : TStrings)
11651:  Procedure GetSystemPaths( Strings : TStrings)
11652:  Procedure MakeEditNumeric( EditHandle : integer)
11653: end;
11654:
11655: procedure SIRegister_yuvconverts(CL: TPSPascalCompiler);
11656: begin
11657:   AddTypeS('TVideoCodec','(vcUnknown,vcRGB,vcYUY2,vcUYVY,vcBTYUV,vcYV,U9,vcYUV12,vcY8,vcY211)
11658:  'BI_YUY2','LongWord( $32595559);
11659:  'BI_UYVY','LongWord').SetUInt( $59565955);
11660:  'BI_BTYUV','LongWord').SetUInt( $50313459);
11661:  'BI_YVU9','LongWord').SetUInt( $39555659);
11662:  'BI_YUV12','LongWord( $30323449);
11663:  'BI_Y8','LongWord').SetUInt( $20203859);
11664:  'BI_Y211','LongWord').SetUInt( $31313259);
11665:  Function BICompressionToVideoCodec( Value : DWord) : TVideoCodec
11666:  Function ConvertCodecToRGB(Codec:TVideoCodec;Src,Dst:Pointer;AWidth,AHeight:Integer):Boolean;
11667: end;
11668:
11669: (*----------------------------------------------------------------------------*)
11670: procedure SIRegister_AviCap(CL: TPSPascalCompiler);
11671: begin
11672:  'WM_USER','LongWord').SetUInt( $0400);
11673:  'WM_CAP_START','LongWord').SetUint($0400);
11674:  'WM_CAP_END','longword').SetUint($0400+85);
11675:  //WM_CAP_START+  85
11676:  //    WM_CAP_SET_CALLBACK_CAPCONTROL  = (WM_CAP_START+  85);
11677:  Function capSetCallbackOnError( hwnd : THandle; fpProc : LongInt) : LongInt
11678:  Function capSetCallbackOnStatus( hwnd : THandle; fpProc : LongInt) : LongInt
11679:  Function capSetCallbackOnYield( hwnd : THandle; fpProc : LongInt) : LongInt
11680:  Function capSetCallbackOnFrame( hwnd : THandle; fpProc : LongInt) : LongInt
11681:  Function capSetCallbackOnVideoStream( hwnd : THandle; fpProc : LongInt) : LongInt
11682:  Function capSetCallbackOnWaveStream( hwnd : THandle; fpProc : LongInt) : LongInt
11683:  Function capSetCallbackOnCapControl( hwnd : THandle; fpProc : LongInt) : LongInt
11684:  Function capSetUserData( hwnd : THandle; lUser : LongInt) : LongInt
11685:  Function capGetUserData( hwnd : THandle) : LongInt
11686:  Function capDriverConnect( hwnd : THandle; I : Word) : LongInt
11687:  Function capDriverDisconnect( hwnd : THandle) : LongInt
11688:  Function capDriverGetName( hwnd : THandle; szName : LongInt; wSize : Word) : LongInt
11689:  Function capDriverGetVersion( hwnd : THandle; szVer : LongInt; wSize : Word) : LongInt
11690:  Function capDriverGetCaps( hwnd : THandle; s : LongInt; wSize : Word) : LongInt
11691:  Function capFileSetCaptureFile( hwnd : THandle; szName : LongInt) : LongInt
11692:  Function capFileGetCaptureFile( hwnd : THandle; szName : LongInt; wSize : Word):LongInt
11693:  Function capFileAlloc( hwnd : THandle; dwSize : LongInt) : LongInt
11694:  Function capFileSaveAs( hwnd : THandle; szName : LongInt) : LongInt
11695:  Function capFileSetInfoChunk( hwnd : THandle; lpInfoChunk : LongInt) : LongInt
11696:  Function capFileSaveDIB( hwnd : THandle; szName : LongInt) : LongInt
11697:  Function capEditCopy( hwnd : THandle) : LongInt
11698:  Function capSetAudioFormat( hwnd : THandle; s : LongInt; wSize : Word) : LongInt
11699:  Function capGetAudioFormat( hwnd : THandle; s : LongInt; wSize : Word) : LongInt
11700:  Function capGetAudioFormatSize( hwnd : THandle) : LongInt
11701:  Function capDlgVideoFormat( hwnd : THandle) : LongInt
11702:  Function capDlgVideoSource( hwnd : THandle) : LongInt
11703:  Function capDlgVideoDisplay( hwnd : THandle) : LongInt
11704:  Function capDlgVideoCompression( hwnd : THandle) : LongInt
11705:  Function capGetVideoFormat( hwnd : THandle; s : LongInt; wSize : Word) : LongInt
11706:  Function capGetVideoFormatSize( hwnd : THandle) : LongInt
11707:  Function capSetVideoFormat( hwnd : THandle; s : LongInt; wSize : Word) : LongInt
11708:  Function capPreview( hwnd : THandle; f : Word) : LongInt
11709:  Function capPreviewRate( hwnd : THandle; wMS : Word) : LongInt
11710:  Function capOverlay( hwnd : THandle; f : Word) : LongInt
11711:  Function capPreviewScale( hwnd : THandle; f : Word) : LongInt
11712:  Function capGetStatus( hwnd : THandle; s : LongInt; wSize : Word) : LongInt
11713:  Function capSetScrollPos( hwnd : THandle; lpP : LongInt) : LongInt
11714:  Function capGrabFrame( hwnd : THandle) : LongInt
11715:  Function capGrabFrameNoStop( hwnd : THandle) : LongInt
11716:  Function capCaptureSequence( hwnd : THandle) : LongInt
11717:  Function capCaptureSequenceNoFile( hwnd : THandle) : LongInt
11718:  Function capCaptureStop( hwnd : THandle) : LongInt
11719:  Function capCaptureAbort( hwnd : THandle) : LongInt
11720:  Function capCaptureSingleFrameOpen( hwnd : THandle) : LongInt
```

```
11721:  Function capCaptureSingleFrameClose( hwnd : THandle) : LongInt
11722:  Function capCaptureSingleFrame( hwnd : THandle) : LongInt
11723:  Function capCaptureGetSetup( hwnd : THandle; s : LongInt; wSize : Word) : LongInt
11724:  Function capCaptureSetSetup( hwnd : THandle; s : LongInt; wSize : Word) : LongInt
11725:  Function capSetMCIDeviceName( hwnd : THandle; szName : LongInt) : LongInt
11726:  Function capGetMCIDeviceName( hwnd : THandle; szName : LongInt; wSize : Word) : LongInt
11727:  Function capPaletteOpen( hwnd : THandle; szName : LongInt) : LongInt
11728:  Function capPaletteSave( hwnd : THandle; szName : LongInt) : LongInt
11729:  Function capPalettePaste( hwnd : THandle) : LongInt
11730:  Function capPaletteAuto( hwnd : THandle; iFrames : Word; iColors : LongInt) : LongInt
11731:  Function capPaletteManual( hwnd : THandle; fGrab : Word; iColors : LongInt) : LongInt
11732:   //PCapDriverCaps', '^TCapDriverCaps // will not work
11733:   TCapDriverCaps', 'record wDeviceIndex : WORD; fHasOverlay : BOOL'
11734:    +'; fHasDlgVideoSource : BOOL; fHasDlgVideoFormat : BOOL; fHasDlgVideoDispla'
11735:    +'y : BOOL; fCaptureInitialized : BOOL; fDriverSuppliesPalettes : BOOL; hVid'
11736:    +'eoIn : THANDLE; hVideoOut : THANDLE; hVideoExtIn:THANDLE; hVideoExtOut:THANDLE; end
11737:   //PCapStatus', '^TCapStatus // will not work
11738:   TCapStatus', 'record uiImageWidth : UINT; uiImageHeight : UINT; '
11739:    +'fLiveWindow : BOOL; fOverlayWindow : BOOL; fScale : BOOL; ptScroll : TPOIN'
11740:    +'T; fUsingDefaultPalette : BOOL; fAudioHardware : BOOL; fCapFileExists : BO'
11741:    +'OL; dwCurrentVideoFrame : DWORD; dwCurrentVideoFramesDropped : DWORD; dwCu'
11742:    +'rrentWaveSamples : DWORD; dwCurrentTimeElapsedMS : DWORD; hPalCurrent : HP'
11743:    +'ALETTE; fCapturingNow : BOOL; dwReturn : DWORD; wNumVideoAllocated : WORD;'
11744:    +' wNumAudioAllocated : WORD; end
11745:   //PCaptureParms', '^TCaptureParms // will not work
11746:   TCaptureParms', 'record dwRequestMicroSecPerFrame : DWORD; fMake'
11747:    +'UserHitOKToCapture : BOOL; wPercentDropForError : WORD; fYield : BOOL; dwI'
11748:    +'ndexSize : DWORD; wChunkGranularity : WORD; fUsingDOSMemory : BOOL; wNumVi'
11749:    +'deoRequested : WORD; fCaptureAudio : BOOL; wNumAudioRequested : WORD; vKey'
11750:    +'Abort : WORD; fAbortLeftMouse : BOOL; fAbortRightMouse : BOOL; fLimitEnabl'
11751:    +'ed : BOOL; wTimeLimit : WORD; fMCIControl : BOOL; fStepMCIDevice : BOOL; d'
11752:    +'wMCIStartTime : DWORD; dwMCIStopTime : DWORD; fStepCaptureAt2x : BOOL; wSt'
11753:    +'epCaptureAverageFrames : WORD; dwAudioBufferSize : DWORD; fDisableWriteCac'
11754:    +'he : BOOL; AVStreamMaster : WORD; end
11755:  // PCapInfoChunk', '^TCapInfoChunk // will not work
11756:   //TCapInfoChunk', 'record fccInfoID : FOURCC; lpData : LongInt; cbData : LongInt; end
11757:  'CONTROLCALLBACK_PREROLL','LongInt'( 1);
11758:  'CONTROLCALLBACK_CAPTURING','LongInt'( 2);
11759:  Function capCreateCaptureWindow( lpszWindowName: PChar; dwStyle : DWord; x, y : Integer; nWidth, nHeight
       : Integer; hwndParent : THandle; nID : Integer) : THandle
11760:  Function
      capGetDriverDescription(wDriverIndex:DWord;lpszName:PChar;cbName:Integer;lpszVer:PChar;cbVer:Int):Bool;
11761:  'IDS_CAP_BEGIN','LongInt'( 300);
11762:  'IDS_CAP_END','LongInt'( 301);
11763:  'IDS_CAP_INFO','LongInt'( 401);
11764:  'IDS_CAP_OUTOFMEM','LongInt'( 402);
11765:  'IDS_CAP_FILEEXISTS','LongInt'( 403);
11766:  'IDS_CAP_ERRORPALOPEN','LongInt'( 404);
11767:  'IDS_CAP_ERRORPALSAVE','LongInt'( 405);
11768:  'IDS_CAP_ERRORDIBSAVE','LongInt'( 406);
11769:  'IDS_CAP_DEFAVIEXT','LongInt'( 407);
11770:  'IDS_CAP_DEFPALEXT','LongInt'( 408);
11771:  'IDS_CAP_CANTOPEN','LongInt'( 409);
11772:  'IDS_CAP_SEQ_MSGSTART','LongInt'( 410);
11773:  'IDS_CAP_SEQ_MSGSTOP','LongInt'( 411);
11774:  'IDS_CAP_VIDEDITERR','LongInt'( 412);
11775:  'IDS_CAP_READONLYFILE','LongInt'( 413);
11776:  'IDS_CAP_WRITEERROR','LongInt'( 414);
11777:  'IDS_CAP_NODISKSPACE','LongInt'( 415);
11778:  'IDS_CAP_SETFILESIZE','LongInt'( 416);
11779:  'IDS_CAP_SAVEASPERCENT','LongInt'( 417);
11780:  'IDS_CAP_DRIVER_ERROR','LongInt'( 418);
11781:  'IDS_CAP_WAVE_OPEN_ERROR','LongInt'( 419);
11782:  'IDS_CAP_WAVE_ALLOC_ERROR','LongInt'( 420);
11783:  'IDS_CAP_WAVE_PREPARE_ERROR','LongInt'( 421);
11784:  'IDS_CAP_WAVE_ADD_ERROR','LongInt'( 422);
11785:  'IDS_CAP_WAVE_SIZE_ERROR','LongInt'( 423);
11786:  'IDS_CAP_VIDEO_OPEN_ERROR','LongInt'( 424);
11787:  'IDS_CAP_VIDEO_ALLOC_ERROR','LongInt'( 425);
11788:  'IDS_CAP_VIDEO_PREPARE_ERROR','LongInt'( 426);
11789:  'IDS_CAP_VIDEO_ADD_ERROR','LongInt'( 427);
11790:  'IDS_CAP_VIDEO_SIZE_ERROR','LongInt'( 428);
11791:  'IDS_CAP_FILE_OPEN_ERROR','LongInt'( 429);
11792:  'IDS_CAP_FILE_WRITE_ERROR','LongInt'( 430);
11793:  'IDS_CAP_RECORDING_ERROR','LongInt'( 431);
11794:  'IDS_CAP_RECORDING_ERROR2','LongInt'( 432);
11795:  'IDS_CAP_AVI_INIT_ERROR','LongInt'( 433);
11796:  'IDS_CAP_NO_FRAME_CAP_ERROR','LongInt'( 434);
11797:  'IDS_CAP_NO_PALETTE_WARN','LongInt'( 435);
11798:  'IDS_CAP_MCI_CONTROL_ERROR','LongInt'( 436);
11799:  'IDS_CAP_MCI_CANT_STEP_ERROR','LongInt'( 437);
11800:  'IDS_CAP_NO_AUDIO_CAP_ERROR','LongInt'( 438);
11801:  'IDS_CAP_AVI_DRAWDIB_ERROR','LongInt'( 439);
11802:  'IDS_CAP_COMPRESSOR_ERROR','LongInt'( 440);
11803:  'IDS_CAP_AUDIO_DROP_ERROR','LongInt'( 441);
11804:  'IDS_CAP_STAT_LIVE_MODE','LongInt'( 500);
11805:  'IDS_CAP_STAT_OVERLAY_MODE','LongInt'( 501);
11806:  'IDS_CAP_STAT_CAP_INIT','LongInt'( 502);
11807:  'IDS_CAP_STAT_CAP_FINI','LongInt'( 503);
```

```
11808:  'IDS_CAP_STAT_PALETTE_BUILD','LongInt'( 504);
11809:  'IDS_CAP_STAT_OPTPAL_BUILD','LongInt'( 505);
11810:  'IDS_CAP_STAT_I_FRAMES','LongInt'( 506);
11811:  'IDS_CAP_STAT_L_FRAMES','LongInt'( 507);
11812:  'IDS_CAP_STAT_CAP_L_FRAMES','LongInt'( 508);
11813:  'IDS_CAP_STAT_CAP_AUDIO','LongInt'( 509);
11814:  'IDS_CAP_STAT_VIDEOCURRENT','LongInt'( 510);
11815:  'IDS_CAP_STAT_VIDEOAUDIO','LongInt'( 511);
11816:  'IDS_CAP_STAT_VIDEOONLY','LongInt'( 512);
11817:  'IDS_CAP_STAT_FRAMESDROPPED','LongInt'( 513);
11818:  'AVICAP32','String 'AVICAP32.dll
11819: end;
11820:
11821: procedure SIRegister_ALFcnMisc(CL: TPSPascalCompiler);
11822: begin
11823:  Function AlBoolToInt( Value : Boolean) : Integer
11824:  Function ALMediumPos( LTotal, LBorder, LObject : integer) : Integer
11825:  Function AlIsValidEmail( const Value : AnsiString) : boolean
11826:  Function AlLocalDateTimeToGMTDateTime( const aLocalDateTime : TDateTime) : TdateTime
11827:  Function ALInc( var x : integer; Count : integer) : Integer
11828:  function ALCopyStr(const aSourceString: AnsiString; aStart, aLength: Integer): AnsiString
11829:  function ALGetStringFromFile(filename: AnsiString; const ShareMode: Word = fmShareDenyWrite):AnsiString;
11830:  procedure ALSaveStringtoFile(Str: AnsiString; filename: AnsiString);
11831:  Function ALIsInteger(const S: AnsiString): Boolean;
11832:  function ALIsDecimal(const S: AnsiString): boolean;
11833:  Function ALStringToWideString(const S: AnsiString; const aCodePage: Word): WideString;
11834:  function AlWideStringToString(const WS: WideString; const aCodePage: Word): AnsiString;
11835:  function  ALQuotedStr(const S: AnsiString; const Quote: AnsiChar = ''''): AnsiString;
11836:  function  ALDequotedStr(const S: AnsiString; AQuote: AnsiChar): AnsiString;
11837:  function  AlUTF8removeBOM(const S: AnsiString): AnsiString;
11838:  Function ALRandomStr1(const aLength: Longint; const aCharset: Array of Char): AnsiString;
11839:  Function ALRandomStr(const aLength: Longint): AnsiString;
11840:  Function ALRandomStrU1(const aLength: Longint; const aCharset: Array of Char): String;
11841:  Function ALRandomStrU(const aLength: Longint): String;
11842: end;
11843:
11844: procedure SIRegister_ALJSONDoc(CL: TPSPascalCompiler);
11845: begin
11846:  Procedure ALJSONToTStrings(const AJsonStr:AnsiString;aLst:TALStrings; const aNullStr:AnsiString;const
      aTrueStr: AnsiString; const aFalseStr : AnsiString)
11847: end;
11848:
11849: procedure SIRegister_ALWindows(CL: TPSPascalCompiler);
11850: begin
11851:   _ALMEMORYSTATUSEX', 'record dwLength : DWORD; dwMemoryLoad : DWO'
11852:    +'RD; ullTotalPhys : Int64; ullAvailPhys : Int64; ullTotalPageFile : Int64; '
11853:    +'ullAvailPageFile : Int64; ullTotalVirtual : Int64; ullAvailVirtual : Int64'
11854:    +'; ullAvailExtendedVirtual : Int64; end
11855:   TALMemoryStatusEx', '_ALMEMORYSTATUSEX
11856:  Function ALGlobalMemoryStatusEx( var lpBuffer : TALMEMORYSTATUSEX) : BOOL
11857:  Function ALInterlockedExchange64( var Target : LONGlONG; Value : LONGLONG) : LONGLONG
11858:  'INVALID_SET_FILE_POINTER','LongInt'( DWORD ( - 1 ));
11859:  'QUOTA_LIMITS_HARDWS_MIN_DISABLE','LongWord').SetUInt( $2);
11860:  'QUOTA_LIMITS_HARDWS_MIN_ENABLE','LongWord').SetUInt( $1);
11861:  'QUOTA_LIMITS_HARDWS_MAX_DISABLE','LongWord').SetUInt( $8);
11862:  'QUOTA_LIMITS_HARDWS_MAX_ENABLE','LongWord').SetUInt( $4);
11863: end;
11864:
11865: procedure SIRegister_IPCThrd(CL: TPSPascalCompiler);
11866: begin
11867:   SIRegister_THandledObject(CL);
11868:   SIRegister_TEvent(CL);
11869:   SIRegister_TMutex(CL);
11870:   SIRegister_TSharedMem(CL);
11871:  'TRACE_BUF_SIZE','LongInt'( 200 * 1024);
11872:  'TRACE_BUFFER','String 'TRACE_BUFFER
11873:  'TRACE_MUTEX','String 'TRACE_MUTEX
11874:   //PTraceEntry', '^TTraceEntry // will not work
11875:   SIRegister_TIPCTracer(CL);
11876:  'MAX_CLIENTS','LongInt'( 6);
11877:  'IPCTIMEOUT','LongInt'( 2000);
11878:  'IPCBUFFER_NAME','String 'BUFFER_NAME
11879:  'BUFFER_MUTEX_NAME','String 'BUFFER_MUTEX
11880:  'MONITOR_EVENT_NAME','String 'MONITOR_EVENT
11881:  'CLIENT_EVENT_NAME','String 'CLIENT_EVENT
11882:  'CONNECT_EVENT_NAME','String 'CONNECT_EVENT
11883:  'CLIENT_DIR_NAME','String 'CLIENT_DIRECTORY
11884:  'CLIENT_DIR_MUTEX','String 'DIRECTORY_MUTEX
11885:   FindClass('TOBJECT'),'EMonitorActive
11886:   FindClass('TOBJECT'),'TIPCThread
11887:   TEventKind', '( evMonitorAttach, evMonitorDetach, evMonitorSigna'
11888:    +'l, evMonitorExit, evClientStart, evClientStop, evClientAttach, evClientDet'
11889:    +'ach, evClientSwitch, evClientSignal, evClientExit )
11890:   TClientFlag', '( cfError, cfMouseMove, cfMouseDown, cfResize, cfAttach )
11891:   TClientFlags', 'set of TClientFlag
11892:   //PEventData', '^TEventData // will not work
11893:   TEventData', 'record X : SmallInt; Y : SmallInt; Flag : TClientF'
11894:    +'lag; Flags : TClientFlags; end
11895:   TConnectEvent', 'Procedure ( Sender : TIPCThread; Connecting : Boolean)
```

```
11896:   TDirUpdateEvent', 'Procedure ( Sender : TIPCThread)
11897:   TIPCNotifyEvent', 'Procedure ( Sender : TIPCThread; Data : TEventData)
11898:   //PIPCEventInfo', '^TIPCEventInfo // will not work
11899:   TIPCEventInfo','record FID:Integer;FKind:TEventKind;FData:TEventData;end
11900:   SIRegister_TIPCEvent(CL);
11901:   //PClientDirRecords', '^TClientDirRecords // will not work
11902:   SIRegister_TClientDirectory(CL);
11903:   TIPCState', '( stInActive, stDisconnected, stConnected )
11904:   SIRegister_TIPCThread(CL);
11905:   SIRegister_TIPCMonitor(CL);
11906:   SIRegister_TIPCClient(CL);
11907:  Function IsMonitorRunning( var Hndl : THandle) : Boolean
11908: end;
11909:
11910: (*----------------------------------------------------------------------------*)
11911: procedure SIRegister_ALGSMComm(CL: TPSPascalCompiler);
11912: begin
11913:   SIRegister_TAlGSMComm(CL);
11914:  Function AlGSMComm_BuildPDUMessage( aSMSCenter, aSMSAddress, aMessage : AnsiString) : AnsiString
11915:  Procedure AlGSMComm_DecodePDUMessage(aPDUMessage:AnsiString;var aSMSCenter,aSMSAddress,
       AMessage:AnsiString);
11916:  Function AlGSMComm_UnicodeToGSM7BitDefaultAlphabet( aMessage : WideString) : AnsiString
11917:  Function AlGSMComm_GSM7BitDefaultAlphabetToUnicode(aMess:AnsiString;const
       UseGreekAlphabet:Bool):Widestring;
11918:  function ALMatchesMask(const Filename, Mask: AnsiString): Boolean;
11919:  end;
11920:
11921: procedure SIRegister_ALHttpCommon(CL: TPSPascalCompiler);
11922: begin
11923:   TALHTTPPropertyChangeEvent','Procedure(sender:Tobject;const PropertyIndex:Integer;
11924:   TALHTTPProtocolVersion', '( HTTPpv_1_0, HTTPpv_1_1 )
11925:   TALHTTPMethod','(HTTPmt_Get,HTTPmt_Post,HTTPmt_Head,HTTPmt_Trace,HTTPmt_Put,HTTPmt_Delete);
11926:   TInternetScheme', 'integer
11927:   TALIPv6Binary', 'array[1..16] of Char;
11928:  // TALIPv6Binary = array[1..16] of ansiChar;
11929:  //   TInternetScheme = Integer;
11930:   SIRegister_TALHTTPRequestHeader(CL);
11931:   SIRegister_TALHTTPCookie(CL);
11932:   SIRegister_TALHTTPCookieCollection(CL);
11933:   SIRegister_TALHTTPResponseHeader(CL);
11934:  Function ALHTTPDecode( const AStr : AnsiString) : AnsiString
11935:  Procedure ALHTTPEncodeParamNameValues( ParamValues : TALStrings)
11936: // Procedure ALExtractHTTPFields(Separators, WhiteSpace, Quotes:TSysCharSet;
       Content:PAnsiChar;Strings:TALStrings;StripQuotes:Boolean;
11937: // Procedure ALExtractHeaderFields( Separators,WhiteSpace, Quotes : TSysCharSet; Content : PAnsiChar;
       Strings : TALStrings; Decode : Boolean; StripQuotes : Boolean)
11938: // Procedure ALExtractHeaderFieldsWithQuoteEscaped(Separators,WhiteSpace,
       Quotes:TSysCharSet;Content:PAnsiChar;Strings : TALStrings; Decode : Boolean; StripQuotes : Boolean)
11939:  Function AlRemoveShemeFromUrl( aUrl : AnsiString) : ansiString
11940:  Function AlExtractShemeFromUrl( aUrl : AnsiString) : TInternetScheme
11941:  Function AlExtractHostNameFromUrl( aUrl : AnsiString) : AnsiString
11942:  Function AlExtractDomainNameFromUrl( aUrl : AnsiString) : AnsiString
11943:  Function AlExtractUrlPathFromUrl( aUrl : AnsiString) : AnsiString
11944:  Function AlInternetCrackUrl( aUrl : AnsiString; var SchemeName,HostName,UserName,Password,UrlPath,
       ExtraInfo : AnsiString; var PortNumber : integer) : Boolean;
11945:  Function AlInternetCrackUrl1( aUrl : AnsiString; var SchemeName, HostName, UserName, Password,UrlPath,
       Anchor : AnsiString; Query : TALStrings; var PortNumber : integer) : Boolean;
11946:  Function AlInternetCrackUrl2(var Url:AnsiString;var Anchor:AnsiString;Query:TALStrings):Boolean;
11947:  Function AlRemoveAnchorFromUrl( aUrl : AnsiString; var aAnchor : AnsiString) : AnsiString;
11948:  Function AlRemoveAnchorFromUrl1( aUrl : AnsiString) : AnsiString;
11949:  Function AlCombineUrl( RelativeUrl, BaseUrl : AnsiString) : AnsiString;
11950:  Function AlCombineUrl1(RelativeUrl, BaseUrl, Anchor : AnsiString; Query:TALStrings) : AnsiString;
11951:  Function ALGmtDateTimeToRfc822Str( const aValue : TDateTime) : AnsiString
11952:  Function ALDateTimeToRfc822Str( const aValue : TDateTime) : AnsiString
11953:  Function ALTryRfc822StrToGMTDateTime( const S : AnsiString; out Value : TDateTime) : Boolean
11954:  Function ALRfc822StrToGMTDateTime( const s : AnsiString) : TDateTime
11955:  Function ALTryIPV4StrToNumeric( aIPv4Str : ansiString; var aIPv4Num : Cardinal) : Boolean
11956:  Function ALIPV4StrToNumeric( aIPv4 : ansiString) : Cardinal
11957:  Function ALNumericToIPv4Str( aIPv4 : Cardinal) : ansiString
11958:  Function ALZeroIpV6 : TALIPv6Binary
11959:  Function ALTryIPV6StrToBinary( aIPv6Str : ansiString; var aIPv6Bin : TALIPv6Binary) : Boolean
11960:  Function ALIPV6StrTobinary( aIPv6 : ansiString) : TALIPv6Binary
11961:  Function ALBinaryToIPv6Str( aIPv6 : TALIPv6Binary) : ansiString
11962:  Function ALBinaryStrToIPv6Binary( aIPV6BinaryStr : ansiString) : TALIPv6Binary
11963: end;
11964:
11965: procedure SIRegister_ALFcnHTML(CL: TPSPascalCompiler);
11966: begin
11967:  Procedure ALUTF8ExtractHTMLText(HtmlCont:AnsiStr;LstExtractedResourceText:TALStrings;const
       DecodeHTMLText:Bool;
11968:  Function ALUTF8ExtractHTMLText1(HtmlContent:AnsiString;const DecodeHTMLText:Boolean): AnsiString;
11969:  Function ALXMLCDataElementEncode( Src : AnsiString) : AnsiString
11970:  Function ALXMLTextElementEncode(Src : AnsiString; const useNumericReference : boolean) : AnsiString
11971:  Function ALUTF8XMLTextElementDecode( const Src : AnsiString) : AnsiString
11972:  Function ALUTF8HTMLEncode(const Src:AnsiStr;const EncodeASCIIHtmlEntities:Bool;const
       useNumRef:bool):AnsiString);
11973:  Function ALUTF8HTMLDecode( const Src : AnsiString) : AnsiString
11974:  Function ALJavascriptEncode( const Src : AnsiString; const useNumericReference : boolean) : AnsiString
11975:  Function ALUTF8JavascriptDecode( const Src : AnsiString) : AnsiString
```

```
11976:  Procedure ALHideHtmlUnwantedTagForHTMLHandleTagfunct(var HtmlContent:AnsiString; const
       DeleteBodyOfUnwantedTag : Boolean; const ReplaceUnwantedTagCharBy : AnsiChar)
11977:  Procedure ALCompactHtmlTagParams( TagParams : TALStrings)
11978: end;
11979:
11980: procedure SIRegister_ALInternetMessageCommon(CL: TPSPascalCompiler);
11981: begin
11982:   SIRegister_TALEMailHeader(CL);
11983:   SIRegister_TALNewsArticleHeader(CL);
11984:  Function AlParseEmailAddress(FriendlyEmail:AnsiString;var RealName:AString;const
       decodeRealName:Bool):AnsiString;
11985:  Function AlExtractEmailAddress( FriendlyEmail : AnsiString) : AnsiString
11986:  Function ALMakeFriendlyEmailAddress( aRealName, aEmail : AnsiString) : AnsiString
11987:  Function ALEncodeRealName4FriendlyEmailAddress( aRealName : AnsiString) : AnsiString
11988:  Function AlGenerateInternetMessageID : AnsiString;
11989:  Function AlGenerateInternetMessageID1( ahostname : AnsiString) : AnsiString;
11990:  Function ALDecodeQuotedPrintableString( src : AnsiString) : AnsiString
11991:  Function AlDecodeInternetMessageHeaderInUTF8(aHeaderStr:AnsiString;aDefaultCodePage:Integer):AnsiString;
11992: end;
11993:
11994: (*----------------------------------------------------------------------------*)
11995: procedure SIRegister_ALFcnWinSock(CL: TPSPascalCompiler);
11996: begin
11997:  Function ALHostToIP( HostName : AnsiString; var Ip : AnsiString):Boolean
11998:  Function ALIPAddrToName( IPAddr : AnsiString) : AnsiString
11999:  Function ALgetLocalIPs : TALStrings
12000:  Function ALgetLocalHostName : AnsiString
12001: end;
12002:
12003: procedure SIRegister_ALFcnCGI(CL: TPSPascalCompiler);
12004: begin
12005:  Procedure AlCGIInitDefaultServerVariablesFromWebRequest(WebRequest :
       TALWebRequest;ServerVariables:TALStrings);
12006:  Procedure AlCGIInitDefaultServerVariablesFromWebRequest1(WebRequest: TALWebRequest; ServerVariables :
       TALStrings; ScriptName, ScriptFileName : AnsiString; Url : AnsiString);
12007:  Procedure ALCGIInitDefaultServerVariables( ServerVariables : TALStrings);
12008:  Procedure AlCGIInitDefaultServerVariables1(ServerVars:TALStrings;ScriptName,
       ScriptFileName:AnsiString;Url:AnsiStr;
12009:  Procedure AlCGIInitServerVariablesFromWebRequest( WebRequest:TALWebRequest; ServerVariables : TALStrings;
       ScriptName, ScriptFileName : AnsiString; Url : AnsiString);
12010:  Procedure AlCGIExec( InterpreterFilename : AnsiString; ServerVariables : TALStrings; RequestContentStream
       : Tstream; ResponseContentStream : Tstream; ResponseHeader : TALHTTPResponseHeader);
12011:  Procedure AlCGIExec1(ScriptName,ScriptFileName, Url, X_REWRITE_URL, InterpreterFilename:AnsiString;
       WebRequest : TALIsapiRequest;
       overloadedCookies:AnsiString;overloadedQueryString:AnsiString;overloadedReferer: AnsiString;'
12012:  +'overloadedRequestContentStream:Tstream;var
       ResponseContentStr:AnsiString;ResponseHeader:TALHTTPResponseHeader;
12013:  Procedure AlCGIExec2(ScriptName,ScriptFileName,Url,X_REWRITE_URL,
       InterpreterFilename:AnsiString;WebRequest: TALIsapiRequest; var ResponseContentString : AnsiString;
       ResponseHeader : TALHTTPResponseHeader);
12014: end;
12015:
12016: procedure SIRegister_ALFcnExecute(CL: TPSPascalCompiler);
12017: begin
12018:   TStartupInfoA', 'TStartupInfo
12019:  'SE_CREATE_TOKEN_NAME','String'( 'SeCreateTokenPrivilege
12020:  SE_ASSIGNPRIMARYTOKEN_NAME','String 'SeAssignPrimaryTokenPrivilege
12021:  SE_LOCK_MEMORY_NAME','String)( 'SeLockMemoryPrivilege
12022:  SE_INCREASE_QUOTA_NAME','String 'SeIncreaseQuotaPrivilege
12023:  SE_UNSOLICITED_INPUT_NAME','String 'SeUnsolicitedInputPrivilege
12024:  SE_MACHINE_ACCOUNT_NAME','String 'SeMachineAccountPrivilege
12025:  SE_TCB_NAME','String 'SeTcbPrivilege
12026:  SE_SECURITY_NAME','String 'SeSecurityPrivilege
12027:  SE_TAKE_OWNERSHIP_NAME','String 'SeTakeOwnershipPrivilege
12028:  SE_LOAD_DRIVER_NAME','String 'SeLoadDriverPrivilege
12029:  SE_SYSTEM_PROFILE_NAME','String 'SeSystemProfilePrivilege
12030:  SE_SYSTEMTIME_NAME','String 'SeSystemtimePrivilege
12031:  SE_PROF_SINGLE_PROCESS_NAME','String 'SeProfileSingleProcessPrivilege
12032:  SE_INC_BASE_PRIORITY_NAME','String 'SeIncreaseBasePriorityPrivilege
12033:  SE_CREATE_PAGEFILE_NAME','String 'SeCreatePagefilePrivilege
12034:  SE_CREATE_PERMANENT_NAME','String 'SeCreatePermanentPrivilege
12035:  SE_BACKUP_NAME','String 'SeBackupPrivilege
12036:  SE_RESTORE_NAME','String 'SeRestorePrivilege
12037:  SE_SHUTDOWN_NAME','String 'SeShutdownPrivilege
12038:  SE_DEBUG_NAME','String 'SeDebugPrivilege
12039:  SE_AUDIT_NAME','String 'SeAuditPrivilege
12040:  SE_SYSTEM_ENVIRONMENT_NAME','String 'SeSystemEnvironmentPrivilege
12041:  SE_CHANGE_NOTIFY_NAME','String 'SeChangeNotifyPrivilege
12042:  SE_REMOTE_SHUTDOWN_NAME','String 'SeRemoteShutdownPrivilege
12043:  SE_UNDOCK_NAME','String 'SeUndockPrivilege
12044:  SE_SYNC_AGENT_NAME','String 'SeSyncAgentPrivilege
12045:  SE_ENABLE_DELEGATION_NAME','String 'SeEnableDelegationPrivilege
12046:  SE_MANAGE_VOLUME_NAME','String 'SeManageVolumePrivilege
12047:  Function AlGetEnvironmentString : AnsiString
12048:  Function ALWinExec32(const FileName,CurrentDir,
       Environment:AnsiString;InStream:Tstream;OutStream:TStream):Dword;
12049:  Function ALWinExec321(const FileName:AnsiString; InputStream:Tstream;OutputStream:TStream):Dword;
12050:  Function ALWinExecAndWait32( FileName : AnsiString; Visibility : integer) : DWORD
12051:  Function ALWinExecAndWait32V2( FileName : AnsiString; Visibility : integer) : DWORD
```

```
12052:  Function ALNTSetPrivilege( sPrivilege : AnsiString; bEnabled : Boolean) : Boolean
12053: end;
12054:
12055: procedure SIRegister_ALFcnFile(CL: TPSPascalCompiler);
12056: begin
12057:  Function AlEmptyDirectory(Directory:ansiString;SubDirectory:Bool;IgnoreFiles:array of AnsiString; const
       RemoveEmptySubDirectory : Boolean; const FileNameMask : ansiString; const MinFileAge : TdateTime):Boolean;
12058:  Function AlEmptyDirectory1( Directory : ansiString; SubDirectory : Boolean; const
       RemoveEmptySubDirectory:Bool; const FileNameMask : ansiString; const MinFileAge : TdateTime) : Boolean;
12059:  Function AlCopyDirectory( SrcDirectory, DestDirectory : ansiString; SubDirectory : Boolean; const
       FileNameMask : ansiString; const FailIfExists : Boolean) : Boolean
12060:  Function ALGetModuleName : ansistring
12061:  Function ALGetModuleFileNameWithoutExtension : ansistring
12062:  Function ALGetModulePath : ansiString
12063:  Function AlGetFileSize( const AFileName : ansistring) : int64
12064:  Function AlGetFileVersion( const AFileName : ansistring) : ansiString
12065:  Function ALGetFileCreationDateTime( const aFileName : Ansistring) : TDateTime
12066:  Function ALGetFileLastWriteDateTime( const aFileName : Ansistring) : TDateTime
12067:  Function ALGetFileLastAccessDateTime( const aFileName : Ansistring) : TDateTime
12068:  Procedure ALSetFileCreationDateTime( const aFileName : Ansistring; const aCreationDateTime : TDateTime)
12069:  Function ALIsDirectoryEmpty( const directory : ansiString) : boolean
12070:  Function ALFileExists( const Path : ansiString) : boolean
12071:  Function ALDirectoryExists( const Directory : Ansistring) : Boolean
12072:  Function ALCreateDir( const Dir : Ansistring) : Boolean
12073:  Function ALRemoveDir( const Dir : Ansistring) : Boolean
12074:  Function ALDeleteFile( const FileName : Ansistring) : Boolean
12075:  Function ALRenameFile( const OldName, NewName : ansistring) : Boolean
12076: end;
12077:
12078: procedure SIRegister_ALFcnMime(CL: TPSPascalCompiler);
12079: begin
12080:   NativeInt', 'Integer
12081:   NativeUInt', 'Cardinal
12082:  Function ALMimeBase64EncodeString( const S : AnsiString) : AnsiString
12083:  Function ALMimeBase64EncodeStringNoCRLF( const S : AnsiString) : AnsiString
12084:  Function ALMimeBase64DecodeString( const S : AnsiString) : AnsiString
12085:  Function ALMimeBase64EncodedSize( const InputSize : NativeInt) : NativeInt
12086:  Function ALMimeBase64EncodedSizeNoCRLF( const InputSize : NativeInt) : NativeInt
12087:  Function ALMimeBase64DecodedSize( const InputSize : NativeInt) : NativeInt
12088:  Procedure ALMimeBase64Encode( const InputBuffer : TByteDynArray; InputOffset : NativeInt; const
       InputByteCount : NativeInt; out OutputBuffer : TByteDynArray; OutputOffset : NativeInt)
12089:  Procedure ALMimeBase64EncodeNoCRLF( const InputBuffer : TByteDynArray; InputOffset : NativeInt; const
       InputByteCount : NativeInt; out OutputBuffer : TByteDynArray; OutputOffset : NativeInt)
12090:  Procedure ALMimeBase64EncodeFullLines( const InputBuffer : TByteDynArray; InputOffset : NativeInt; const
       InputByteCount : NativeInt; out OutputBuffer : TByteDynArray; OutputOffset : NativeInt)
12091:  Function ALMimeBase64Decode( const InputBuffer : TByteDynArray; InputOffset : NativeInt; const
       InputByteCount : NativeInt; out OutputBuffer : TByteDynArray; OutputOffset : NativeInt) : NativeInt;
12092:  Function ALMimeBase64DecodePartial( const InputBuffer : TByteDynArray; InputOffset : NativeInt; const
       InputByteCount : NativeInt; out OutputBuffer : TByteDynArray; OutputOffset : NativeInt;'
12093:  + 'var ByteBuffer : Cardinal; var ByteBufferSpace : Cardinal) : NativeInt;
12094:  Function ALMimeBase64DecodePartialEnd( out OutputBuffer : TByteDynArray; OutputOffset : NativeInt; const
       ByteBuffer : Cardinal; const ByteBufferSpace : Cardinal) : NativeInt;
12095:  Procedure ALMimeBase64Encode(const InputBuf:TByteDynArray;const InputByteCnt:NatInt;out
       OutputBuf:TByteDynArray);
12096:  Procedure ALMimeBase64EncodeNoCRLF(const InputBuffer:TByteDynArray; const InputByteCount:NativeInt;out
       OutputBuffer:TByteDynArray);
12097:  Procedure ALMimeBase64EncodeFullLines(const InputBuffer:TByteDynArray;const InputByteCount:NativeInt;out
       OutputBuffer:TByteDynArray);
12098:  Function ALMimeBase64Decode1(const InputBuffer:TByteDynArray;const InputByteCount:NativeInt;out
       OutputBuffer:TByteDynArray):NativeInt;
12099:  Function ALMimeBase64DecodePartial1(const InputBuffer:TByteDynArray;const InputByteCount:NativeInt;out
       OutputBuffer: TByteDynArray; var ByteBuffer : Cardinal; var ByteBufferSpace : Cardinal) : NativeInt;
12100:  Function ALMimeBase64DecodePartialEnd1(out OutputBuffer:TByteDynArray;const ByteBuffer:Cardinal;const
       ByteBufferSpace:Cardinal):NativeInt;
12101:  Procedure ALMimeBase64EncodeFile( const InputFileName, OutputFileName : TFileName)
12102:  Procedure ALMimeBase64EncodeFileNoCRLF( const InputFileName, OutputFileName : TFileName)
12103:  Procedure ALMimeBase64DecodeFile( const InputFileName, OutputFileName : TFileName)
12104:  Procedure ALMimeBase64EncodeStream( const InputStream : TStream; const OutputStream : TStream)
12105:  Procedure ALMimeBase64EncodeStreamNoCRLF( const InputStream : TStream; const OutputStream : TStream)
12106:  Procedure ALMimeBase64DecodeStream( const InputStream : TStream; const OutputStream : TStream)
12107:  'cALMimeBase64_ENCODED_LINE_BREAK','LongInt'( 76);
12108:  'cALMimeBase64_DECODED_LINE_BREAK','LongInt'( cALMimeBase64_ENCODED_LINE_BREAK div 4 * 3);
12109:  'cALMimeBase64_BUFFER_SIZE','LongInt'( cALMimeBase64_DECODED_LINE_BREAK * 3 * 4 * 4);
12110:  Procedure ALFillMimeContentTypeByExtList( AMIMEList : TALStrings)
12111:  Procedure ALFillExtByMimeContentTypeList( AMIMEList : TALStrings)
12112:  Function ALGetDefaultFileExtFromMimeContentType( aContentType : AnsiString) : AnsiString
12113:  Function ALGetDefaultMIMEContentTypeFromExt( aExt : AnsiString) : AnsiString
12114: end;
12115:
12116: procedure SIRegister_ALXmlDoc(CL: TPSPascalCompiler);
12117: begin
12118:  'cALXMLNodeMaxListSize','LongInt'( Maxint div 16);
12119:   FindClass('TOBJECT'),'TALXMLNode
12120:   FindClass('TOBJECT'),'TALXMLNodeList
12121:   FindClass('TOBJECT'),'TALXMLDocument
12122:   TAlXMLParseProcessingInstructionEvent','Procedure (Sender:TObject; const Target,Data:AnsiString)
12123:   TAlXMLParseTextEvent', 'Procedure ( Sender : TObject; const str: AnsiString)
12124:   TAlXMLParseStartElementEvent', 'Procedure ( Sender : TObject; co'
12125:    +'nst Name : AnsiString; const Attributes : TALStrings)
```

```
12126:   TAlXMLParseEndElementEvent', 'Procedure ( Sender : TObject; const Name : AnsiString)
12127:   TALXmlNodeType', '( ntReserved, ntElement, ntAttribute, ntText, '
12128:    +'ntCData, ntEntityRef, ntEntity, ntProcessingInstr, ntComment, ntDocument, '
12129:    +'ntDocType, ntDocFragment, ntNotation )
12130:   TALXMLDocOption', '( doNodeAutoCreate, doNodeAutoIndent )
12131:   TALXMLDocOptions', 'set of TALXMLDocOption
12132:   TALXMLParseOption', '( poPreserveWhiteSpace, poIgnoreXMLReferences )
12133:   TALXMLParseOptions', 'set of TALXMLParseOption
12134:   TALXMLPrologItem', '( xpVersion, xpEncoding, xpStandalone )
12135:   PALPointerXMLNodeList', '^TALPointerXMLNodeList // will not work
12136:   SIRegister_EALXMLDocError(CL);
12137:   SIRegister_TALXMLNodeList(CL);
12138:   SIRegister_TALXMLNode(CL);
12139:   SIRegister_TALXmlElementNode(CL);
12140:   SIRegister_TALXmlAttributeNode(CL);
12141:   SIRegister_TALXmlTextNode(CL);
12142:   SIRegister_TALXmlDocumentNode(CL);
12143:   SIRegister_TALXmlCommentNode(CL);
12144:   SIRegister_TALXmlProcessingInstrNode(CL);
12145:   SIRegister_TALXmlCDataNode(CL);
12146:   SIRegister_TALXmlEntityRefNode(CL);
12147:   SIRegister_TALXmlEntityNode(CL);
12148:   SIRegister_TALXmlDocTypeNode(CL);
12149:   SIRegister_TALXmlDocFragmentNode(CL);
12150:   SIRegister_TALXmlNotationNode(CL);
12151:   SIRegister_TALXMLDocument(CL);
12152:  cAlXMLUTF8EncodingStr','String 'UTF-8
12153:  cALXmlUTF8HeaderStr','String'<?xmlversion="1.0"encoding="UTF-8"standalone="yes"?>'+#13#10);
12154:  CALNSDelim','String ':
12155:  CALXML','String 'xml
12156:  CALVersion','String 'version
12157:  CALEncoding','String 'encoding
12158:  CALStandalone','String 'standalone
12159:  CALDefaultNodeIndent','String '
12160:  CALXmlDocument','String 'DOCUMENT
12161:  Function ALCreateEmptyXMLDocument( const Rootname : AnsiString) : TalXMLDocument
12162:  Procedure ALClearXMLDocument(const rootname:AnsiString;xmldoc:TalXMLDocument;const
      EncodingStr:AnsiString);
12163:  Function ALFindXmlNodeByChildNodeValue(xmlrec:TalxmlNode;const ChildNodeName,
      ChildNodeValue:AnsiString;const Recurse: Boolean) : TalxmlNode
12164:  Function ALFindXmlNodeByNameAndChildNodeValue( xmlrec : TalxmlNode; const NodeName : ansiString; const
      ChildNodeName, ChildNodeValue : AnsiString; const Recurse : Boolean) : TalxmlNode
12165:  Function ALFindXmlNodeByAttribute(xmlrec:TalxmlNode;const AttributeName,AttributeValue:AnsiString;const
      Recurse: Boolean):TalxmlNode
12166:  Function ALFindXmlNodeByNameAndAttribute( xmlrec : TalxmlNode; const NodeName : ansiString; const
      AttributeName, AttributeValue : AnsiString; const Recurse : Boolean) : TalxmlNode
12167:  Function ALExtractAttrValue( const AttrName, AttrLine : AnsiString; const Default : AnsiString) :
      AnsiString
12168: end;
12169:
12170: procedure SIRegister_TeCanvas(CL: TPSPascalCompiler);
12171: //based on TEEProc, TeCanvas, TEEngine, TChart
12172: begin
12173:  'TeePiStep','Double').setExtended( Pi / 180.0);
12174:  'TeeDefaultPerspective','LongInt'( 100);
12175:  'TeeMinAngle','LongInt'( 270);
12176:  'teeclMoneyGreen','LongWord').SetUInt( TColor ( $C0DCC0 ));
12177:  'teeclSkyBlue','LongWord').SetUInt( TColor ( $F0CAA6 ));
12178:  'teeclCream','LongWord( TColor ( $F0FBFF ));
12179:  'teeclMedGray','LongWord').SetUInt( TColor ( $A4A0A0 ));
12180:  'teeclMoneyGreen','LongWord').SetUInt( TColor ( $C0DCC0 ));
12181:  'teeclSkyBlue','LongWord').SetUInt( TColor ( $F0CAA6 ));
12182:  'teeclCream','LongWord').SetUInt( TColor ( $F0FBFF ));
12183:  'teeclMedGray','LongWord').SetUInt( TColor ( $A4A0A0 ));
12184:  'TA_LEFT','LongInt'( 0);
12185:  'TA_RIGHT','LongInt'( 2);
12186:  'TA_CENTER','LongInt'( 6);
12187:  'TA_TOP','LongInt'( 0);
12188:  'TA_BOTTOM','LongInt'( 8);
12189:  'teePATCOPY','LongInt'( 0);
12190:  'NumCirclePoints','LongInt'( 64);
12191:  'teeDEFAULT_CHARSET','LongInt'( 1);
12192:  'teeANTIALIASED_QUALITY','LongInt'( 4);
12193:  'TA_LEFT','LongInt'( 0);
12194:  'bs_Solid','LongInt'( 0);
12195:  'teepf24Bit','LongInt'( 0);
12196:  'teepfDevice','LongInt'( 1);
12197:  'CM_MOUSELEAVE','LongInt'( 10000);
12198:  'CM_SYSCOLORCHANGE','LongInt'( 10001);
12199:  'DC_BRUSH','LongInt'( 18);
12200:  'DC_PEN','LongInt'( 19);
12201:   teeCOLORREF', 'LongWord
12202:   TLogBrush', 'record lbStyle : Integer; lbColor : TColor; lbHatch: Integer; end
12203:   //TNotifyEvent', 'Procedure ( Sender : TObject)
12204:   SIRegister_TFilterRegion(CL);
12205:   SIRegister_IFormCreator(CL);
12206:   SIRegister_TTeeFilter(CL);
12207:   //TFilterClass', 'class of TTeeFilter
12208:   SIRegister_TFilterItems(CL);
```

```
12209:   SIRegister_TConvolveFilter(CL);
12210:   SIRegister_TBlurFilter(CL);
12211:   SIRegister_TTeePicture(CL);
12212:   TPenEndStyle', '( esRound, esSquare, esFlat )
12213:   SIRegister_TChartPen(CL);
12214:   SIRegister_TChartHiddenPen(CL);
12215:   SIRegister_TDottedGrayPen(CL);
12216:   SIRegister_TDarkGrayPen(CL);
12217:   SIRegister_TWhitePen(CL);
12218:   SIRegister_TChartBrush(CL);
12219:   TTeeView3DScrolled', 'Procedure ( IsHoriz : Boolean)
12220:   TTeeView3DChangedZoom', 'Procedure ( NewZoom : Integer)
12221:   SIRegister_TView3DOptions(CL);
12222:   FindClass('TOBJECT'),'TTeeCanvas
12223:   TTeeTransparency', 'Integer
12224:   SIRegister_TTeeBlend(CL);
12225:   FindClass('TOBJECT'),'TCanvas3D
12226:   SIRegister_TTeeShadow(CL);
12227:   teeTGradientDirection','(gdTopBottom, gdBottomTop, gdLeftRight, gdRightLeft, gdFromCenter, gdFromTopLeft,
        gdFromBottomLeft, gdRadial,gdDiagonalUp,gdDiagonalDown )
12228:   FindClass('TOBJECT'),'TSubGradient
12229:   SIRegister_TCustomTeeGradient(CL);
12230:   SIRegister_TSubGradient(CL);
12231:   SIRegister_TTeeGradient(CL);
12232:   SIRegister_TTeeFontGradient(CL);
12233:   SIRegister_TTeeFont(CL);
12234:   TCanvasBackMode', '( cbmNone, cbmTransparent, cbmOpaque )
12235:   TCanvasTextAlign', 'Integer
12236:   TTeeCanvasHandle', 'HDC
12237:   SIRegister_TTeeCanvas(CL);
12238:   TPoint3DFloat', 'record X : Double; Y : Double; Z : Double; end
12239:   SIRegister_TFloatXYZ(CL);
12240:   TPoint3D', 'record x : integer; y : integer; z : Integer; end
12241:   TRGB', 'record blue: byte; green: byte; red: byte; end
12242:   {TRGB=packed record
12243:     Blue  : Byte;
12244:     Green : Byte;
12245:     Red   : Byte;
12246:     //$IFDEF CLX  //Alpha : Byte; // Linux  end;}
12247:
12248: TTeeCanvasCalcPoints', 'Function ( x, z : Integer; var P0, P1 : '
12249:    +'TPoint3D; var Color0, Color1 : TColor) : Boolean
12250: TTeeCanvasSurfaceStyle', '( tcsSolid, tcsWire, tcsDot )
12251: TCanvas3DPlane', '( cpX, cpY, cpZ )
12252:   //IInterface', 'IUnknown
12253:   SIRegister_TCanvas3D(CL);
12254:   SIRegister_TTeeCanvas3D(CL);
12255:   TTrianglePoints', 'Array[0..2] of TPoint;
12256:   TFourPoints', 'Array[0..3] of TPoint;
12257:  Function ApplyDark( Color : TColor; HowMuch : Byte) : TColor
12258:  Function ApplyBright( Color : TColor; HowMuch : Byte) : TColor
12259:  Function Point3D( const x, y, z : Integer) : TPoint3D
12260:  Procedure SwapDouble( var a, b : Double)
12261:  Procedure SwapInteger( var a, b : Integer)
12262:  Procedure RectSize( const R : TRect; var RectWidth, RectHeight : Integer)
12263:  Procedure teeRectCenter( const R : TRect; var X, Y : Integer)
12264:  Function RectFromPolygon( const Points : array of TPoint; NumPoints : Integer): TRect
12265:  Function RectFromTriangle( const Points : TTrianglePoints) : TRect
12266:  Function RectangleInRectangle( const Small, Big : TRect) : Boolean
12267:  Procedure ClipCanvas( ACanvas : TCanvas; const Rect : TRect)
12268:  Procedure UnClipCanvas( ACanvas : TCanvas)
12269:  Procedure ClipEllipse( ACanvas : TTeeCanvas; const Rect : TRect)
12270:  Procedure ClipRoundRectangle(ACanvas:TTeeCanvas;const Rect : TRect; RoundSize : Integer)
12271:  Procedure ClipPolygon(ACanvas:TTeeCanvas;const Points:array of TPoint;NumPoints:Integer)
12272:  'TeeCharForHeight','String 'W
12273:  'DarkerColorQuantity','Byte').SetUInt( 128);
12274:  'DarkColorQuantity','Byte').SetUInt( 64);
12275:   TButtonGetColorProc', 'Function  : TColor
12276:   SIRegister_TTeeButton(CL);
12277:   SIRegister_TButtonColor(CL);
12278:   SIRegister_TComboFlat(CL);
12279:  Procedure TeeSetTeePen(FPen:TPen; APen : TChartPen; AColor : TColor; Handle:TTeeCanvasHandle)
12280:  Function TeePoint( const aX, aY : Integer) : TPoint
12281:  Function TEEPointInRect( const Rect : TRect; const P : TPoint) : Boolean;
12282:  Function PointInRect1( const Rect : TRect; x, y : Integer) : Boolean;
12283:  Function TeeRect( Left, Top, Right, Bottom : Integer) : TRect
12284:  Function OrientRectangle( const R : TRect) : TRect
12285:  Procedure TeeSetBitmapSize( Bitmap : TBitmap; Width, Height : Integer)
12286:  Function PolygonBounds( const P : array of TPoint) : TRect
12287:  Function PolygonInPolygon( const A, B : array of TPoint) : Boolean
12288:  Function RGBValue( const Color : TColor) : TRGB
12289:  Function EditColor( AOwner : TComponent; AColor : TColor) : TColor
12290:  Function EditColorDialog( AOwner : TComponent; var AColor : TColor) : Boolean
12291:  Function PointAtDistance( AFrom, ATo : TPoint; ADist : Integer) : TPoint
12292:  Function TeeCull( const P : TFourPoints) : Boolean;
12293:  Function TeeCull1( const P0, P1, P2 : TPoint) : Boolean;
12294:   TSmoothStretchOption', '( ssBestQuality, ssBestPerformance )
12295:  Procedure SmoothStretch( Src, Dst : TBitmap);
12296:  Procedure SmoothStretch1( Src, Dst : TBitmap; Option : TSmoothStretchOption);
```

```
12297:  Function TeeDistance( const x, y : Double) : Double
12298:  Function TeeLoadLibrary( const FileName : String) : HInst
12299:  Procedure TeeFreeLibrary( hLibModule : HMODULE)
12300:  Procedure TeeBlendBitmaps( const Percent : Double; ABitmap, BBitmap : TBitmap; BOrigin : TPoint)
12301:  //Procedure TeeCalcLines( var Lines : TRGBArray; Bitmap : TBitmap)
12302:  Procedure TeeShadowSmooth(Bitmap, Back : TBitmap; Left, Top, Width, Height, horz, vert : Integer;
       Smoothness : Double; FullDraw : Boolean; ACanvas : TCanvas3D; Clip : Boolean)
12303:    SIRegister_ICanvasHyperlinks(CL);
12304:    SIRegister_ICanvasToolTips(CL);
12305:  Function Supports( const Instance : IInterface; const IID : TGUID) : Boolean
12306: end;
12307:
12308: procedure SIRegister_ovcmisc(CL: TPSPascalCompiler);
12309: begin
12310:   TOvcHdc', 'Integer
12311:   TOvcHWND', 'Cardinal
12312:   TOvcHdc', 'HDC
12313:   TOvcHWND', 'HWND
12314:  Function LoadBaseBitmap( lpBitmapName : PChar) : HBITMAP
12315:  Function LoadBaseCursor( lpCursorName : PChar) : HCURSOR
12316:  Function ovCompStruct( const S1, S2, Size : Cardinal) : Integer
12317:  Function DefaultEpoch : Integer
12318:  Function DrawButtonFrame(Canvas:TCanvas;const Client:TRect;IsDown,IsFlat:Bool;Style:TButtonStyle):TRect;
12319:  Procedure FixRealPrim( P : PChar; DC : Char)
12320:  Function GetDisplayString( Canvas : TCanvas; const S : string; MinChars, MaxWidth : Integer) : string
12321:  Function GetLeftButton : Byte
12322:  Function GetNextDlgItem( Ctrl : TOvcHWnd) : hWnd
12323:  Procedure GetRGB( Clr : TColor; var IR, IG, IB : Byte)
12324:  Function GetShiftFlags : Byte
12325:  Function ovCreateRotatedFont( F : TFont; Angle : Integer) : hFont
12326:  Function GetTopTextMargin(Font:TFont;BorderStyle:TBorderStyle; Height:Integer;Ctl3D:Boolean): Integer
12327:  Function ovExtractWord( N : Integer; const S : string; WordDelims : TCharSet) : string
12328:  Function ovIsForegroundTask : Boolean
12329:  Function ovTrimLeft( const S : string) : string
12330:  Function ovTrimRight( const S : string) : string
12331:  Function ovQuotedStr( const S : string) : string
12332:  Function ovWordCount( const S : string; const WordDelims : TCharSet) : Integer
12333:  Function ovWordPosition(const N:Integer;const S: string;const WordDelims : TCharSet) : Integer
12334:  Function PtrDiff( const P1, P2 : PChar) : Word
12335:  Procedure PtrInc( var P, Delta : Word)
12336:  Procedure PtrDec( var P, Delta : Word)
12337:  Procedure FixTextBuffer( InBuf, OutBuf : PChar; OutSize : Integer)
12338:  Procedure TransStretchBlt( DstDC : TOvcHdc; DstX, DstY, DstW, DstH : Integer; SrcDC : TOvcHdc; SrcX, SrcY,
       SrcW, SrcH : Integer; MaskDC : TOvcHdc; MaskX, MaskY : Integer)
12339:  Function ovMinI( X, Y : Integer) : Integer
12340:  Function ovMaxI( X, Y : Integer) : Integer
12341:  Function ovMinL( X, Y : LongInt) : LongInt
12342:  Function ovMaxL( X, Y : LongInt) : LongInt
12343:  Function GenerateComponentName( PF : TWinControl; const Root : string) : string
12344:  Function PartialCompare( const S1, S2 : string) : Boolean
12345:  Function PathEllipsis( const S : string; MaxWidth : Integer) : string
12346:  Function ovCreateDisabledBitmap( FOriginal : TBitmap; OutlineColor : TColor) : TBitmap
12347:  Procedure ovCopyParentImage( Control : TControl; Dest : TCanvas)
12348:  Procedure ovDrawTransparentBitmap( Dest : TCanvas; X, Y, W, H : Integer; Rect : TRect; Bitmap : TBitmap;
       TransparentColor : TColor)
12349:  Procedure DrawTransparentBitmapPrim(DC:TOvcHdc;Bitmap:HBitmap;xStart,yStart,Width,Height:Int;Rect:TRect;
       TransparentColor : TColorRef)
12350:  Function ovWidthOf( const R : TRect) : Integer
12351:  Function ovHeightOf( const R : TRect) : Integer
12352:  Procedure ovDebugOutput( const S : string)
12353:  Function GetArrowWidth( Width, Height : Integer) : Integer
12354:  Procedure StripCharSeq( CharSeq : string; var Str : string)
12355:  Procedure StripCharFromEnd( aChr : Char; var Str : string)
12356:  Procedure StripCharFromFront( aChr : Char; var Str : string)
12357:  Function SystemParametersInfo( uiAction, uiParam : UINT; pvParam : UINT; fWinIni : UINT) : BOOL
12358:  Function SystemParametersInfoNCM(uiAction,uiParam:UINT;pvParam:TNonClientMetrics;fWinIni:UINT):BOOL;
12359:  Function SystemParametersInfoA( uiAction, uiParam : UINT; pvParam : UINT; fWinIni : UINT) : BOOL
12360:  Function CreateEllipticRgn( p1, p2, p3, p4 : Integer) : HRGN
12361:  Function CreateEllipticRgnIndirect( const p1 : TRect) : HRGN
12362:  Function CreateFontIndirect( const p1 : TLogFont) : HFONT
12363:  Function CreateMetaFile( p1 : PChar) : HDC
12364:  Function DescribePixelFormat(DC: HDC;p2:Int;p3:UINT;var p4:TPixelFormatDescriptor): BOOL
12365:  Function DrawText(hDC:HDC;lpString:PChar;nCount:Integer; var lpRect : TRect;uFormat:UINT):Integer
12366:  Function DrawTextS(hDC:HDC;lpString:string;nCount:Integer; var lpRect:TRect;uFormat:UINT):Integer
12367:  Function SetMapperFlags( DC : HDC; Flag : DWORD) : DWORD
12368:  Function SetGraphicsMode( hdc : HDC; iMode : Integer) : Integer
12369:  Function SetMapMode( DC : HDC; p2 : Integer) : Integer
12370:  Function SetMetaFileBitsEx( Size : UINT; const Data : PChar) : HMETAFILE
12371:  //Function SetPaletteEntries(Palette:HPALETTE;StartIndex,NumEntries:UINT;var PaletteEntries):UINT
12372:  Function SetPixel( DC : HDC; X, Y : Integer; Color : COLORREF) : COLORREF
12373:  Function SetPixelV( DC : HDC; X, Y : Integer; Color : COLORREF) : BOOL
12374:  //Function SetPixelFormat( DC : HDC; PixelFormat : Integer; FormatDef : PPixelFormatDescriptor) : BOOL
12375:  Function SetPolyFillMode( DC : HDC; PolyFillMode : Integer) : Integer
12376:  Function StretchBlt(DestDC:HDC;X,Y,Width,Height:Int;SrcDC:HDC;XSrc,YSrc,SrcWidth,
       SrcHeight:Int;Rop:DWORD):BOOL
12377:  Function SetRectRgn( Rgn : HRgn; X1, Y1, X2, Y2 : Integer) : BOOL
12378:  Function StretchDIBits(DC : HDC; DestX,DestY,DestWidth,DestHeight,SrcX,SrcY,SrcWidth,
       SrcHeight:Int;Bits:int; var BitsInfo : TBitmapInfo; Usage : UINT; Rop : DWORD) : Integer
12379:  Function SetROP2( DC : HDC; p2 : Integer) : Integer
```

```
12380:  Function SetStretchBltMode( DC : HDC; StretchMode : Integer) : Integer
12381:  Function SetSystemPaletteUse( DC : HDC; p2 : UINT) : UINT
12382:  Function SetTextCharacterExtra( DC : HDC; CharExtra : Integer) : Integer
12383:  Function SetTextColor( DC : HDC; Color : COLORREF) : COLORREF
12384:  Function SetTextAlign( DC : HDC; Flags : UINT) : UINT
12385:  Function SetTextJustification( DC : HDC; BreakExtra, BreakCount : Integer) : Integer
12386:  Function UpdateColors( DC : HDC) : BOOL
12387:  Function GetViewportExtEx( DC : HDC; var Size : TSize) : BOOL
12388:  Function GetViewportOrgEx( DC : HDC; var Point : TPoint) : BOOL
12389:  Function GetWindowExtEx( DC : HDC; var Size : TSize) : BOOL
12390:  Function GetWindowOrgEx( DC : HDC; var Point : TPoint) : BOOL
12391:  Function IntersectClipRect( DC : HDC; X1, Y1, X2, Y2 : Integer) : Integer
12392:  Function InvertRgn( DC : HDC; p2 : HRGN) : BOOL
12393:  Function MaskBlt(DestDC:HDC; XDest,YDest,Width,Height:Integer; SrcDC : HDC; XScr, YScr : Integer; Mask :
       HBITMAP; xMask, yMask : Integer; Rop : DWORD) : BOOL
12394:  Function PlgBlt(DestDC:HDC;const PtsArray,SrcDC:HDC;XSrc,YSrc,Widt,Heigh:Int;Mask:HBITMAP;xMask,
       yMask:Int):BOOL;
12395:  Function OffsetClipRgn( DC : HDC; XOffset, YOffset : Integer) : Integer
12396:  Function OffsetRgn( RGN : HRGN; XOffset, YOffset : Integer) : Integer
12397:  Function PatBlt( DC : HDC; X, Y, Width, Height : Integer; Rop : DWORD) : BOOL
12398:  Function Pie( DC : HDC; X1, Y1, X2, Y2, X3, Y3, X4, Y4 : Integer) : BOOL
12399:  Function PlayMetaFile( DC : HDC; MF : HMETAFILE) : BOOL
12400:  Function PaintRgn( DC : HDC; RGN : HRGN) : BOOL
12401:  Function PtInRegion( RGN : HRGN; X, Y : Integer) : BOOL
12402:  Function PtVisible( DC : HDC; X, Y : Integer) : BOOL
12403:  Function RectInRegion( RGN : HRGN; const Rect : TRect) : BOOL
12404:  Function RectVisible( DC : HDC; const Rect : TRect) : BOOL
12405:  Function Rectangle( DC : HDC; X1, Y1, X2, Y2 : Integer) : BOOL
12406:  Function RestoreDC( DC : HDC; SavedDC : Integer) : BOOL
12407: end;
12408:
12409: procedure SIRegister_ovcfiler(CL: TPSPascalCompiler);
12410: begin
12411:   SIRegister_TOvcAbstractStore(CL);
12412:   //PExPropInfo', '^TExPropInfo // will not work
12413: //  TExPropInfo', 'record PI : TPropInfo; AObject : TObject; end
12414:   SIRegister_TOvcPropertyList(CL);
12415:   SIRegister_TOvcDataFiler(CL);
12416:  Procedure UpdateStoredList( AForm : TWinControl; AStoredList : TStrings; FromForm : Boolean)
12417:  Procedure UpdateStoredList1( AForm : TCustomForm; AStoredList : TStrings; FromForm : Boolean)
12418:  Function CreateStoredItem( const CompName, PropName : string) : string
12419:  Function ParseStoredItem( const Item : string; var CompName, PropName : string) : Boolean
12420:  //Function GetPropType( PropInfo : PExPropInfo) : PTypeInfo
12421: end;
12422:
12423: procedure SIRegister_ovccoco(CL: TPSPascalCompiler);
12424: begin
12425:  'ovsetsize','LongInt'( 16);
12426:  'etSyntax','LongInt'( 0);
12427:  'etSymantic','LongInt'( 1);
12428:  'chCR','Char #13);
12429:  'chLF','Char #10);
12430:  'chLineSeparator',' chCR);
12431:   SIRegister_TCocoError(CL);
12432:   SIRegister_TCommentItem(CL);
12433:   SIRegister_TCommentList(CL);
12434:   SIRegister_TSymbolPosition(CL);
12435: TGenListType', '( glNever, glAlways, glOnError )
12436: TovBitSet', 'set of Integer
12437:   //PStartTable', '^TStartTable // will not work
12438: 'TovCharSet', 'set of AnsiChar
12439: TAfterGenListEvent', 'Procedure ( Sender : TObject; var PrintErrorCount : boolean)
12440: TCommentEvent', 'Procedure ( Sender : TObject; CommentList : TCommentList)
12441: TCustomErrorEvent', 'Function(Sender:TObject;const ErrorCode: longint;const Data:string): string
12442: TovErrorEvent', 'Procedure ( Sender : TObject; Error : TCocoError)
12443: TovErrorProc', 'Procedure ( ErrorCode : integer; Symbol : TSymbolP'
12444:    +'osition; const Data : string; ErrorType : integer)
12445: TFailureEvent', 'Procedure ( Sender : TObject; NumErrors : integer)
12446: TGetCH', 'Function ( pos : longint) : char
12447: TStatusUpdateProc', 'Procedure ( Sender : TObject; Status: string; LineNum:integer)
12448:   SIRegister_TCocoRScanner(CL);
12449:   SIRegister_TCocoRGrammar(CL);
12450:  '_EF','Char #0);
12451:  '_TAB','Char').SetString( #09);
12452:  '_CR','Char').SetString( #13);
12453:  '_LF','Char').SetString( #10);
12454:  '_EL','').SetString( _CR);
12455:  '_EOF','Char').SetString( #26);
12456:  'LineEnds','TCharSet'(ord(_CR) or ord(_LF) or ord(_EF));
12457:  'minErrDist','LongInt'( 2);
12458:  Function ovPadL( S : string; ch : char; L : integer) : string
12459: end;
12460:
12461:   TFormatSettings = record
12462:     CurrencyFormat: Byte;
12463:     NegCurrFormat: Byte;
12464:     ThousandSeparator: Char;
12465:     DecimalSeparator: Char;
12466:     CurrencyDecimals: Byte;
```

```
12467:     DateSeparator: Char;
12468:     TimeSeparator: Char;
12469:     ListSeparator: Char;
12470:     CurrencyString: string;
12471:     ShortDateFormat: string;
12472:     LongDateFormat: string;
12473:     TimeAMString: string;
12474:     TimePMString: string;
12475:     ShortTimeFormat: string;
12476:     LongTimeFormat: string;
12477:     ShortMonthNames: array[1..12] of string;
12478:     LongMonthNames: array[1..12] of string;
12479:     ShortDayNames: array[1..7] of string;
12480:     LongDayNames: array[1..7] of string;
12481:     TwoDigitYearCenturyWindow: Word;
12482:   end;
12483:
12484: procedure SIRegister_OvcFormatSettings(CL: TPSPascalCompiler);
12485: begin
12486:  Function ovFormatSettings : TFormatSettings
12487: end;
12488:
12489: procedure SIRegister_ovcstr(CL: TPSPascalCompiler);
12490: begin
12491:   TOvcCharSet', 'set of Char
12492:   ovBTable', 'array[0..255] of Byte
12493:   //BTable = array[0..{$IFDEF UNICODE}{$IFDEF
       HUGE_UNICODE_BMTABLE}$FFFF{$ELSE}$FF{$ENDIF}{$ELSE}$FF{$ENDIF}] of Byte;
12494:  Function BinaryBPChar( Dest : PChar; B : Byte) : PChar
12495:  Function BinaryLPChar( Dest : PChar; L : LongInt) : PChar
12496:  Function BinaryWPChar( Dest : PChar; W : Word) : PChar
12497:  Procedure BMMakeTable( MatchString : PChar; var BT : ovBTable)
12498:  Function BMSearch(var Buffer,BufLength:Cardinal;var BT:ovBTable; MatchString:PChar;var Pos:Cardinal):Bool;
12499:  Function BMSearchUC(var Buffer,BufLength:Card; var BT:ovBTable;MatchString:PChar; var Pos: Card):Boolean
12500:  Function CharStrPChar( Dest : PChar; C : Char; Len : Cardinal) : PChar
12501:  Function DetabPChar( Dest : PChar; Src : PChar; TabSize : Byte) : PChar
12502:  Function HexBPChar( Dest : PChar; B : Byte) : PChar
12503:  Function HexLPChar( Dest : PChar; L : LongInt) : PChar
12504:  Function HexPtrPChar( Dest : PChar; P : TObject) : PChar
12505:  Function HexWPChar( Dest : PChar; W : Word) : PChar
12506:  Function LoCaseChar( C : Char) : Char
12507:  Function OctalLPChar( Dest : PChar; L : LongInt) : PChar
12508:  Function StrChDeletePrim( P : PChar; Pos : Cardinal) : PChar
12509:  Function StrChInsertPrim( Dest : PChar; C : Char; Pos: Cardinal) : PChar
12510:  Function StrChPos( P : PChar; C : Char; var Pos : Cardinal) : Boolean
12511:  Procedure StrInsertChars( Dest : PChar; Ch : Char; Pos, Count : Word)
12512:  Function StrStCopy( Dest, S : PChar; Pos, Count : Cardinal) : PChar
12513:  Function StrStDeletePrim( P : PChar; Pos, Count : Cardinal) : PChar
12514:  Function StrStInsert( Dest, S1, S2 : PChar; Pos : Cardinal) : PChar
12515:  Function StrStInsertPrim( Dest, S : PChar; Pos : Cardinal) : PChar
12516:  Function StrStPos( P, S : PChar; var Pos : Cardinal) : Boolean
12517:  Function StrToLongPChar( S : PChar; var I : LongInt) : Boolean
12518:  Procedure TrimAllSpacesPChar( P : PChar)
12519:  Function TrimEmbeddedZeros( const S : string) : string
12520:  Procedure TrimEmbeddedZerosPChar( P : PChar)
12521:  Function TrimTrailPrimPChar( S : PChar) : PChar
12522:  Function TrimTrailPChar( Dest, S : PChar) : PChar
12523:  Function TrimTrailingZeros( const S : string) : string
12524:  Procedure TrimTrailingZerosPChar( P : PChar)
12525:  Function UpCaseChar( C : Char) : Char
12526:  Function ovcCharInSet( C : Char; const CharSet : TOvcCharSet) : Boolean
12527:  Function ovc32StringIsCurrentCodePage( const S : WideString) : Boolean;
12528:  //Function ovc32StringIsCurrentCodePage1( const S:PWideChar; CP : Cardinal) : Boolean;
12529: end;
12530:
12531: procedure SIRegister_AfUtils(CL: TPSPascalCompiler);
12532: begin
12533:   //PRaiseFrame', '^TRaiseFrame // will not work
12534:   TRaiseFrame', 'record NextRaise : PRaiseFrame; ExceptAddr : ___Poin'
12535:    +'ter; ExceptObject : TObject; ExceptionRecord : PExceptionRecord; end
12536:  Procedure SafeCloseHandle( var Handle : THandle)
12537:  Procedure ExchangeInteger( X1, X2 : Integer)
12538:  Procedure FillInteger( const Buffer, Size, Value : Integer)
12539:  Function LongMulDiv( Mult1, Mult2, Div1 : Longint) : Longint
12540:  Function afCompareMem( P1, P2 : TObject; Length : Integer) : Boolean
12541:
12542: FILENAME_ADVAPI32     = 'ADVAPI32.DLL';
12543:     function AbortSystemShutdown; external advapi32 name 'AbortSystemShutdownW';
12544: function AbortSystemShutdown(lpMachineName: PKOLChar): BOOL; stdcall;
12545:     function AccessCheckAndAuditAlarm(SubsystemName: PKOLChar;
12546:       HandleId: Pointer; ObjectTypeName, ObjectName: PKOLChar;
12547:       SecurityDescriptor: PSecurityDescriptor; DesiredAccess: DWORD;
12548:       const GenericMapping: TGenericMapping;  ObjectCreation: BOOL;
12549:       var GrantedAccess: DWORD; var AccessStatus, pfGenerateOnClose: BOOL): BOOL; stdcall;
12550:     function AccessCheckByTypeAndAuditAlarm(SubsystemName: PKOLChar;
12551:       HandleId: Pointer; ObjectTypeName, ObjectName: PKOLChar;
12552:       SecurityDescriptor: PSecurityDescriptor; PrincipalSelfSid: PSID; DesiredAccess: DWORD;
12553:       AuditType: AUDIT_EVENT_TYPE; Flags: DWORD; ObjectTypeList: PObjectTypeList;
12554:       ObjectTypeListLength: DWORD; const GenericMapping: TGenericMapping;  ObjectCreation: BOOL;
```

```
12555:       var GrantedAccess: DWORD; var AccessStatus, pfGenerateOnClose: BOOL): BOOL; stdcall;
12556:     function AccessCheckByTypeResultListAndAuditAlarm(SubsystemName: PKOLChar;
12557:       HandleId: Pointer; ObjectTypeName, ObjectName: PKOLChar;
12558:       SecurityDescriptor: PSecurityDescriptor; PrincipalSelfSid: PSID; DesiredAccess: DWORD;
12559:       AuditType: AUDIT_EVENT_TYPE; Flags: DWORD; ObjectTypeList: PObjectTypeList;
12560:       ObjectTypeListLength: DWORD; const GenericMapping: TGenericMapping;  ObjectCreation: BOOL;
12561:       var GrantedAccess: DWORD; var AccessStatusList:DWORD; var pfGenerateOnClose: BOOL): BOOL; stdcall;
12562:     function BackupEventLog(hEventLog: THandle; lpBackupFileName: PKOLChar): BOOL; stdcall;
12563:     function ClearEventLog(hEventLog: THandle; lpBackupFileName: PKOLChar): BOOL; stdcall;
12564:     function CreateProcessAsUser(hToken: THandle; lpApplicationName: PKOLChar;
12565:       lpCommandLine: PKOLChar; lpProcessAttributes: PSecurityAttributes;
12566:       lpThreadAttributes: PSecurityAttributes; bInheritHandles: BOOL;
12567:       dwCreationFlags: DWORD; lpEnvironment: Pointer; lpCurrentDirectory: PKOLChar;
12568:       const lpStartupInfo: TStartupInfo; var lpProcessInformation: TProcessInformation): BOOL; stdcall;
12569:     function GetCurrentHwProfile(var lpHwProfileInfo: THWProfileInfo): BOOL; stdcall;
12570:     function GetFileSecurity(lpFileName: PKOLChar; RequestedInformation: SECURITY_INFORMATION;
12571:       pSecurityDescriptor: PSecurityDescriptor;nLength:DWORD;var lpnLengthNeeded: DWORD):BOOL; stdcall;
12572:     function GetUserName(lpBuffer: PKOLChar; var nSize: DWORD): BOOL; stdcall;
12573:     function InitiateSystemShutdown(lpMachineName, lpMessage: PKOLChar;
12574:       dwTimeout: DWORD; bForceAppsClosed, bRebootAfterShutdown: BOOL): BOOL; stdcall;
12575:     function LogonUser(lpszUsername, lpszDomain, lpszPassword: PKOLChar;
12576:       dwLogonType, dwLogonProvider: DWORD; var phToken: THandle): BOOL; stdcall;
12577:     function LookupAccountName(lpSystemName, lpAccountName: PKOLChar;
12578:       Sid: PSID; var cbSid: DWORD; ReferencedDomainName: PKOLChar;
12579:       var cbReferencedDomainName: DWORD; var peUse: SID_NAME_USE): BOOL; stdcall;
12580:     function LookupAccountSid(lpSystemName: PKOLChar; Sid: PSID;
12581:       Name: PKOLChar; var cbName: DWORD; ReferencedDomainName: PKOLChar;
12582:       var cbReferencedDomainName: DWORD; var peUse: SID_NAME_USE): BOOL; stdcall;
12583:     function LookupPrivilegeDisplayName(lpSystemName, lpName: PKOLChar;
12584:       lpDisplayName: PKOLChar; var cbDisplayName, lpLanguageId: DWORD): BOOL; stdcall;
12585:     function LookupPrivilegeName(lpSystemName: PKOLChar;
12586:       var lpLuid: TLargeInteger; lpName: PKOLChar; var cbName: DWORD): BOOL; stdcall;
12587:     function LookupPrivilegeValue(lpSystemName, lpName: PKOLChar;
12588:       var lpLuid: TLargeInteger): BOOL; stdcall;
12589:     function ObjectCloseAuditAlarm(SubsystemName: PKOLChar;
12590:       HandleId: Pointer; GenerateOnClose: BOOL): BOOL; stdcall;
12591:     function ObjectDeleteAuditAlarm(SubsystemName: PKOLChar;
12592:       HandleId: Pointer; GenerateOnClose: BOOL): BOOL; stdcall;
12593:     function ObjectOpenAuditAlarm(SubsystemName: PKOLChar; HandleId: Pointer;
12594:       ObjectTypeName: PKOLChar; ObjectName: PKOLChar; pSecurityDescriptor: PSecurityDescriptor;
12595:       ClientToken: THandle; DesiredAccess, GrantedAccess: DWORD;
12596:       var Privileges: TPrivilegeSet; ObjectCreation, AccessGranted: BOOL;
12597:       var GenerateOnClose: BOOL): BOOL; stdcall;
12598:     function ObjectPrivilegeAuditAlarm(SubsystemName: PKOLChar;
12599:       HandleId: Pointer; ClientToken: THandle; DesiredAccess: DWORD;
12600:       var Privileges: TPrivilegeSet; AccessGranted: BOOL): BOOL; stdcall;
12601:     function OpenBackupEventLog(lpUNCServerName, lpFileName: PKOLChar): THandle; stdcall;
12602:     function OpenEventLog(lpUNCServerName, lpSourceName: PKOLChar): THandle; stdcall;
12603:     function PrivilegedServiceAuditAlarm(SubsystemName, ServiceName: PKOLChar;
12604:       ClientToken: THandle; var Privileges: TPrivilegeSet; AccessGranted: BOOL): BOOL; stdcall;
12605:     function ReadEventLog(hEventLog: THandle; dwReadFlags, dwRecordOffset: DWORD;
12606:       lpBuffer: Pointer; nNumberOfBytesToRead: DWORD;
12607:       var pnBytesRead, pnMinNumberOfBytesNeeded: DWORD): BOOL; stdcall;
12608:     function RegConnectRegistry(lpMachineName: PKOLChar; hKey: HKEY;
12609:       var phkResult: HKEY): Longint; stdcall;
12610:     function RegCreateKey(hKey: HKEY; lpSubKey: PKOLChar;
12611:       var phkResult: HKEY): Longint; stdcall;
12612:     function RegCreateKeyEx(hKey: HKEY; lpSubKey: PKOLChar;
12613:       Reserved: DWORD; lpClass: PKOLChar; dwOptions: DWORD; samDesired: REGSAM;
12614:       lpSecurityAttributes: PSecurityAttributes; var phkResult: HKEY;
12615:       lpdwDisposition: PDWORD): Longint; stdcall;
12616:     function RegDeleteKey(hKey: HKEY; lpSubKey: PKOLChar): Longint; stdcall;
12617:     function RegDeleteValue(hKey: HKEY; lpValueName: PKOLChar): Longint; stdcall;
12618:     function RegEnumKeyEx(hKey: HKEY; dwIndex: DWORD; lpName: PKOLChar;
12619:       var lpcbName: DWORD; lpReserved: Pointer; lpClass: PKOLChar;
12620:       lpcbClass: PDWORD; lpftLastWriteTime: PFileTime): Longint; stdcall;
12621:     function RegEnumKey(hKey:HKEY; dwIndex:DWORD; lpName:PKOLChar; cbName:DWORD):Longint;stdcall;
12622:     function RegEnumValue(hKey: HKEY; dwIndex: DWORD; lpValueName: PKOLChar;
12623:       var lpcbValueName: DWORD; lpReserved: Pointer; lpType: PDWORD;
12624:       lpData: PByte; lpcbData: PDWORD): Longint; stdcall;
12625:     function RegLoadKey(hKey: HKEY; lpSubKey, lpFile: PKOLChar): Longint; stdcall;
12626:     function RegOpenKey(hKey: HKEY; lpSubKey: PKOLChar;var phkResult: HKEY):Longint; stdcall;
12627:     function RegOpenKeyEx(hKey: HKEY; lpSubKey: PKOLChar;
12628:       ulOptions: DWORD; samDesired: REGSAM; var phkResult: HKEY): Longint; stdcall;
12629:     function RegQueryInfoKey(hKey: HKEY; lpClass: PKOLChar;
12630:       lpcbClass: PDWORD; lpReserved: Pointer;
12631:       lpcSubKeys, lpcbMaxSubKeyLen, lpcbMaxClassLen, lpcValues,
12632:       lpcbMaxValueNameLen, lpcbMaxValueLen, lpcbSecurityDescriptor: PDWORD;
12633:       lpftLastWriteTime: PFileTime): Longint; stdcall;
12634:     function RegQueryMultipleValues(hKey: HKEY; var ValList;
12635:       NumVals: DWORD; lpValueBuf: PKOLChar; var ldwTotsize: DWORD): Longint; stdcall;
12636:     function RegQueryValue(hKey: HKEY; lpSubKey: PKOLChar;
12637:       lpValue: PKOLChar; var lpcbValue: Longint): Longint; stdcall;
12638:     function RegQueryValueEx(hKey: HKEY; lpValueName: PKOLChar;
12639:       lpReserved: Pointer; lpType: PDWORD; lpData: PByte; lpcbData: PDWORD): Longint; stdcall;
12640:     function RegReplaceKey(hKey: HKEY; lpSubKey: PKOLChar;
12641:        lpNewFile: PKOLChar; lpOldFile: PKOLChar): Longint; stdcall;
12642:     function RegRestoreKey(hKey: HKEY; lpFile: PKOLChar; dwFlags: DWORD): Longint; stdcall;
12643:     function RegSaveKey(hKey: HKEY; lpFile: PKOLChar;
```

```
12644:       lpSecurityAttributes: PSecurityAttributes): Longint; stdcall;
12645:     function RegSetValue(hKey: HKEY; lpSubKey: PKOLChar;
12646:       dwType: DWORD; lpData: PKOLChar; cbData: DWORD): Longint; stdcall;
12647:     function RegSetValueEx(hKey: HKEY; lpValueName: PKOLChar;
12648:       Reserved: DWORD; dwType: DWORD; lpData: Pointer; cbData: DWORD): Longint; stdcall;
12649:     function RegUnLoadKey(hKey: HKEY; lpSubKey: PKOLChar): Longint; stdcall;
12650:     function RegisterEventSource(lpUNCServerName, lpSourceName: PKOLChar): THandle; stdcall;
12651:     function ReportEvent(hEventLog: THandle; wType, wCategory: Word;
12652:       dwEventID: DWORD; lpUserSid: Pointer; wNumStrings: Word;
12653:       dwDataSize: DWORD; lpStrings, lpRawData: Pointer): BOOL; stdcall;
12654:     function SetFileSecurity(lpFileName: PKOLChar; SecurityInformation: SECURITY_INFORMATION;
12655:       pSecurityDescriptor: PSecurityDescriptor): BOOL; stdcall;
12656:
12657:  Function wAddAtom( lpString : PKOLChar) : ATOM
12658:  Function wBeginUpdateResource( pFileName : PKOLChar; bDeleteExistingResources : BOOL) : THandle
12659:  //Function wCallNamedPipe( lpNamedPipeName : PKOLChar; lpInBuffer : Pointer; nInBufferSize : DWORD;
      lpOutBuffer : Pointer; nOutBufferSize : DWORD; var lpBytesRead : DWORD; nTimeOut : DWORD) : BOOL
12660:  //Function wCommConfigDialog( lpszName : PKOLChar; hWnd : HWND; var lpCC : TCommConfig) : BOOL
12661:  Function wCompareString( Locale : LCID; dwCmpFlags : DWORD; lpString1 : PKOLChar; cchCount1 : Integer;
      lpString2 : PKOLChar; cchCount2 : Integer) : Integer
12662:  Function wCopyFile( lpExistingFileName, lpNewFileName : PKOLChar; bFailIfExists : BOOL) : BOOL
12663:  //Function wCopyFileEx( lpExistingFileName, lpNewFileName : PKOLChar; lpProgressRoutine :
      TFNProgressRoutine; lpData : Pointer; pbCancel : PBool; dwCopyFlags : DWORD) : BOOL
12664:  Function wCreateDirectory( lpPathName : PKOLChar; lpSecurityAttributes : PSecurityAttributes) : BOOL
12665:  Function wCreateDirectoryEx(lpTemplateDirectory,
      lpNewDirectory:PKOLChar;lpSecAttrib:PSecurityAttribts):BOOL;
12666:  Function wCreateEvent(lpEventAttribes:PSecurityAttrib;bManualReset,
      bInitialState:BOOL;lpName:PKOLChar):THandle;
12667:  Function wCreateFile( lpFileName : PKOLChar; dwDesiredAccess, dwShareMode : DWORD; lpSecurityAttributes :
      PSecurityAttributes; dwCreationDisposition, dwFlagsAndAttributes:DWORD;hTemplateFile:THandle):THandle
12668:  Function wCreateFileMapping( hFile : THandle; lpFileMappingAttributes : PSecurityAttributes; flProtect,
      dwMaximumSizeHigh, dwMaximumSizeLow : DWORD; lpName : PKOLChar) : THandle
12669:  Function wCreateHardLink(lpFileName,
      lpExistingFileName:PKOLChar;lpSecurityAttributes:PSecurityAttributes):BOOL
12670:  Function
      CreateMailslot(lpName:PKOLChar;MaxMessSize:DWORD;lReadTimeout:DWORD;lpSecurityAttrib:PSecurityAttributes):THandle);
12671:  Function wCreateNamedPipe( lpName : PKOLChar; dwOpenMode, dwPipeMode, nMaxInstances, nOutBufferSize,
      nInBufferSize, nDefaultTimeOut : DWORD; lpSecurityAttributes : PSecurityAttributes) : THandle
12672:  //Function CreateProcess( lpApplicationName : PKOLChar; lpCommandLine : PKOLChar; lpProcessAttributes,
      lpThreadAttributes : PSecurityAttributes; bInheritHandles : BOOL; dwCreationFlags : DWORD; lpEnvironment :
      Pointer;lpCurrentDirectory:PKOLChar;const lpStartupInfo:TStartupInfo;var
      lpProcessInfo:TProcessInformation):BOOL
12673:  Function wCreateSemaphore(lpSemaphoreAttributes: PSecurityAttributes; lInitialCount, lMaximumCount :
      Longint; lpName : PKOLChar) : THandle
12674:  Function
      wCreateWaitableTimer(lpTimerAttribs:PSecurityAttribs;bManualReset:BOOL;lpTimerName:PKOLChar):THandle);
12675:  Function wDefineDosDevice( dwFlags : DWORD; lpDeviceName, lpTargetPath : PKOLChar) : BOOL
12676:  Function wDeleteFile( lpFileName : PKOLChar) : BOOL
12677:  Function wEndUpdateResource( hUpdate : THandle; fDiscard : BOOL) : BOOL
12678:  //Function
      wEnumCalendarInfo(lpCalInfEnumProc:TFNCalInfEnumProc;Locale:LCID;Calendar:CALID;CalType:CALTYPE):BOOL;
12679:  //Function wEnumDateFormats(lpDateFmtEnumProc: TFNDateFmtEnumProc; Locale : LCID; dwFlags : DWORD) : BOOL
12680:  //Function
      wEnumResourceNames(hModule:HMODULE;lpType:PKOLChar;lpEnumFunc:ENUMRESNAMEPROC;lParam:Longint):BOOL;
12681:  //Function wEnumResourceTypes( hModule:HMODULE; lpEnumFunc:ENUMRESTYPEPROC;lParam:Longint):BOOL;
12682:  //Function wEnumSystemCodePages( lpCodePageEnumProc : TFNCodepageEnumProc; dwFlags : DWORD) : BOOL
12683:  //Function wEnumSystemLocales( lpLocaleEnumProc : TFNLocaleEnumProc; dwFlags : DWORD) : BOOL
12684:  //Function wEnumTimeFormats(lpTimeFmtEnumProc:TFNTimeFmtEnumProc;Locale:LCID;dwFlags:DWORD):BOOL;
12685:  Function wExpandEnvironmentStrings( lpSrc : PKOLChar; lpDst : PKOLChar; nSize : DWORD) : DWORD
12686:  Procedure wFatalAppExit( uAction : UINT; lpMessageText : PKOLChar)
12687:  //Function wFillConsoleOutputCharacter( hConsoleOutput : THandle; cCharacter : KOLChar; nLength : DWORD;
      dwWriteCoord : TCoord; var lpNumberOfCharsWritten : DWORD) : BOOL
12688:  Function wFindAtom( lpString : PKOLChar) : ATOM
12689:  Function
      wFindFirstChangeNotification(lpPathName:PKOLChar;bWatchSubtree:BOOL;dwNotifyFilter:DWORD):THandle;
12690:  Function wFindFirstFile( lpFileName : PKOLChar; var lpFindFileData : TWIN32FindData) : THandle
12691:  //Function wFindFirstFileEx( lpFileName : PKOLChar; fInfoLevelId : TFindexInfoLevels; lpFindFileData :
      Pointer; fSearchOp : TFindexSearchOps; lpSearchFilter : Pointer; dwAdditionalFlags : DWORD) : BOOL
12692:  Function wFindNextFile( hFindFile : THandle; var lpFindFileData : TWIN32FindData) : BOOL
12693:  Function wFindResource( hModule : HMODULE; lpName, lpType : PKOLChar) : HRSRC
12694:  Function wFindResourceEx( hModule : HMODULE; lpType, lpName : PKOLChar; wLanguage : Word) : HRSRC
12695:  Function
      wFoldString(dwMapFlags:DWORD;lpSrcStr:PKOLChar;cchSrc:Int;lpDestStr:PKOLChar;cchDest:Integer):Integer);
12696:  //Function wFormatMessage( dwFlags : DWORD; lpSource : Pointer; dwMessageId : DWORD; dwLanguageId :
      DWORD; lpBuffer : PKOLChar; nSize : DWORD; Arguments : Pointer) : DWORD
12697:  Function wFreeEnvironmentStrings( EnvBlock : PKOLChar) : BOOL
12698:  Function wGetAtomName( nAtom : ATOM; lpBuffer : PKOLChar; nSize : Integer) : UINT
12699:  Function wGetBinaryType( lpApplicationName : PKOLChar; var lpBinaryType : DWORD) : BOOL
12700:  Function wGetCommandLine : PKOLChar
12701:  //Function wGetCompressedFileSize( lpFileName : PKOLChar; lpFileSizeHigh : PDWORD) : DWORD
12702:  Function wGetComputerName( lpBuffer : PKOLChar; var nSize : DWORD) : BOOL
12703:  Function wGetConsoleTitle( lpConsoleTitle : PKOLChar; nSize : DWORD) : DWORD
12704:  //Function wGetCurrencyFormat( Locale : LCID; dwFlags : DWORD; lpValue : PKOLChar; lpFormat :
      PCurrencyFmt; lpCurrencyStr : PKOLChar; cchCurrency : Integer) : Integer
12705:  Function wGetCurrentDirectory( nBufferLength : DWORD; lpBuffer : PKOLChar) : DWORD
12706:  //Function wGetDateFormat( Locale : LCID; dwFlags : DWORD; lpDate : PSystemTime; lpFormat : PKOLChar;
      lpDateStr : PKOLChar; cchDate : Integer) : Integer
12707:  //Function wGetDefaultCommConfig( lpszName:PKOLChar;var lpCC : TCommConfig;var lpdwSize:DWORD):BOOL
12708:  Function wGetDiskFreeSpace( lpRootPathName : PKOLChar; var lpSectorsPerCluster, lpBytesPerSector,
      lpNumberOfFreeClusters, lpTotalNumberOfClusters : DWORD) : BOOL
```

```
12709:  //Function wGetDiskFreeSpaceEx( lpDirectoryName : PKOLChar; var lpFreeBytesAvailableToCaller,
        lpTotalNumberOfBytes, lpTotalNumberOfFreeBytes : PLargeInteger) : BOOL
12710:  Function wGetDriveType( lpRootPathName : PKOLChar) : UINT
12711:  Function wGetEnvironmentStrings : PKOLChar
12712:  Function wGetEnvironmentVariable( lpName : PKOLChar; lpBuffer : PKOLChar; nSize : DWORD) : DWORD;
12713:  Function wGetFileAttributes( lpFileName : PKOLChar) : DWORD
12714:  //Function
        wGetFileAttributesEx(lpFileName:PKOLChar;fInfoLevelId:TGetFileExInfoLevs;lpFileInform:Pointer):BOOL;
12715:  Function wGetFullPathName(lpFileName:PKOLChar;nBufferLeng:WORD;lpBuffer:PKOLChar;var
        lpFilePart:PKOLChar):DWORD;
12716:  //Function wGetLocaleInfo(Locale:LCID; LCType:LCTYPE;lpLCData:PKOLChar;cchData:Integer): Integer
12717:  Function wGetLogicalDriveStrings( nBufferLength : DWORD; lpBuffer : PKOLChar) : DWORD
12718:  Function wGetModuleFileName( hModule : HINST; lpFilename : PKOLChar; nSize : DWORD) : DWORD
12719:  Function wGetModuleHandle( lpModuleName : PKOLChar) : HMODULE
12720:  //Function wGetNamedPipeHandleState( hNamedPipe : THandle; lpState, lpCurInstances, lpMaxCollectionCount,
        lpCollectDataTimeout : PDWORD; lpUserName : PKOLChar; nMaxUserNameSize : DWORD) : BOOL
12721:  //Function wGetNumberFormat( Locale : LCID; dwFlags:DWORD; lpValue:PKOLChar; lpFormat:PNumberFmt;
        lpNumberStr : PKOLChar; cchNumber : Integer) : Integer
12722:  Function wGetPrivateProfileInt(lpAppName,lpKeyName:PKOLChar;nDefault:Integer;lpFileName:PKOLChar):UINT;
12723:  Function
        wGetPrivateProfileSection(lpAppName:PKOLChar;lpRetrStr:PKOLChar;nSize:DWORD;pFileName:PKOLChar):DWORD;
12724:  Function wGetPrivateProfileSectionNames(lpszReturnBuffer:PKOLChar;nSize:DWORD;lpFileName:PKOLChar):DWORD;
12725:  Function wGetPrivateProfileString( lpAppName, lpKeyName, lpDefault : PKOLChar;lpReturnedStr: PKOLChar;
        nSize:DWORD; lpFileName : PKOLChar) : DWORD
12726:  Function wGetProfileInt( lpAppName, lpKeyName : PKOLChar; nDefault : Integer) : UINT
12727:  Function wGetProfileSection( lpAppName : PKOLChar; lpReturnedString : PKOLChar; nSize : DWORD) : DWORD
12728:  Function wGetProfileString(lpAppName,lpKeyName,
        lpDefault:PKOLChar;lpReturnedStr:PKOLChar;nSize:DWORD):DWORD;
12729:  Function wGetShortPathName( lpszLongPath:PKOLChar;lpszShortPath: PKOLChar; cchBuffer : DWORD) : DWORD
12730:  //Procedure wGetStartupInfo( var lpStartupInfo : TStartupInfo)
12731: // Function wGetStringTypeEx(Locale:LCID; dwInfoType:DWORD;lpSrcStr:PKOLChar;cchSrc:Integer;var
        lpCharType):BOOL
12732:  Function wGetSystemDirectory( lpBuffer : PKOLChar; uSize : UINT) : UINT
12733:  Function wGetTempFileName( lpPathName, lpPrefixString: PKOLChar;uUnique:UINT;lpTempFileName:PKOLChar):UINT
12734:  Function wGetTempPath( nBufferLength : DWORD; lpBuffer : PKOLChar) : DWORD
12735: //Function
        wGetTimeFormat(Loc:LCID;dwFlgs:DWORD;lpTime:PSystemTime;lpFrm:PKOLChar;lpTimeStr:PKOLChar;cTime:Int):Int
12736: //Function wGetVersionEx( var lpVersionInformation : TOSVersionInfo) : BOOL
12737: //Function GetVolumeInformation( lpRootPathName : PKOLChar; lpVolumeNameBuffer : PKOLChar; nVolumeNameSize
        : DWORD; lpVolumeSerialNumber : PDWORD; var lpMaximumComponentLength, lpFileSystemFlags : DWORD;
        lpFileSystemNameBuffer : PKOLChar; nFileSystemNameSize : DWORD) : BOOL
12738:  Function wGetWindowsDirectory( lpBuffer : PKOLChar; uSize : UINT) : UINT
12739:  Function wGlobalAddAtom( lpString : PKOLChar) : ATOM
12740:  Function wGlobalFindAtom( lpString : PKOLChar) : ATOM
12741:  Function wGlobalGetAtomName( nAtom : ATOM; lpBuffer : PKOLChar; nSize : Integer) : UINT
12742:  Function wIsBadStringPtr( lpsz : PKOLChar; ucchMax : UINT) : BOOL
12743:  Function
        wLCMapString(Loc:LCID;dwMapFlgs:DWORD;lpSrcStr:PKOLChar;cchSrc:Int;lpDestStr:PKOLChar;cchDest:Int):Int;
12744:  Function wLoadLibrary( lpLibFileName : PKOLChar) : HMODULE
12745:  Function wLoadLibraryEx( lpLibFileName : PKOLChar; hFile : THandle; dwFlags : DWORD) : HMODULE
12746:  Function wMoveFile( lpExistingFileName, lpNewFileName : PKOLChar) : BOOL
12747:  Function wMoveFileEx( lpExistingFileName, lpNewFileName : PKOLChar; dwFlags : DWORD) : BOOL
12748:  //Function wMoveFileWithProgress( lpExistingFileName, lpNewFileName : PKOLChar; lpProgressRoutine :
        TFNProgressRoutine; lpData : Pointer; dwFlags : DWORD) : BOOL
12749:  Function wOpenEvent( dwDesiredAccess : DWORD; bInheritHandle : BOOL;lpName:PKOLChar) : THandle
12750:  Function wOpenFileMapping( dwDesiredAccess : DWORD; bInheritHandle:BOOL;lpName: PKOLChar):THandle
12751:  Function wOpenMutex( dwDesiredAccess : DWORD; bInheritHandle : BOOL; lpName : PKOLChar) : THandle
12752:  Function wOpenSemaphore( dwDesiredAccess : DWORD; bInheritHandle : BOOL; lpName : PKOLChar):THandle
12753:  Function wOpenWaitableTimer(dwDesiredAccess:DWORD;bInheritHandle:BOOL;lpTimerName:PKOLChar):THandle
12754:  Procedure wOutputDebugString( lpOutputString : PKOLChar)
12755:  //Function wPeekConsoleInput(hConsoleInput:THandle;var lpBuffer:TInputRecord;nLength:DWORD;var
        lpNumberOfEventsRead:DWORD):BOOL;
12756:  Function wQueryDosDevice( lpDeviceName : PKOLChar; lpTargetPath : PKOLChar; ucchMax : DWORD) : DWORD
12757:  //Function wQueryRecoveryAgents(p1:PKOLChar;var p2:Pointer;var p3:TRecoveryAgentInformation):DWORD
12758:  //Function wReadConsole( hConsoleInput : THandle; lpBuffer : Pointer; nNumberOfCharsToRead : DWORD; var
        lpNumberOfCharsRead : DWORD; lpReserved : Pointer) : BOOL
12759:  //Function wReadConsoleInput(hConsInp:THandle;var lpBuf:TInpRec;nLength:DWORD;var
        lpNumbOfEventsRead:DWORD):BOOL;
12760:  //Function wReadConsoleOutput( hConsoleOutput : THandle; lpBuffer : Pointer; dwBufferSize, dwBufferCoord
        : TCoord; var lpReadRegion : TSmallRect) : BOOL
12761:  //Function wReadConsoleOutputCharacter( hConsoleOutput : THandle; lpCharacter : PKOLChar; nLength :
        DWORD; dwReadCoord : TCoord; var lpNumberOfCharsRead : DWORD) : BOOL
12762:  Function wRemoveDirectory( lpPathName : PKOLChar) : BOOL
12763:  //Function wScrollConsoleScreenBuffer( hConsoleOutput : THandle; const lpScrollRectangle : TSmallRect;
        lpClipRectangle : PSmallRect; dwDestinationOrigin : TCoord; var lpFill : TCharInfo) : BOOL
12764:  Function wSearchPath( lpPath,lpFileName,lpExtension:PKOLChar;nBufferLength:DWORD;lpBuffer:PKOLChar;var
        lpFilePart:PKOLChar):DWORD;
12765:  Function wSetComputerName( lpComputerName : PKOLChar) : BOOL
12766:  Function wSetConsoleTitle( lpConsoleTitle : PKOLChar) : BOOL
12767:  Function wSetCurrentDirectory( lpPathName : PKOLChar) : BOOL
12768:  //Function wSetDefaultCommConfig( lpszName : PKOLChar; lpCC : PCommConfig; dwSize : DWORD) : BOOL
12769:  Function wSetEnvironmentVariable( lpName, lpValue : PKOLChar) : BOOL
12770:  Function wSetFileAttributes( lpFileName : PKOLChar; dwFileAttributes : DWORD) : BOOL
12771:  //Function wSetLocaleInfo( Locale : LCID; LCType : LCTYPE; lpLCData : PKOLChar) : BOOL
12772:  Function wSetVolumeLabel( lpRootPathName : PKOLChar; lpVolumeName : PKOLChar) : BOOL
12773:  //Function wUpdateResource(hUpdate:THandle;lpType,
        lpName:PKOLChar;wLanguage:Word;lpData:Ptr;cbData:DWORD):BOOL
12774:  Function wVerLanguageName( wLang : DWORD; szLang : PKOLChar; nSize : DWORD) : DWORD
12775:  Function wWaitNamedPipe( lpNamedPipeName : PKOLChar; nTimeOut : DWORD) : BOOL
```

```
12776:  //Function wWriteConsole( hConsoleOutput : THandle; const lpBuffer : Pointer; nNumberOfCharsToWrite :
        DWORD; var lpNumberOfCharsWritten : DWORD; lpReserved : Pointer) : BOOL
12777:  //Function wWriteConsoleInput( hConsoleInput : THandle; const lpBuffer : TInputRecord; nLength : DWORD;
        var lpNumberOfEventsWritten : DWORD) : BOOL
12778:  //Function wWriteConsoleOutput(hConsoleOutput:THandle; lpBuffer:Pointer; dwBufferSize,dwBufferCoord :
        TCoord; var lpWriteRegion : TSmallRect) : BOOL
12779:  //Function wWriteConsoleOutputCharacter( hConsoleOutput : THandle; lpCharacter : PKOLChar; nLength :
        DWORD; dwWriteCoord : TCoord; var lpNumberOfCharsWritten : DWORD) : BOOL
12780:  Function wWritePrivateProfileSection( lpAppName, lpString, lpFileName : PKOLChar) : BOOL
12781:  Function wWritePrivateProfileString( lpAppName, lpKeyName, lpString, lpFileName : PKOLChar) : BOOL
12782:  Function wWriteProfileSection( lpAppName, lpString : PKOLChar) : BOOL
12783:  Function wWriteProfileString( lpAppName, lpKeyName, lpString : PKOLChar) : BOOL
12784:  Function wlstrcat( lpString1, lpString2 : PKOLChar) : PKOLChar
12785:  Function wlstrcmp( lpString1, lpString2 : PKOLChar) : Integer
12786:  Function wlstrcmpi( lpString1, lpString2 : PKOLChar) : Integer
12787:  Function wlstrcpy( lpString1, lpString2 : PKOLChar) : PKOLChar
12788:  Function wlstrcpyn( lpString1, lpString2 : PKOLChar; iMaxLength : Integer) : PKOLChar
12789:  Function wlstrlen( lpString : PKOLChar) : Integer
12790:  //Function wMultinetGetConnectionPerformance( lpNetResource : PNetResource; lpNetConnectInfoStruc :
        PNetConnectInfoStruct) : DWORD
12791:  //Function wWNetAddConnection2(var lpNetResource:TNetResource;lpPassw,
        lpUserName:PKOLChar;dwFlags:DWORD):DWORD;
12792:  //Function wWNetAddConnection3( hwndOwner : HWND; var lpNetResource:TNetResource;lpPassword,
        lpUserName:PKOLChar; dwFlags : DWORD) : DWORD
12793:  Function wWNetAddConnection( lpRemoteName, lpPassword, lpLocalName : PKOLChar) : DWORD
12794:  Function wWNetCancelConnection2( lpName : PKOLChar; dwFlags : DWORD; fForce : BOOL) : DWORD
12795:  Function wWNetCancelConnection( lpName : PKOLChar; fForce : BOOL) : DWORD
12796:  //Function wWNetConnectionDialog1( var lpConnDlgStruct : TConnectDlgStruct) : DWORD
12797:  //Function wWNetDisconnectDialog1( var lpConnDlgStruct : TDiscDlgStruct) : DWORD
12798:  //Function wWNetEnumResource(hEnum:THandle;var lpcCount:DWORD;lpBuffer:Ptr;var lpBufferSize:DWORD):DWORD;
12799:  Function wWNetGetConnection(lpLocalName:PKOLChar;lpRemoteName:PKOLChar; var lpnLength:DWORD):DWORD;
12800:  Function wWNetGetLastError( var lpError : DWORD; lpErrorBuf : PKOLChar; nErrorBufSize : DWORD; lpNameBuf
        : PKOLChar; nNameBufSize : DWORD) : DWORD
12801:  //Function wWNetGetNetworkInformation(lpProvider:PKOLChar;var lpNetInfoStruct:TNetInfoStruct):DWORD;
12802:  Function wWNetGetProviderName(dwNetType:DWORD;lpProviderName:PKOLChar;var lpBufferSize:DWORD):DWORD;
12803:  //Function wWNetGetResourceParent(lpNetResource:PNetResource;lpBuffer:Pointer;var cbBuffer:DWORD):DWORD;
12804: //Function wWNetGetUniversalName(lpLocalPath:PKOLChar;dwInfoLevel:DWORD;lpBuffer:Ptr;var
        lpBufferSize:DWORD):DWORD;
12805:  Function wWNetGetUser( lpName : PKOLChar; lpUserName : PKOLChar; var lpnLength : DWORD) : DWORD
12806: // Function wWNetOpenEnum(dwScope,dwType,dwUsage:DWORD;lpNetResource:PNetRes;var lphEnum:THandle):DWORD;
12807: // Function wWNetSetConnection( lpName : PKOLChar; dwProperties : DWORD; pvValues : Pointer) : DWORD
12808:  //Function wWNetUseConnection(hwndOwner:HWND;var
        lpNetResource:TNetResource;lpUserID:PKOLChar;lpPassword:PKOLChar; dwFlags:DWORD;lpAccessName:PKOLChar;var
        lpBufferSize:DWORD;var lpResult:DWORD):DWORD
12809:  Function wGetFileVersionInfo(lptstrFilename:PKOLChar;dwHandle,dwLen:DWORD;lpData:Pointer):BOOL;
12810:  Function wGetFileVersionInfoSize( lptstrFilename : PKOLChar; var lpdwHandle : DWORD) : DWORD
12811:  Function wVerFindFile( uFlags : DWORD; szFileName, szWinDir, szAppDir, szCurDir : PKOLChar; var
        lpuCurDirLen : UINT; szDestDir : PKOLChar; var lpuDestDirLen : UINT) : DWORD
12812:  Function wVerInstallFile( uFlags : DWORD; szSrcFileName, szDestFileName, szSrcDir, szDestDir, szCurDir,
        szTmpFile : PKOLChar; var lpuTmpFileLen : UINT) : DWORD
12813: //Function wVerQueryValue(pBlock:Pointer;lpSubBlock:PKOLChar;var lplpBuffer:Ptr;var puLen:UINT):BOOL;
12814: //Function wGetPrivateProfileStruct(lpszSection,
        lpszKey:PKOLChar;lpStruct:Ptr;uSizeStruct:UINT;szFile:PKOLChar):BOOL;
12815: //Function wWritePrivateProfileStruct(lpszSection,
        lpszKey:PKOLChar;lpStruct:Ptr;uSizeStruct:UINT;szFile:PKOLChar):BOOL;
12816:  Function wAddFontResource( FileName : PKOLChar) : Integer
12817:  //Function wAddFontResourceEx( p1 : PKOLChar; p2 : DWORD; p3 : PDesignVector) : Integer
12818:  Function wCopyEnhMetaFile( p1 : HENHMETAFILE; p2 : PKOLChar) : HENHMETAFILE
12819:  Function wCopyMetaFile( p1 : HMETAFILE; p2 : PKOLChar) : HMETAFILE
12820:  //Function wCreateColorSpace( var ColorSpace : TLogColorSpace) : HCOLORSPACE
12821:  //Function wCreateDC( lpszDriver, lpszDevice, lpszOutput : PKOLChar; lpdvmInit : PDeviceMode) : HDC
12822: // Function wCreateEnhMetaFile( DC : HDC; FileName : PKOLChar; Rect : PRect; Desc : PKOLChar) : HDC
12823:  Function wCreateFont( nHeight, nWidth, nEscapement, nOrientaion, fnWeight : Integer; fdwItalic,
        fdwUnderline, fdwStrikeOut,fdwCharSet,fdwOutputPrec,fdwClipPrecision,fdwQualy,
        fdwPitchAndFamily:DWORD;lpszFace:PKOLChar):HFONT;
12824:  Function wCreateFontIndirect( const p1 : TLogFont) : HFONT
12825:  //Function wCreateFontIndirectEx( const p1 : PEnumLogFontExDV) : HFONT
12826: // Function wCreateIC( lpszDriver, lpszDevice, lpszOutput : PKOLChar; lpdvmInit : PDeviceMode) : HDC
12827:  Function wCreateMetaFile( p1 : PKOLChar) : HDC
12828:  Function wCreateScalableFontResource( p1 : DWORD; p2, p3, p4 : PKOLChar) : BOOL
12829: //Function wDeviceCapabilities(pDriverNa,pDeviceNam,
        pPort:PKOLChar;iIdx:Int;pOut:PKOLChar;DevMod:PDeviceMode):Int;
12830: // Function wEnumFontFamilies( DC : HDC; p2 : PKOLChar; p3 : TFNFontEnumProc; p4 : LPARAM) : BOOL
12831:  //Function wEnumFontFamiliesEx(DC:HDC;var p2:TLogFont;p3:TFNFontEnumProc;p4:LPARAM;p5:DWORD):BOOL);
12832:  //Function wEnumFonts(DC:HDC;lpszFace:PKOLChar;fntenmprc:TFNFontEnumProc;lpszData:PKOLChar):Integer;
12833:  //Function wEnumICMProfiles( DC : HDC; ICMProc : TFNICMEnumProc; p3 : LPARAM) : Integer
12834:  //Function wExtTextOut(DC:HDC;X,
        Y:Int;Options:Longint;Rect:PRect;Str:PKOLChar;Count:Longint;Dx:PInteger:BOOL
12835:  //Function wGetCharABCWidths( DC : HDC; FirstChar, LastChar : UINT; const ABCStructs) : BOOL
12836:  //Function wGetCharABCWidthsFloat( DC : HDC; FirstChar, LastChar : UINT; const ABCFloatSturcts) : BOOL
12837:  //Function wGetCharWidth32( DC : HDC; FirstChar, LastChar : UINT; const Widths) : BOOL
12838:  //Function wGetCharWidth( DC : HDC; FirstChar, LastChar : UINT; const Widths) : BOOL
12839: // Function wGetCharWidthFloat( DC : HDC; FirstChar, LastChar : UINT; const Widths) : BOOL
12840: // Function wGetCharacterPlacement(DC:HDC;p2:PKOLChar;p3,p4:BOOL;var p5:TGCPResults;p6:DWORD):DWORD
12841:  Function wGetEnhMetaFile( p1 : PKOLChar) : HENHMETAFILE
12842:  Function wGetEnhMetaFileDescription( p1 : HENHMETAFILE; p2 : UINT; p3 : PKOLChar) : UINT
12843: // Function wGetGlyphIndices( DC : HDC; p2 : PKOLChar; p3 : Integer; p4 : PWORD; p5 : DWORD) : DWORD
12844: // Function wGetGlyphOutline( DC : HDC; uChar,uFormat:UINT;const lpgm:TGlyphMetrics; cbBuffer : DWORD;
        lpvBuffer : Pointer; const lpmat2 : TMat2) : DWORD
```

```
12845:  Function wGetICMProfile( DC : HDC; var Size : DWORD; Name : PKOLChar) : BOOL
12846: // Function wGetLogColorSpace( p1 : HCOLORSPACE; var ColorSpace : TLogColorSpace; Size : DWORD) : BOOL
12847:  Function wGetMetaFile( p1 : PKOLChar) : HMETAFILE
12848: // Function wGetObject( p1 : HGDIOBJ; p2 : Integer; p3 : Pointer) : Integer
12849:  //Function wGetOutlineTextMetrics( DC : HDC; p2 : UINT; OTMetricStructs : Pointer) : UINT
12850:  //Function wGetTextExtentExPoint(DC:HDC;p2:PKOLChar; p3,p4:Integer;p5,p6:PInteger;var p7:TSize):BOOL
12851:  Function wGetTextExtentPoint32( DC : HDC; Str : PKOLChar; Count : Integer; var Size : TSize) : BOOL
12852:  Function wGetTextExtentPoint( DC : HDC; Str : PKOLChar; Count : Integer; var Size : TSize) : BOOL
12853:  Function wGetTextFace( DC : HDC; Count : Integer; Buffer : PKOLChar) : Integer
12854:  //Function wGetTextMetrics( DC : HDC; var TM : TTextMetric) : BOOL
12855:  Function wPolyTextOut( DC : HDC; const PolyTextArray, Strings : Integer) : BOOL
12856:  Function wRemoveFontResource( FileName : PKOLChar) : BOOL
12857:  //Function wRemoveFontResourceEx( p1 : PKOLChar; p2 : DWORD; p3 : PDesignVector) : BOOL
12858:  //Function wResetDC( DC : HDC; const InitData : TDeviceMode) : HDC
12859:  Function wSetICMProfile( DC : HDC; Name : PKOLChar) : BOOL
12860:  //Function wStartDoc( DC : HDC; const p2 : TDocInfo) : Integer
12861:  Function wTextOut( DC : HDC; X, Y : Integer; Str : PKOLChar; Count : Integer) : BOOL
12862:  Function wUpdateICMRegKey( p1 : DWORD; p2, p3 : PKOLChar; p4 : UINT) : BOOL
12863:  Function wwglUseFontBitmaps( DC : HDC; p2, p3, p4 : DWORD) : BOOL
12864:  //Function wwglUseFontOutlines(p1:HDC; p2,p3,p4:DWORD;p5,p6:Single;p7:Int;p8:PGlyphMetricsFloat):BOOL
12865:  Function wAppendMenu( hMenu : HMENU; uFlags, uIDNewItem : UINT; lpNewItem : PKOLChar) : BOOL
12866:  Function wCallMsgFilter( var lpMsg : TMsg; nCode : Integer) : BOOL
12867:  //Function
       wCallWindowProc(lpPrevWndFunc:TFNWndProc;hWnd:HWND;Msg:UINT;wParam:WPARAM;lParam:LPARAM):LRESULT
12868:  //Function wChangeDisplaySettings( var lpDevMode : TDeviceMode; dwFlags : DWORD) : Longint
12869: // Function wChangeDisplaySettingsEx( lpszDeviceName:PKOLChar;var lpDevMode: TDeviceMode; wnd : HWND;
       dwFlags : DWORD; lParam : Pointer) : Longint
12870:  Function wChangeMenu(hMenu:HMENU;cmd:UINT;lpszNewItem:PKOLChar;cmdInsert:UINT;flags:UINT):BOOL;
12871:  Function wCharLower( lpsz : PKOLChar) : PKOLChar
12872:  Function wCharLowerBuff( lpsz : PKOLChar; cchLength : DWORD) : DWORD
12873:  Function wCharNext( lpsz : PKOLChar) : PKOLChar
12874:  //Function wCharNextEx( CodePage : Word; lpCurrentChar : LPCSTR; dwFlags : DWORD) : LPSTR
12875:  Function wCharPrev( lpszStart : PKOLChar; lpszCurrent : PKOLChar) : PKOLChar
12876: // Function wCharPrevEx( CodePage : Word; lpStart, lpCurrentChar : LPCSTR; dwFlags : DWORD) : LPSTR
12877:  Function wCharToOem( lpszSrc : PKOLChar; lpszDst : PKOLChar) : BOOL
12878:  Function wCharToOemBuff( lpszSrc : PKOLChar; lpszDst : PKOLChar; cchDstLength : DWORD) : BOOL
12879:  Function wCharUpper( lpsz : PKOLChar) : PKOLChar
12880:  Function wCharUpperBuff( lpsz : PKOLChar; cchLength : DWORD) : DWORD
12881:  Function wCopyAcceleratorTable( hAccelSrc : HACCEL; var lpAccelDst, cAccelEntries : Integer) : Integer
12882:  Function wCreateAcceleratorTable( var Accel, Count : Integer) : HACCEL
12883:  //Function wCreateDesktop(lpszDesktop,
       lpszDevice:PKOLChar;pDevmode:PDeviceMode;dwFlags:DWORD;dwDesiredAccess:DWORD;lpsa:PSecurityAttribs):HDESK
12884:  //Function wCreateDialogIndirectParam( hInstance : HINST; const lpTemplate : TDlgTemplate; hWndParent :
       HWND; lpDialogFunc : TFNDlgProc; dwInitParam : LPARAM) : HWND
12885:  //Function wCreateDialogParam( hInstance : HINST; lpTemplateName : PKOLChar; hWndParent : HWND;
       lpDialogFunc : TFNDlgProc; dwInitParam : LPARAM) : HWND
12886:  Function wCreateMDIWindow( lpClassName, lpWindowName:PKOLChar;dwStyle: DWORD; X,Y,nWidth,nHeight:Integer;
       hWndParent : HWND; hInstance : HINST; lParam : LPARAM) : HWND
12887: //Function wCreateWindowEx(dwExStyle:DWORD;lpClassName:PKOLChar;lpWindowName:PKOLChar;dwStyle DWORD;X,Y,
       nWidth, nHeight:Int WndParent:HWND;hMenu:HMENU;hInstance:HINST;lpParam:Pointer):HWND
12888:  //Function wCreateWindowStation(lpwinsta:PKOLChar;dwReserv,
       dwDesiredAccess:DWORD;lpsa:PSecurityAttribs):HWINSTA;
12889:  Function wDefDlgProc( hDlg : HWND; Msg : UINT; wParam : WPARAM; lParam : LPARAM) : LRESULT
12890:  Function wDefFrameProc(hWnd,hWndMDIClient:HWND;uMsg:UINT;wParam:WPARAM;lParam:LPARAM):LRESULT;
12891:  Function wDefMDIChildProc( hWnd : HWND; uMsg : UINT; wParam : WPARAM; lParam: LPARAM):LRESULT;
12892:  Function wDefWindowProc( hWnd : HWND; Msg : UINT; wParam : WPARAM; lParam:LPARAM): LRESULT
12893:  //Function wDialogBoxIndirectParam( hInstance : HINST; const lpDialogTemplate : TDlgTemplate; hWndParent
       : HWND; lpDialogFunc : TFNDlgProc; dwInitParam : LPARAM) : Integer
12894:  //Function wDialogBoxParam( hInstance : HINST; lpTemplateName : PKOLChar; hWndParent : HWND; lpDialogFunc
       : TFNDlgProc; dwInitParam : LPARAM) : Integer
12895:  Function wDispatchMessage( const lpMsg : TMsg) : Longint
12896:  Function wDlgDirList(hDlg:HWND;lpPathSpec:PKOLChar;nIDListBox,
       nIDStaticPath:Integer;uFileType:UINT):Integer;
12897:  Function wDlgDirListComboBox(hDlg:HWND;lpPathSpec:PKOLChar;nIDComboBox,
       nIDStaticPath:Int;uFiletype:UINT):Int;
12898:  Function wDlgDirSelectComboBoxEx( hDlg : HWND; lpString:PKOLChar;nCount,nIDComboBox:Integer): BOOL
12899:  Function wDlgDirSelectEx( hDlg : HWND; lpString : PKOLChar; nCount, nIDListBox : Integer) : BOOL
12900: //Function wDrawState(DC:HDC;Brush:HBRUSH;CBFunc:TFNDrawStateProc;lData:LPARA;wDat:WPARA;x,y,cx,
       cy:Int;Flags:UINT):BOOL;
12901:  Function wDrawText(hDC:HDC;lpString:PKOLChar;nCount:Integer;var lpRect:TRect;uFormat:UINT):Integer;
12902:  Function wFindWindow( lpClassName, lpWindowName : PKOLChar) : HWND
12903:  Function wFindWindowEx( Parent, Child : HWND; ClassName, WindowName : PKOLChar) : HWND
12904:  //Function wGetAltTabInfo(hwnd:HWND;iItem:Int;var
       pati:TAltTabInfo;pszItemText:PKOLChar;cchItemText:UINT):BOOL;
12905: // Function wGetClassInfo( hInstance : HINST; lpClassName : PKOLChar; var lpWndClass : TWndClass) : BOOL
12906:  //Function wGetClassInfoEx( Instance : HINST; Classname : PKOLChar; var WndClass : TWndClassEx) : BOOL
12907:  Function wGetClassLong( hWnd : HWND; nIndex : Integer) : DWORD
12908:  Function wGetClassName( hWnd : HWND; lpClassName : PKOLChar; nMaxCount : Integer) : Integer
12909:  Function wGetClipboardFormatName( format : UINT; lpszFormatName:PKOLChar;cchMaxCount:Integer):Integer;
12910:  Function wGetDlgItemText( hDlg: HWND;nIDDlgItem:Integer;lpString:PKOLChar;nMaxCount:Integer):UINT
12911:  Function wGetKeyNameText( lParam : Longint; lpString : PKOLChar; nSize : Integer) : Integer
12912:  Function wGetKeyboardLayoutName( pwszKLID : PKOLChar) : BOOL
12913:  //Function wGetMenuItemInfo( p1 : HMENU; p2 : UINT; p3 : BOOL; var p4 : TMenuItemInfo) : BOOL
12914:  Function wGetMenuString(hMenu:HMENU;uIDItem:UINT;lpString:PKOLChar;nMaxCount:Integer;uFlag:UINT):Integer;
12915:  Function wGetMessage( var lpMsg : TMsg; hWnd : HWND; wMsgFilterMin, wMsgFilterMax : UINT) : BOOL
12916:  Function wGetProp( hWnd : HWND; lpString : PKOLChar) : THandle
12917:  //Function wGetTabbedTextExtent( hDC : HDC; lpString : PKOLChar; nCount, nTabPositions : Integer; var
       lpnTabStopPositions) : DWORD
12918: //Function wGetUserObjectInform(hObj:THandle;nIndex:Int;pvInfo:Ptr;nLength:DWORD;var
       lpnLengthNeed:DWORD)BOOL;
```

```
12919:  Function wGetWindowLong( hWnd : HWND; nIndex : Integer) : Longint
12920:  Function wGetWindowModuleFileName( hwnd : HWND; pszFileName : PKOLChar; cchFileNameMax : UINT) : UINT
12921:  Function wGetWindowText( hWnd : HWND; lpString : PKOLChar; nMaxCount : Integer) : Integer
12922:  Function wGetWindowTextLength( hWnd : HWND) : Integer
12923: //Function wGrayString(hDC:HDC;hBrush:HBRUSH;lpOutFunc:TFNGrayStrProc;lpDat:LPARA;nCnt,X,Y,nWidt,
       nHeigt:Int):BOOL;
12924:  Function wInsertMenu( hMenu : HMENU; uPosition, uFlags, uIDNewItem : UINT; lpNewItem : PKOLChar) : BOOL
12925:  //Function wInsertMenuItem( p1 : HMENU; p2 : UINT; p3 : BOOL; const p4 : TMenuItemInfo) : BOOL
12926:  Function wIsCharAlpha( ch : KOLChar) : BOOL
12927:  Function wIsCharAlphaNumeric( ch : KOLChar) : BOOL
12928:  Function wIsCharLower( ch : KOLChar) : BOOL
12929:  Function wIsCharUpper( ch : KOLChar) : BOOL
12930:  Function wIsDialogMessage( hDlg : HWND; var lpMsg : TMsg) : BOOL
12931:  Function wLoadAccelerators( hInstance : HINST; lpTableName : PKOLChar) : HACCEL
12932:  Function wLoadBitmap( hInstance : HINST; lpBitmapName : PKOLChar) : HBITMAP
12933:  Function wLoadCursor( hInstance : HINST; lpCursorName : PKOLChar) : HCURSOR
12934:  Function wLoadCursorFromFile( lpFileName : PKOLChar) : HCURSOR
12935:  Function wLoadIcon( hInstance : HINST; lpIconName : PKOLChar) : HICON
12936:  Function wLoadImage(hInst:HINST;ImageName:PKOLChar;ImageType:UINT;X,Y:Integer;Flags:UINT): THandle
12937:  Function wLoadKeyboardLayout( pwszKLID : PKOLChar; Flags : UINT) : HKL
12938:  Function wLoadMenu( hInstance : HINST; lpMenuName : PKOLChar) : HMENU
12939:  //Function wLoadMenuIndirect( lpMenuTemplate : Pointer) : HMENU
12940:  Function wLoadString(hInstance:HINST;uID: UINT; lpBuffer :PKOLChar;nBufferMax:Integer):Integer
12941:  Function wMapVirtualKey( uCode, uMapType : UINT) : UINT
12942:  Function wMapVirtualKeyEx( uCode, uMapType : UINT; dwhkl : HKL) : UINT
12943:  Function wMessageBox( hWnd : HWND; lpText, lpCaption : PKOLChar; uType : UINT) : Integer
12944:  Function wMessageBoxEx( hWnd:HWND; lpText,lpCaption:PKOLChar;uType:UINT;wLanguageId:Word): Integer
12945:  //Function wMessageBoxIndirect( const MsgBoxParams : TMsgBoxParams) : BOOL
12946:  Function wModifyMenu( hMnu : HMENU; uPosition, uFlags, uIDNewItem : UINT; lpNewItem : PKOLChar) : BOOL
12947:  //Function wOemToAnsi( const lpszSrc : LPCSTR; lpszDst : LPSTR) : BOOL
12948:  //7Function wOemToAnsiBuff( lpszSrc : LPCSTR; lpszDst : LPSTR; cchDstLength : DWORD) : BOOL
12949:  //Function wOemToChar( lpszSrc : PKOLChar; lpszDst : PKOLChar) : BOOL
12950:  Function wOemToCharBuff( lpszSrc : PKOLChar; lpszDst : PKOLChar; cchDstLength : DWORD) : BOOL
12951:  Function wOpenDesktop(lpszDesktop:PKOLChar;dwFlags:DWORD;fInherit:BOOL;dwDesiredAccess:DWORD): HDESK
12952:  Function wOpenWindowStation( lpszWinSta : PKOLChar; fInherit : BOOL; dwDesiredAccess : DWORD): HWINSTA
12953:  Function wPeekMessage( var lpMsg : TMsg; hWnd: HWND;wMsgFilterMin,wMsgFilterMax, wRemoveMsg:UINT):BOOL
12954:  Function wPostMessage( hWnd : HWND; Msg : UINT; wParam : WPARAM; lParam : LPARAM) : BOOL
12955:  Function wPostThreadMessage(idThread:DWORD;Msg : UINT; wParam : WPARAM; lParam : LPARAM) : BOOL
12956:  Function wRealGetWindowClass( hwnd : HWND; pszType : PKOLChar; cchType : UINT) : UINT
12957: // Function wRegisterClass( const lpWndClass : TWndClass) : ATOM
12958: // Function wRegisterClassEx( const WndClass : TWndClassEx) : ATOM
12959:  Function wRegisterClipboardFormat( lpszFormat : PKOLChar) : UINT
12960: // Function wRegisterDeviceNotification(hRecipient:THandle;NotificFilter:Pointer;Flags:DWORD):HDEVNOTIFY
12961:  Function wRegisterWindowMessage( lpString : PKOLChar) : UINT
12962:  Function wRemoveProp( hWnd : HWND; lpString : PKOLChar) : THandle
12963:  Function wSendDlgItemMessage(hDlg:HWND;nIDDlgItem:Integer;Msg:UINT;wParam:WPARAM;lParam:LPARAM):Longint;
12964:  Function wSendMessage( hWnd : HWND; Msg : UINT; wParam : WPARAM; lParam : LPARAM) : LRESULT
12965:  //Function wSendMessageCallback( hWnd : HWND; Msg : UINT; wParam : WPARAM; lParam:LPARAM;
       lpResultCallBack : TFNSendAsyncProc; dwData : DWORD) : BOOL
12966:  Function wSendMessageTimeout(hWnd:HWND;Msg:UINT;wParam:WPARAM;lParam:LPARAM; fuFlags,uTimeout:UINT;var
       lpdwResult:DWORD): LRESULT
12967:  Function wSendNotifyMessage( hWnd : HWND; Msg : UINT; wParam : WPARAM; lParam : LPARAM) : BOOL
12968:  Function wSetClassLong( hWnd : HWND; nIndex : Integer; dwNewLong : Longint) : DWORD
12969:  Function wSetDlgItemText( hDlg : HWND; nIDDlgItem : Integer; lpString : PKOLChar) : BOOL
12970:  //Function wSetMenuItemInfo( p1 : HMENU; p2 : UINT; p3 : BOOL; const p4 : TMenuItemInfo) : BOOL
12971:  Function wSetProp( hWnd : HWND; lpString : PKOLChar; hData : THandle) : BOOL
12972: // Function wSetUserObjectInformation(hObj:THandle;nIndex:Integer;pvInfo:Pointer;nLength:DWORD):BOOL
12973:  Function wSetWindowLong( hWnd : HWND; nIndex : Integer; dwNewLong : Longint) : Longint
12974:  Function wSetWindowText( hWnd : HWND; lpString : PKOLChar) : BOOL
12975:  //Function wSetWindowsHook( nFilterType : Integer; pfnFilterProc : TFNHookProc) : HHOOK
12976:  //Function wSetWindowsHookEx(idHook:Integer;lpfn:TFNHookProc;hmod:HINST;dwThreadId:DWORD):HHOOK;
12977: // Function wSystemParametersInfo( uiAction, uiParam : UINT; pvParam : Pointer; fWinIni: UINT):BOOL
12978:  Function wTabbedTextOut(hDC:HDC;X,Y:Int;lpString:PKOLChar;nCount,nTabPositions:Int;var
       lpnTabStopPositions,nTabOrigin:Int):Longint;
12979:  Function wTranslateAccelerator( hWnd : HWND; hAccTable : HACCEL; var lpMsg : TMsg) : Integer
12980:  Function wUnregisterClass( lpClassName : PKOLChar; hInstance : HINST) : BOOL
12981:  Function wVkKeyScan( ch : KOLChar) : SHORT
12982:  Function wVkKeyScanEx( ch : KOLChar; dwhkl : HKL) : SHORT
12983:  Function wWinHelp( hWndMain : HWND; lpszHelp : PKOLChar; uCommand : UINT; dwData : DWORD) : BOOL
12984:  Function wwsprintf( Output : PKOLChar; Format : PKOLChar) : Integer
12985:  Function wwvsprintf( Output : PKOLChar; Format : PKOLChar; arglist : va_list) : Integer
12986:
12987: //TestDrive!
12988: 'SID_REVISION','LongInt'(1);'FILENAME_ADVAPI32','String').SetString('ADVAPI32.DLL
12989:  'PROC_CONVERTSIDTOSTRINGSIDA','String').SetString( 'ConvertSidToStringSidA
12990:  Function GetDomainUserSidS(const domainName:String;const userName:String; var foundDomain:String):String;
12991:  Function GetLocalUserSidStr( const UserName : string) : string
12992:  Function getPid4user( const domain : string; const user : string; var pid : dword) : boolean
12993:  Function Impersonate2User( const domain : string; const user : string) : boolean
12994:  Function GetProcessUserBypid( pid : DWORD; var UserName, Domain : AnsiString) : Boolean
12995:  Function KillProcessbyname( const exename : string; var found : integer) : integer
12996:  Function getWinProcessList : TStringList
12997: end;
12998:
12999: procedure SIRegister_AfSafeSync(CL: TPSPascalCompiler);
13000: begin
13001:  'AfMaxSyncSlots','LongInt'( 64);
13002:  'AfSynchronizeTimeout','LongInt'( 2000);
13003:   TAfSyncSlotID', 'DWORD
```

```
13004:   TAfSyncStatistics','record MessagesCount:Int;TimeoutMessages:Int;DisabledMessages:Int;end;
13005:   TAfSafeSyncEvent', 'Procedure ( ID : TAfSyncSlotID)
13006:   TAfSafeDirectSyncEvent', 'Procedure
13007:  Function AfNewSyncSlot( const AEvent : TAfSafeSyncEvent) : TAfSyncSlotID
13008:  Function AfReleaseSyncSlot( const ID : TAfSyncSlotID) : Boolean
13009:  Function AfEnableSyncSlot( const ID : TAfSyncSlotID; Enable : Boolean) : Boolean
13010:  Function AfValidateSyncSlot( const ID : TAfSyncSlotID) : Boolean
13011:  Function AfSyncEvent( const ID : TAfSyncSlotID; Timeout : DWORD) : Boolean
13012:  Function AfDirectSyncEvent( Event : TAfSafeDirectSyncEvent; Timeout : DWORD) : Boolean
13013:  Function AfIsSyncMethod : Boolean
13014:  Function AfSyncWnd : HWnd
13015:  Function AfSyncStatistics : TAfSyncStatistics
13016:  Procedure AfClearSyncStatistics
13017: end;
13018:
13019: procedure SIRegister_AfComPortCore(CL: TPSPascalCompiler);
13020: begin
13021:  'fBinary','LongWord')( $00000001);
13022:  'fParity','LongWord'( $00000002);
13023:  'fOutxCtsFlow','LongWord').SetUInt( $00000004);
13024:  'fOutxDsrFlow','LongWord')( $00000008);
13025:  'fDtrControl','LongWord')( $00000030);
13026:  'fDtrControlDisable','LongWord')( $00000000);
13027:  'fDtrControlEnable','LongWord')( $00000010);
13028:  'fDtrControlHandshake','LongWord')( $00000020);
13029:  'fDsrSensitivity','LongWord')( $00000040);
13030:  'fTXContinueOnXoff','LongWord')( $00000080);
13031:  'fOutX','LongWord')( $00000100);
13032:  'fInX','LongWord')( $00000200);
13033:  'fErrorChar','LongWord')( $00000400);
13034:  'fNull','LongWord')( $00000800);
13035:  'fRtsControl','LongWord')( $00003000);
13036:  'fRtsControlDisable','LongWord')( $00000000);
13037:  'fRtsControlEnable','LongWord')( $00001000);
13038:  'fRtsControlHandshake','LongWord')( $00002000);
13039:  'fRtsControlToggle','LongWord')( $00003000);
13040:  'fAbortOnError','LongWord')( $00004000);
13041:  'fDummy2','LongWord')( $FFFF8000);
13042:   TAfCoreEvent', '( ceOutFree, ceLineEvent, ceNeedReadData, ceException )
13043:   FindClass('TOBJECT'),'EAfComPortCoreError
13044:   FindClass('TOBJECT'),'TAfComPortCore
13045:   TAfComPortCoreEvent', 'Procedure ( Sender : TAfComPortCore; Even'
13046:    +'tKind : TAfCoreEvent; Data : DWORD)
13047:   SIRegister_TAfComPortCoreThread(CL);
13048:   SIRegister_TAfComPortEventThread(CL);
13049:   SIRegister_TAfComPortWriteThread(CL);
13050:   SIRegister_TAfComPortCore(CL);
13051:  Function FormatDeviceName( PortNumber : Integer) : string
13052: end;
13053:
13054: procedure SIRegister_ApplicationFileIO(CL: TPSPascalCompiler);
13055: begin
13056:   TAFIOFileStreamEvent', 'Function ( const fileName : String; mode: Word) : TStream
13057:   TAFIOFileStreamExistsEvent', 'Function ( const fileName : String) : Boolean
13058:   SIRegister_TApplicationFileIO(CL);
13059:   TDataFileCapability', '( dfcRead, dfcWrite )
13060:   TDataFileCapabilities', 'set of TDataFileCapability
13061:   SIRegister_TDataFile(CL);
13062:   //TDataFileClass', 'class of TDataFile
13063:  Function ApplicationFileIODefined : Boolean
13064:  Function CreateFileStream(const fileName: String; mode: WordfmShareDenyNone):TStream
13065:  Function FileStreamExists(const fileName: String) : Boolean
13066:  //Procedure Register
13067: end;
13068:
13069: procedure SIRegister_ALFBXLib(CL: TPSPascalCompiler);
13070: begin
13071:   TALFBXFieldType', '( uftUnKnown, uftNumeric, uftChar, uftVarchar'
13072:    +', uftCstring, uftSmallint, uftInteger, uftQuad, uftFloat, uftDoublePrecisi'
13073:    +'on, uftTimestamp, uftBlob, uftBlobId, uftDate, uftTime, uftInt64, uftArray, uftNull )
13074:   TALFBXScale', 'Integer
13075:   FindClass('TOBJECT'),'EALFBXConvertError
13076:   SIRegister_EALFBXError(CL);
13077:   SIRegister_EALFBXException(CL);
13078:   FindClass('TOBJECT'),'EALFBXGFixError
13079:   FindClass('TOBJECT'),'EALFBXDSQLError
13080:   FindClass('TOBJECT'),'EALFBXDynError
13081:   FindClass('TOBJECT'),'EALFBXGBakError
13082:   FindClass('TOBJECT'),'EALFBXGSecError
13083:   FindClass('TOBJECT'),'EALFBXLicenseError
13084:   FindClass('TOBJECT'),'EALFBXGStatError
13085:   //EALFBXExceptionClass', 'class of EALFBXError
13086:   TALFBXCharacterSet', '( csNONE, csASCII, csBIG_5, csCYRL, csDOS4'
13087:    +'37, csDOS850, csDOS852, csDOS857, csDOS860, csDOS861, csDOS863, csDOS865, '
13088:    +'csEUCJ_0208, csGB_2312, csISO8859_1, csISO8859_2, csKSC_5601, csNEXT, csOC'
13089:    +'TETS, csSJIS_0208, csUNICODE_FSS, csUTF8, csWIN1250, csWIN1251, csWIN1252,'
13090:    +' csWIN1253, csWIN1254, csDOS737, csDOS775, csDOS858, csDOS862, csDOS864, c'
13091:    +'sDOS866, csDOS869, csWIN1255, csWIN1256, csWIN1257, csISO8859_3, csISO8859'
13092:    +'_4, csISO8859_5, csISO8859_6, csISO8859_7, csISO8859_8, csISO8859_9, csISO'
```

```
13093:    +'8859_13, csKOI8R, csKOI8U, csWIN1258, csTIS620, csGBK, csCP943C )
13094:   TALFBXTransParam', '( tpConsistency, tpConcurrency, tpShared, tp'
13095:    +'Protected, tpExclusive, tpWait, tpNowait, tpRead, tpWrite, tpLockRead, tpL'
13096:    +'ockWrite, tpVerbTime, tpCommitTime, tpIgnoreLimbo, tpReadCommitted, tpAuto'
13097:    +'Commit, tpRecVersion, tpNoRecVersion, tpRestartRequests, tpNoAutoUndo, tpLockTimeout )
13098:   TALFBXTransParams', 'set of TALFBXTransParam
13099:  Function ALFBXStrToCharacterSet( const CharacterSet : AnsiString) : TALFBXCharacterSet
13100:  Function ALFBXCreateDBParams( Params : AnsiString; Delimiter : Char) : AnsiString
13101:  Function ALFBXCreateBlobParams( Params : AnsiString; Delimiter : Char) : AnsiString
13102:  'cALFBXMaxParamLength','LongInt'( 125);
13103:   TALFBXParamsFlag', '( pfNotInitialized, pfNotNullable )
13104:   TALFBXParamsFlags', 'set of TALFBXParamsFlag
13105:   //PALFBXSQLVar', '^TALFBXSQLVar // will not work
13106:   //PALFBXSQLDaData', '^TALFBXSQLDaData // will not work
13107:   TALFBXStatementType', '( stSelect, stInsert, stUpdate, stDelete,'
13108:    +' stDDL, stGetSegment, stPutSegment, stExecProcedure, stStartTrans, stCommi'
13109:    +'t, stRollback, stSelectForUpdate, stSetGenerator, stSavePoint )
13110:   SIRegister_TALFBXSQLDA(CL);
13111:   //PALFBXPtrArray', '^TALFBXPtrArray // will not work
13112:   SIRegister_TALFBXPoolStream(CL);
13113:   //PALFBXBlobData', '^TALFBXBlobData // will not work
13114:   TALFBXBlobData', 'record Size : Integer; Buffer : string; end
13115:   //PALFBXArrayDesc', '^TALFBXArrayDesc // will not work
13116:   //TALFBXArrayDesc', 'TISCArrayDesc
13117:   //TALFBXBlobDesc', 'TISCBlobDesc
13118:   //PALFBXArrayInfo', '^TALFBXArrayInfo // will not work
13119:   //TALFBXArrayInfo', 'record index : Integer; size : integer; info: TALFBXArrayDesc; end
13120:   SIRegister_TALFBXSQLResult(CL);
13121:   //TALFBXSQLResultClass', 'class of TALFBXSQLResult
13122:   SIRegister_TALFBXSQLParams(CL);
13123:   //TALFBXSQLParamsClass', 'class of TALFBXSQLParams
13124:   TALFBXDSQLInfoData', 'record InfoCode : byte; InfoLen : Word; St'
13125:    +'atementType : TALFBXStatementType; end
13126:   FindClass('TOBJECT'),'TALFBXLibrary
13127:   //PALFBXStatusVector', '^TALFBXStatusVector // will not work
13128:   TALFBXOnConnectionLost', 'Procedure ( Lib : TALFBXLibrary)
13129:   //TALFBXOnGetDBExceptionClass', 'Procedure ( Number : Integer; out'
13130:    //+' Excep : EALFBXExceptionClass)
13131:   SIRegister_TALFBXLibrary(CL);
13132:  'cAlFBXDateOffset','LongInt'( 15018);
13133:  'cALFBXTimeCoeff','LongInt'( 864000000);
13134:  //Procedure ALFBXDecodeTimeStamp( v : PISCTimeStamp; out DateTime : Double);
13135:  //Procedure ALFBXDecodeTimeStamp1( v : PISCTimeStamp; out TimeStamp : TTimeStamp);
13136:  //Function ALFBXDecodeTimeStamp2( v : PISCTimeStamp) : Double;
13137:  Procedure ALFBXDecodeSQLDate( v : Integer; out Year : SmallInt; out Month, Day : Word)
13138:  Procedure ALFBXDecodeSQLTime(v:Cardinal;out Hour,Minute,Second:Word; out Fractions: LongWord)
13139:  //Procedure ALFBXEncodeTimeStamp( const DateTime : TDateTime; v : PISCTimeStamp);
13140:  //Procedure ALFBXEncodeTimeStamp1( const Date : Integer; v : PISCTimeStamp);
13141:  //Procedure ALFBXEncodeTimeStamp2( const Time : Cardinal; v : PISCTimeStamp);
13142:  Function ALFBXEncodeSQLDate( Year : Integer; Month, Day : Integer) : Integer
13143:  Function ALFBXEncodeSQLTime( Hour, Minute, Second : Word; var Fractions : LongWord): Cardinal
13144:   TALFBXParamType', '( prNone, prByte, prShrt, prCard, prStrg, prIgno )
13145:   TALFBXDPBInfo', 'record Name : AnsiString; ParamType : TALFBXParamType; end
13146:  Function ALFBXSQLQuote( const name : AnsiString) : AnsiString
13147:  Function ALFBXSQLUnQuote( const name : AnsiString) : AnsiString
13148: end;
13149:
13150: procedure SIRegister_ALFBXClient(CL: TPSPascalCompiler);
13151: begin
13152:   TALFBXClientSQLParam', 'record Value : AnsiString; IsNull : Boolean; end
13153:   TALFBXClientSQLParams', 'array of TALFBXClientSQLParam
13154:   TALFBXClientSelectDataSQL', 'record SQL : AnsiString; Params : T'
13155:    +'ALFBXClientSQLParams; RowTag : AnsiString; ViewTag : AnsiString; Skip : in'
13156:    +'teger; First : Integer; CacheThreshold : Integer; end
13157:   TALFBXClientSelectDataSQLs', 'array of TALFBXClientSelectDataSQL
13158:   TALFBXClientUpdateDataSQL', 'record SQL : AnsiString; Params: TALFBXClientSQLParams; end
13159:   TALFBXClientUpdateDataSQLs', 'array of TALFBXClientUpdateDataSQL
13160:   TALFBXClientMonitoringIOStats', 'record page_reads : int64; page'
13161:    +'_writes : int64; page_fetches : int64; page_marks : int64; end
13162:   SIRegister_TALFBXClient(CL);
13163:   SIRegister_TALFBXConnectionStatementPoolBinTreeNode(CL);
13164:   SIRegister_TALFBXConnectionStatementPoolBinTree(CL);
13165:   SIRegister_TALFBXConnectionWithStmtPoolContainer(CL);
13166:   SIRegister_TALFBXConnectionWithoutStmtPoolContainer(CL);
13167:   SIRegister_TALFBXReadTransactionPoolContainer(CL);
13168:   SIRegister_TALFBXReadStatementPoolContainer(CL);
13169:   SIRegister_TALFBXStringKeyPoolBinTreeNode(CL);
13170:   SIRegister_TALFBXConnectionPoolClient(CL);
13171:   SIRegister_TALFBXEventThread(CL);
13172:   Function AlMySqlClientSlashedStr( const Str : AnsiString) : AnsiString
13173: end;
13174:
13175: procedure SIRegister_ovcBidi(CL: TPSPascalCompiler);
13176: begin
13177: _OSVERSIONINFOA = record
13178:     dwOSVersionInfoSize: DWORD;
13179:     dwMajorVersion: DWORD;
13180:     dwMinorVersion: DWORD;
13181:     dwBuildNumber: DWORD;
```

```
13182:     dwPlatformId: DWORD;
13183:     szCSDVersion: array[0..127] of AnsiChar; { Maintenance AnsiString for PSS usage }
13184:   end;
13185:  TOSVersionInfoA', '_OSVERSIONINFOA
13186:   TOSVersionInfo', 'TOSVersionInfoA
13187:  'WS_EX_RIGHT','LongWord')( $00001000);
13188:  'WS_EX_LEFT','LongWord')( $00000000);
13189:  'WS_EX_RTLREADING','LongWord')( $00002000);
13190:  'WS_EX_LTRREADING','LongWord')( $00000000);
13191:  'WS_EX_LEFTSCROLLBAR','LongWord')( $00004000);
13192:  'WS_EX_RIGHTSCROLLBAR','LongWord')( $00000000);
13193:  Function SetProcessDefaultLayout( dwDefaultLayout : DWORD) : BOOL
13194:  'LAYOUT_RTL','LongWord')( $00000001);
13195:  'LAYOUT_BTT','LongWord')( $00000002);
13196:  'LAYOUT_VBH','LongWord')( $00000004);
13197:  'LAYOUT_BITMAPORIENTATIONPRESERVED','LongWord')( $00000008);
13198:  'NOMIRRORBITMAP','LongWord')( DWORD ( $80000000 ));
13199:  Function SetLayout( dc : HDC; dwLayout : DWORD) : DWORD
13200:  Function GetLayout( dc : hdc) : DWORD
13201:  Function IsBidi : Boolean
13202:  Function GetCurrentHwProfile( var lpHwProfileInfo : THWProfileInfo) : BOOL
13203:  Function GetVersionEx( var lpVersionInformation : TOSVersionInfo) : BOOL
13204:  Function SetPriorityClass( hProcess : THandle; dwPriorityClass: DWORD) : BOOL
13205:  Function GetPriorityClass( hProcess : THandle) : DWORD
13206:  Function OpenClipboard( hWndNewOwner : HWND) : BOOL
13207:  Function CloseClipboard : BOOL
13208:  Function GetClipboardSequenceNumber : DWORD
13209:  Function GetClipboardOwner : HWND
13210:  Function SetClipboardViewer( hWndNewViewer : HWND) : HWND
13211:  Function GetClipboardViewer : HWND
13212:  Function ChangeClipboardChain( hWndRemove, hWndNewNext : HWND) : BOOL
13213:  Function SetClipboardData( uFormat : UINT; hMem : THandle) : THandle
13214:  Function GetClipboardData( uFormat : UINT) : THandle
13215:  Function RegisterClipboardFormat( lpszFormat : PChar) : UINT
13216:  Function CountClipboardFormats : Integer
13217:  Function EnumClipboardFormats( format : UINT) : UINT
13218:  Function GetClipboardFormatName(format:UINT;lpszFormatName:PChar;cchMaxCount:Integer):Integer
13219:  Function EmptyClipboard : BOOL
13220:  Function IsClipboardFormatAvailable( format : UINT) : BOOL
13221:   Function GetPriorityClipboardFormat( var paFormatPriorityList, cFormats : Integer) : Integer
13222:  Function GetOpenClipboardWindow : HWND
13223:  Function EndDialog( hDlg : HWND; nResult : Integer) : BOOL
13224:  Function GetDlgItem( hDlg : HWND; nIDDlgItem : Integer) : HWND
13225:  Function SetDlgItemInt( hDlg : HWND; nIDDlgItem : Integer; uValue : UINT; bSigned: BOOL): BOOL
13226:  Function GetDlgItemInt(hDlg:HWND;nIDDlgItem:Integer;var lpTranslated:BOOL;bSigned: BOOL): UINT
13227:  Function SetDlgItemText( hDlg : HWND; nIDDlgItem : Integer; lpString : PChar) : BOOL
13228:  Function CheckDlgButton( hDlg : HWND; nIDButton : Integer; uCheck : UINT) : BOOL
13229:  Function CheckRadioButton( hDlg : HWND; nIDFirstButton, nIDLastButton,nIDCheckButton:Integer) : BOOL
13230:  Function IsDlgButtonChecked( hDlg : HWND; nIDButton : Integer) : UINT
13231:  Function SendDlgItemMessage(hDlg:HWND;nIDDlgItem:Int;Msg:UINT;wParam:WPARAM;lParam:LPARAM):Longint;
13232: end;
13233:
13234: procedure SIRegister_DXPUtils(CL: TPSPascalCompiler);
13235: begin
13236:  Function glExecuteAndWait(cmdLine:String;visibility:Word;timeout:Cardinal;killAppOnTimeOut:Bool):Int;
13237:  Function GetTemporaryFilesPath : String
13238:  Function GetTemporaryFileName : String
13239:  Function FindFileInPaths( const fileName, paths : String) : String
13240:  Function PathsToString( const paths : TStrings) : String
13241:  Procedure StringToPaths( const pathsString : String; paths : TStrings)
13242:  //Function MacroExpandPath( const aPath : String) : String
13243: end;
13244:
13245: procedure SIRegister_ALMultiPartBaseParser(CL: TPSPascalCompiler);
13246: begin
13247:   SIRegister_TALMultiPartBaseContent(CL);
13248:   SIRegister_TALMultiPartBaseContents(CL);
13249:   SIRegister_TAlMultiPartBaseStream(CL);
13250:   SIRegister_TALMultipartBaseEncoder(CL);
13251:   SIRegister_TALMultipartBaseDecoder(CL);
13252:  Function ALMultipartExtractBoundaryFromContentType( aContentType : AnsiString) : AnsiString
13253:  Function ALMultipartExtractSubValueFromHeaderLine(aHeaderLine:AnsiString;aName:AnsiString):AnsiString;
13254:  Function ALMultipartSetSubValueInHeaderLine(aHeaderLine:AnsiString;aName,AValue:AnsiString):AnsiString;
13255: end;
13256:
13257: procedure SIRegister_SmallUtils(CL: TPSPascalCompiler);
13258: begin
13259:   TdriveSize', 'record FreeS : Int64; TotalS : Int64; end
13260:   TWinVerRec', 'record WinPlatform : Integer; WinMajorVersion : In'
13261:    +teger; WinMinorVersion :Integer; WinBuildNumber : Integer; WinCSDVersion: String; end
13262:  Function aAllocPadedMem( Size : Cardinal) : TObject
13263:  Procedure aFreePadedMem( var P : TObject);
13264:  Procedure aFreePadedMem1( var P : PChar);
13265:  Function aCheckPadedMem( P : Pointer) : Byte
13266:  Function aGetPadMemSize( P : Pointer) : Cardinal
13267:  Function aAllocMem( Size : Cardinal) : Pointer
13268:  Function aStrLen( const Str : PChar) : Cardinal
13269:  Function aStrLCopy( Dest : PChar; const Source : PChar; MaxLen : Cardinal) : PChar
13270:  Function aStrECopy( Dest : PChar; const Source : PChar) : PChar
```

```
13271:  Function aStrCopy( Dest : PChar; const Source : PChar) : PChar
13272:  Function aStrEnd( const Str : PChar) : PChar
13273:  Function aStrScan( const Str : PChar; aChr : Char) : PChar
13274:  Function aStrMove( Dest : PChar; const Source : PChar; Count : Cardinal) : PChar
13275:  Function aPCharLength( const Str : PChar) : Cardinal
13276:  Function aPCharUpper( Str : PChar) : PChar
13277:  Function aPCharLower( Str : PChar) : PChar
13278:  Function aStrCat( Dest : PChar; const Source : PChar) : PChar
13279:  Function aLastDelimiter( const Delimiters, S : String) : Integer
13280:  Function aCopyTail( const S : String; Len : Integer) : String
13281:  Function aInt2Thos( I : Int64) : String
13282:  Function aUpperCase( const S : String) : String
13283:  Function aLowerCase( const S : string) : String
13284:  Function aCompareText( const S1, S2 : string) : Integer
13285:  Function aSameText( const S1, S2 : string) : Boolean
13286:  Function aInt2Str( Value : Int64) : String
13287:  Function aStr2Int( const Value : String) : Int64
13288:  Function aStr2IntDef( const S : string; Default : Int64) : Int64
13289:  Function aGetFileExt( const FileName : String) : String
13290:  Function aGetFilePath( const FileName : String) : String
13291:  Function aGetFileName( const FileName : String) : String
13292:  Function aChangeExt( const FileName, Extension : String) : String
13293:  Function aAdjustLineBreaks( const S : string) : string
13294:  Function aGetWindowStr( WinHandle : HWND) : String
13295:  Function aDiskSpace( Drive : String) : TdriveSize
13296:  Function aFileExists( FileName : String) : Boolean
13297:  Function aFileSize( FileName : String) : Int64
13298:  Function aDirectoryExists( const Name : string) : Boolean
13299:  Function aSysErrorMessage( ErrorCode : Integer) : string
13300:  Function aShortPathName( const LongName : string) : string
13301:  Function aGetWindowVer : TWinVerRec
13302:  procedure InitDriveSpacePtr;
13303: end;
13304:
13305: procedure SIRegister_MakeApp(CL: TPSPascalCompiler);
13306: begin
13307:  aZero','LongInt'( 0);
13308:  'makeappDEF','LongInt'( - 1);
13309:   'CS_VREDRAW','LongInt'( DWORD ( 1 ));
13310:  'CS_HREDRAW','LongInt'( DWORD ( 2 ));
13311:  'CS_KEYCVTWINDOW','LongInt'( 4);
13312:  'CS_DBLCLKS','LongInt'( 8);
13313:  'CS_OWNDC','LongWord')( $20);
13314:  'CS_CLASSDC','LongWord')( $40);
13315:  'CS_PARENTDC','LongWord')( $80);
13316:  'CS_NOKEYCVT','LongWord')( $100);
13317:  'CS_NOCLOSE','LongWord')( $200);
13318:  'CS_SAVEBITS','LongWord')( $800);
13319:  'CS_BYTEALIGNCLIENT','LongWord')( $1000);
13320:  'CS_BYTEALIGNWINDOW','LongWord')( $2000);
13321:  'CS_GLOBALCLASS','LongWord')( $4000);
13322:  'CS_IME','LongWord')( $10000);
13323:  'CS_DROPSHADOW','LongWord')( $20000);
13324:   //PPanelFunc', '^TPanelFunc // will not work
13325:   TPanelStyle', '(psEdge, psTabEdge, psBorder, psTabBorder, psTab, psNone )
13326:   TFontLook', '( flBold, flItalic, flUnderLine, flStrikeOut )
13327:   TFontLooks', 'set of TFontLook
13328:  TMessagefunc','function(hWnd,iMsg,wParam,lParam:Integer):Integer)
13329:  Function SetWinClass(const ClassName:String; pMessFunc: Tmessagefunc; wcStyle : Integer): Word
13330:  Function SetWinClassO( const ClassName : String; pMessFunc : TObject; wcStyle : Integer): Word
13331:  Function SetWinClass( const ClassName : String; pMessFunc : TObject; wcStyle : Integer) : Word
13332:  Function MakeForm(Left,Top,Width,Height:Integer;const Caption:String;WinStyle:Integer):Integer
13333:  Procedure RunMsgLoop( Show : Boolean)
13334:  Function MakeFont(Height,Width:Integer; const FontName:String; Look:TFontLooks; Roman:Boolean): Integer
13335:  Function MakeButton(Left,Top,Width,Height:Integer;pCaption:PChar;hParent,
       ID_Number:Cardinal;hFont:Int):Int;
13336:  Function MakeListBox(Left,Top,Width,Height,Parent:Integer;const ListItems:String;WinStyle:Integer):Integer
13337:  Function MakeComboBox(Left,Top,Width,Height,Parent:Integer;const ListItems:String;WinStyle:Integer):Int
13338:  Function MakePanel(Left,Top,Width,Height,
       hParent:Int;WndFunc:TPanelFunc;ID_Number:Card;Style:TPanelStyle):Int;
13339:  Function MakeSubMenu(const ItemList : String; ID1, ID2 : Cardinal; hMenu : Integer) : Integer
13340:  Function id4menu( a, b : Byte; c : Byte; d : Byte) : Cardinal
13341:  Procedure DoInitMakeApp   //set first to init formclasscontrol!
13342: end;
13343:
13344: procedure SIRegister_ScreenSaver(CL: TPSPascalCompiler);
13345: begin
13346:   TScreenSaverOption', '( ssoAutoAdjustFormProperties, ssoAutoHook'
13347:    +'KeyboardEvents, ssoAutoHookMouseEvents, ssoEnhancedMouseMoveDetection )
13348:   TScreenSaverOptions', 'set of TScreenSaverOption
13349:  'cDefaultScreenSaverOptions','LongInt').Value.ts32:=ord(ssoAutoAdjustFormProperties) or
       ord(ssoAutoHookKeyboardEvents) or ord(ssoEnhancedMouseMoveDetection);
13350:   TScreenSaverPreviewEvent', 'Procedure ( Sender : TObject; previewHwnd: HWND)
13351:   SIRegister_TScreenSaver(CL);
13352:  //Procedure Register
13353:  Procedure SetScreenSaverPassword
13354: end;
13355:
13356: procedure SIRegister_XCollection(CL: TPSPascalCompiler);
```

```
13357: begin
13358:   FindClass('TOBJECT'),'TXCollection
13359:   SIRegister_EFilerException(CL);
13360:   SIRegister_TXCollectionItem(CL);
13361:   //TXCollectionItemClass', 'class of TXCollectionItem
13362:   SIRegister_TXCollection(CL);
13363:  Procedure RegisterXCollectionDestroyEvent( notifyEvent : TNotifyEvent)
13364:  Procedure DeRegisterXCollectionDestroyEvent( notifyEvent : TNotifyEvent)
13365:  Procedure RegisterXCollectionItemClass( aClass : TXCollectionItemClass)
13366:  Procedure UnregisterXCollectionItemClass( aClass : TXCollectionItemClass)
13367:  Function FindXCollectionItemClass( const className : String) : TXCollectionItemClass
13368:  Function GetXCollectionItemClassesList( baseClass : TXCollectionItemClass) : TList
13369: end;
13370:
13371: procedure SIRegister_XOpenGL(CL: TPSPascalCompiler);
13372: begin
13373:   TMapTexCoordMode', '(mtcmUndefined, mtcmNull, mtcmMain, mtcmDual, mtcmSecond,mtcmArbitrary);
13374:  Procedure xglMapTexCoordToNull
13375:  Procedure xglMapTexCoordToMain
13376:  Procedure xglMapTexCoordToSecond
13377:  Procedure xglMapTexCoordToDual
13378:  Procedure xglMapTexCoordToArbitrary( const units : array of Cardinal);
13379:  Procedure xglMapTexCoordToArbitrary1( const bitWiseUnits : Cardinal);
13380:  Procedure xglMapTexCoordToArbitraryAdd( const bitWiseUnits : Cardinal)
13381:  Procedure xglBeginUpdate
13382:  Procedure xglEndUpdate
13383:  Procedure xglPushState
13384:  Procedure xglPopState
13385:  Procedure xglForbidSecondTextureUnit
13386:  Procedure xglAllowSecondTextureUnit
13387:  Function xglGetBitWiseMapping : Cardinal
13388: end;
13389:
13390: procedure SIRegister_VectorLists(CL: TPSPascalCompiler);
13391: begin
13392:   TBaseListOption', '( bloExternalMemory, bloSetCountResetsMemory)
13393:   TBaseListOptions', 'set of TBaseListOption
13394:   SIRegister_TBaseList(CL);
13395:   SIRegister_TBaseVectorList(CL);
13396:   SIRegister_TAffineVectorList(CL);
13397:   SIRegister_TVectorList(CL);
13398:   SIRegister_TTexPointList(CL);
13399:   SIRegister_TXIntegerList(CL);
13400:   //PSingleArrayList', '^TSingleArrayList // will not work
13401:   SIRegister_TSingleList(CL);
13402:   SIRegister_TByteList(CL);
13403:   SIRegister_TQuaternionList(CL);
13404:  Procedure QuickSortLists( startIndex, endIndex : Integer; refList : TSingleList; objList : TList);
13405:  Procedure QuickSortLists1( startIndex, endIndex : Integer; refList : TSingleList; objList : TBaseList);
13406:  Procedure FastQuickSortLists(startIndex,
       endIndex:Integer;refList:TSingleList;objList:TPersistentObjectList);
13407: end;
13408:
13409: procedure SIRegister_MeshUtils(CL: TPSPascalCompiler);
13410: begin
13411:  Procedure ConvertStripToList( const strip : TAffineVectorList; list : TAffineVectorList);
13412:  Procedure ConvertStripToList1( const strip : TIntegerList; list : TIntegerList);
13413:  Procedure ConvertStripToList2(const strip:TAffineVectorList;const
       indices:TIntegerList;list:TAffineVectorList);
13414:  Procedure ConvertIndexedListToList(const data:TAffineVectlist;const
       indices:TIntegerList;list:TAffineVectorList);
13415:  Function BuildVectorCountOptimizedIndices(const vertices:TAffineVectorList; const
       normals:TAffineVectorList; const texCoords : TAffineVectorList) : TIntegerList
13416:  Procedure RemapReferences( reference : TAffineVectorList; const indices : TIntegerList);
13417:  Procedure RemapReferences1( reference : TIntegerList; const indices : TIntegerList);
13418:  Procedure RemapAndCleanupReferences( reference : TAffineVectorList; indices : TIntegerList)
13419:  Function RemapIndicesToIndicesMap( remapIndices : TIntegerList) : TIntegerList
13420:  Procedure RemapTrianglesIndices( indices, indicesMap : TIntegerList)
13421:  Procedure RemapIndices( indices, indicesMap : TIntegerList)
13422:  Procedure UnifyTrianglesWinding( indices : TIntegerList)
13423:  Procedure InvertTrianglesWinding( indices : TIntegerList)
13424:  Function BuildNormals( reference : TAffineVectorList; indices : TIntegerList) : TAffineVectorList
13425:  Function BuildNonOrientedEdgesList(triangleIndices:TIntegerList; triangleEdges : TIntegerList;
       edgesTriangles : TIntegerList) : TIntegerList
13426:  Procedure WeldVertices( vertices : TAffineVectorList; indicesMap : TIntegerList; weldRadius : Single)
13427:  Function StripifyMesh(indices:TIntegerList;maxVertexIndex:Integer;agglomerateLoneTriangles:Boolean):
       TPersistentObjectList;
13428:  Procedure IncreaseCoherency( indices : TIntegerList; cacheSize : Integer)
13429:  Procedure SubdivideTriangles( smoothFactor : Single; vertices : TAffineVectorList; triangleIndices :
       TIntegerList; normals : TAffineVectorList; onSubdivideEdge : TSubdivideEdgeEvent)
13430: end;
13431:
13432: procedure SIRegister_JclSysUtils(CL: TPSPascalCompiler);
13433: begin
13434:  Procedure GetAndFillMem( var P : TObject; const Size : Integer; const Value : Byte)
13435:  Procedure FreeMemAndNil( var P : TObject)
13436:  Function PCharOrNil( const S : string) : PChar
13437:   SIRegister_TJclReferenceMemoryStream(CL);
13438:   FindClass('TOBJECT'),'EJclVMTError
```

```
13439:  {Function GetVirtualMethodCount( AClass : TClass) : Integer
13440:  Function GetVirtualMethod( AClass : TClass; const Index : Integer) : Pointer
13441:  Procedure SetVirtualMethod( AClass : TClass; const Index : Integer; const Method:Pointer)
13442:   PDynamicIndexList', '^TDynamicIndexList // will not work
13443:   PDynamicAddressList', '^TDynamicAddressList // will not work
13444:  Function GetDynamicMethodCount( AClass : TClass) : Integer
13445:  Function GetDynamicIndexList( AClass : TClass) : PDynamicIndexList
13446:  Function GetDynamicAddressList( AClass : TClass) : PDynamicAddressList
13447:  Function HasDynamicMethod( AClass : TClass; Index : Integer) : Boolean
13448:  Function GetDynamicMethod( AClass : TClass; Index : Integer) : Pointer
13449:  Function GetInitTable( AClass : TClass) : PTypeInfo
13450:   PFieldEntry', '^TFieldEntry // will not work}
13451:   TFieldEntry', 'record OffSet : Integer; IDX : Word; Name : ShortString; end
13452:  Function JIsClass( Address : Pointer) : Boolean
13453:  Function JIsObject( Address : Pointer) : Boolean
13454:  Function GetImplementorOfInterface( const I : IInterface) : TObject
13455:   TDigitCount', 'Integer
13456:   SIRegister_TJclNumericFormat(CL);
13457:  Function JIntToStrZeroPad( Value, Count : Integer) : AnsiString
13458:   TTextHandler', 'Procedure ( const Text : string)
13459: // 'ABORT_EXIT_CODE','LongInt'( ERROR_CANCELLED 1223);
13460:  Function JExecute(const
       CommandLine:string;OutputLineCallback:TTextHandler;RawOutpt:Bool;AbortPtr:PBool):Card;
13461:  Function JExecute1(const CommandLine:string;var Output:string; RawOutput:Bool; AbortPtr:PBool):Cardinal;
13462:  Function ReadKey : Char   //to and from the DOS console !
13463:   TModuleHandle', 'HINST
13464:   //TModuleHandle', 'Pointer
13465:  'INVALID_MODULEHANDLE_VALUE','LongInt'( TModuleHandle ( 0 ));
13466:  Function LoadModule( var Module : TModuleHandle; FileName : string) : Boolean
13467:  Function LoadModuleEx( var Module : TModuleHandle; FileName : string; Flags : Cardinal) : Boolean
13468:  Procedure UnloadModule( var Module : TModuleHandle)
13469:  Function GetModuleSymbol( Module : TModuleHandle; SymbolName : string) : Pointer
13470:  Function GetModuleSymbolEx( Module : TModuleHandle; SymbolName : string; var Accu : Boolean) : Pointer
13471:  Function ReadModuleData(Module:TModuleHandle;SymbolName:string;var Buffer,Size: Cardinal):Boolean;
13472:  Function WriteModuleData(Module:TModuleHandle;SymbolName:string;var Buffer,Size:Cardinal):Boolean;
13473:   FindClass('TOBJECT'),'EJclConversionError
13474:  Function JStrToBoolean( const S : string) : Boolean
13475:  Function JBooleanToStr( B : Boolean) : string
13476:  Function JIntToBool( I : Integer) : Boolean
13477:  Function JBoolToInt( B : Boolean) : Integer
13478:  'ListSeparator','String ';
13479:  'ListSeparator1','String ':
13480:  Procedure ListAddItems( var List : string; const Separator, Items : string)
13481:  Procedure ListIncludeItems( var List : string; const Separator, Items : string)
13482:  Procedure ListRemoveItems( var List : string; const Separator, Items : string)
13483:  Procedure ListDelItem( var List : string; const Separator : string; const Index : Integer)
13484:  Function ListItemCount( const List, Separator : string) : Integer
13485:  Function ListGetItem( const List, Separator : string; const Index : Integer) : string
13486:  Procedure ListSetItem(var List:string;const Separator:string;const Index:Integer;const Value:string)
13487:  Function ListItemIndex( const List, Separator, Item : string) : Integer
13488:  Function SystemTObjectInstance : LongWord
13489:  Function IsCompiledWithPackages : Boolean
13490:  Function JJclGUIDToString( const GUID : TGUID) : string
13491:  Function JJclStringToGUID( const S : string) : TGUID
13492:   SIRegister_TJclIntfCriticalSection(CL);
13493:   SIRegister_TJclSimpleLog(CL);
13494:  Procedure InitSimpleLog( const ALogFileName : string)
13495: end;
13496:
13497: procedure SIRegister_JclBorlandTools(CL: TPSPascalCompiler);
13498: begin
13499:    FindClass('TOBJECT'),'EJclBorRADException
13500:    TJclBorRADToolKind', '( brDelphi, brCppBuilder, brBorlandDevStudio )
13501:    TJclBorRADToolEdition', '( deOPEN, dePRO, deSVR )
13502:    TJclBorRADToolEdition', '( deSTD, dePRO, deCSS, deARC )
13503:    TJclBorRADToolPath', 'string
13504:   'SupportedDelphiVersions','LongInt'( 5 or  6 or  7 or  8 or  9 or  10 or  11);
13505:   'SupportedBCBVersions','LongInt'( 5 or  6 or  10 or  11);
13506:   'SupportedBDSVersions','LongInt'( 1 or  2 or  3 or  4 or  5);
13507:   BorRADToolRepositoryPagesSection','String 'Repository Pages
13508:   BorRADToolRepositoryDialogsPage','String 'Dialogs
13509:   BorRADToolRepositoryFormsPage','String 'Forms
13510:   BorRADToolRepositoryProjectsPage','String 'Projects
13511:   BorRADToolRepositoryDataModulesPage','String 'Data Modules
13512:   BorRADToolRepositoryObjectType','String 'Type
13513:   BorRADToolRepositoryFormTemplate','String 'FormTemplate
13514:   BorRADToolRepositoryProjectTemplate','String 'ProjectTemplate
13515:   BorRADToolRepositoryObjectName','String 'Name
13516:   BorRADToolRepositoryObjectPage','String 'Page
13517:   BorRADToolRepositoryObjectIcon','String 'Icon
13518:   BorRADToolRepositoryObjectDescr','String 'Description
13519:   BorRADToolRepositoryObjectAuthor','String 'Author
13520:   BorRADToolRepositoryObjectAncestor','String 'Ancestor
13521:   BorRADToolRepositoryObjectDesigner','String 'Designer
13522:   BorRADToolRepositoryDesignerDfm','String 'dfm
13523:   BorRADToolRepositoryDesignerXfm','String 'xfm
13524:   BorRADToolRepositoryObjectNewForm','String 'DefaultNewForm
13525:   BorRADToolRepositoryObjectMainForm','String 'DefaultMainForm
13526:   SourceExtensionDelphiPackage','String '.dpk
```

```
13527:  SourceExtensionBCBPackage','String '.bpk
13528:  SourceExtensionDelphiProject','String '.dpr
13529:  SourceExtensionBCBProject','String '.bpr
13530:  SourceExtensionBDSProject','String '.bdsproj
13531:  SourceExtensionDProject','String '.dproj
13532:  BinaryExtensionPackage','String '.bpl
13533:  BinaryExtensionLibrary','String '.dll
13534:  BinaryExtensionExecutable','String '.exe
13535:  CompilerExtensionDCP','String '.dcp
13536:  CompilerExtensionBPI','String '.bpi
13537:  CompilerExtensionLIB','String '.lib
13538:  CompilerExtensionTDS','String '.tds
13539:  CompilerExtensionMAP','String '.map
13540:  CompilerExtensionDRC','String '.drc
13541:  CompilerExtensionDEF','String '.def
13542:  SourceExtensionCPP','String '.cpp
13543:  SourceExtensionH','String '.h
13544:  SourceExtensionPAS','String '.pas
13545:  SourceExtensionDFM','String '.dfm
13546:  SourceExtensionXFM','String '.xfm
13547:  SourceDescriptionPAS','String 'Pascal source file
13548:  SourceDescriptionCPP','String 'C++ source file
13549:  DesignerVCL','String 'VCL
13550:  DesignerCLX','String 'CLX
13551:  ProjectTypePackage','String 'package
13552:  ProjectTypeLibrary','String 'library
13553:  ProjectTypeProgram','String 'program
13554:  Personality32Bit','String '32 bit
13555:  Personality64Bit','String '64 bit
13556:  PersonalityDelphi','String 'Delphi
13557:  PersonalityDelphiDotNet','String 'Delphi.net
13558:  PersonalityBCB','String 'C++Builder
13559:  PersonalityCSB','String 'C#Builder
13560:  PersonalityVB','String 'Visual Basic
13561:  PersonalityDesign','String 'Design
13562:  PersonalityUnknown','String 'Unknown personality
13563:  PersonalityBDS','String 'Borland Developer Studio
13564:  DOFDirectoriesSection','String 'Directories
13565:  DOFUnitOutputDirKey','String 'UnitOutputDir
13566:  DOFSearchPathName','String 'SearchPath
13567:  DOFConditionals','String 'Conditionals
13568:  DOFLinkerSection','String 'Linker
13569:  DOFPackagesKey','String 'Packages
13570:  DOFCompilerSection','String 'Compiler
13571:  DOFPackageNoLinkKey','String 'PackageNoLink
13572:  DOFAdditionalSection','String 'Additional
13573:  DOFOptionsKey','String 'Options
13574:   TJclBorPersonality', '( bpDelphi32, bpDelphi64, bpBCBuilder32, b'
13575:    +'pBCBuilder64, bpDelphiNet32, bpDelphiNet64, bpCSBuilder32, bpCSBuilder64, '
13576:    +'bpVisualBasic32, bpVisualBasic64, bpDesign, bpUnknown )
13577:   TJclBorPersonalities', 'set of TJclBorPersonality
13578:   TJclBorDesigner', '( bdVCL, bdCLX )
13579:   TJclBorDesigners', 'set of TJClBorDesigner
13580:   TJclBorPlatform', '( bp32bit, bp64bit )
13581:   FindClass('TOBJECT'),'TJclBorRADToolInstallation
13582:   SIRegister_TJclBorRADToolInstallationObject(CL);
13583:   SIRegister_TJclBorlandOpenHelp(CL);
13584:   TJclHelp2Object', '( hoRegisterSession, hoRegister, hoPlugin )
13585:   TJclHelp2Objects', 'set of TJclHelp2Object
13586:   SIRegister_TJclHelp2Manager(CL);
13587:   SIRegister_TJclBorRADToolIdeTool(CL);
13588:   SIRegister_TJclBorRADToolIdePackages(CL);
13589:   SIRegister_IJclCommandLineTool(CL);
13590:   FindClass('TOBJECT'),'EJclCommandLineToolError
13591:   SIRegister_TJclCommandLineTool(CL);
13592:   SIRegister_TJclBorlandCommandLineTool(CL);
13593:   SIRegister_TJclBCC32(CL);
13594:   SIRegister_TJclDCC32(CL);
13595:   TJclDCC', 'TJclDCC32
13596:   SIRegister_TJclBpr2Mak(CL);
13597:   SIRegister_TJclBorlandMake(CL);
13598:   SIRegister_TJclBorRADToolPalette(CL);
13599:   SIRegister_TJclBorRADToolRepository(CL);
13600:   TCommandLineTool', '( clAsm, clBcc32, clDcc32, clDccIL, clMake,clProj2Mak )
13601:   TCommandLineTools', 'set of TCommandLineTool
13602:   //TJclBorRADToolInstallationClass', 'class of TJclBorRADToolInstallation
13603:   SIRegister_TJclBorRADToolInstallation(CL);
13604:   SIRegister_TJclBCBInstallation(CL);
13605:   SIRegister_TJclDelphiInstallation(CL);
13606:   SIRegister_TJclDCCIL(CL);
13607:   SIRegister_TJclBDSInstallation(CL);
13608:   TTraverseMethod', 'Function ( Installation : TJclBorRADToolInstallation) : Boolean
13609:   SIRegister_TJclBorRADToolInstallations(CL);
13610:  Function BPLFileName( const BPLPath, PackageFileName : string) : string
13611:  Function BinaryFileName( const OutputPath, ProjectFileName : string) : string
13612:  Function IsDelphiPackage( const FileName : string) : Boolean
13613:  Function IsDelphiProject( const FileName : string) : Boolean
13614:  Function IsBCBPackage( const FileName : string) : Boolean
13615:  Function IsBCBProject( const FileName : string) : Boolean
```

```
13616:  Procedure GetDPRFileInfo(const DPRFileName:string;out BinaryExtensio:string;const LibSuffx:PString);
13617:  Procedure GetBPRFileInfo(const BPRFileName:string;out BinaryFileName:string;const Descript:PString);
13618:  Procedure GetDPKFileInfo(const DPKFileName:string;out RunOnly:Bool;const LibSuffix:PString;const
       Descript:PString;
13619:  Procedure GetBPKFileInfo(const BPKFileName:string;out RunOnly:Bool;const BinaryFName:PString;const
       Descript:PString
13620:  function SamePath(const Path1, Path2: string): Boolean;
13621: end;
13622:
13623: procedure SIRegister_JclFileUtils_max(CL: TPSPascalCompiler);
13624: begin
13625:  'ERROR_NO_MORE_FILES','LongInt'( 18);
13626:  //Function stat64( FileName: PChar;var StatBuffer : TStatBuf64) : Integer
13627:  //Function fstat64( FileDes: Integer;var StatBuffer : TStatBuf64) : Integer
13628:  //Function lstat64( FileName: PChar;var StatBuffer : TStatBuf64) : Integer
13629:  'LPathSeparator','String '/
13630:  'LDirDelimiter','String '/
13631:  'LDirSeparator','String ':
13632:  'JXPathDevicePrefix','String '\\.\
13633:  'JXPathSeparator','String '\
13634:  'JXDirDelimiter','String '\
13635:  'JXDirSeparator','String ';
13636:  'JXPathUncPrefix','String '\\
13637:  'faNormalFile','LongWord')( $00000080);
13638:  //'faUnixSpecific',' faSymLink);
13639:   JXTCompactPath', '( cpCenter, cpEnd )
13640:     _WIN32_FILE_ATTRIBUTE_DATA', 'record dwFileAttributes : DWORD; f'
13641:    +'tCreationTime : TFileTime; ftLastAccessTime : TFileTime; ftLastWriteTime :'
13642:    +' TFileTime; nFileSizeHigh : DWORD; nFileSizeLow : DWORD; end
13643:   TWin32FileAttributeData', '_WIN32_FILE_ATTRIBUTE_DATA
13644:   WIN32_FILE_ATTRIBUTE_DATA', '_WIN32_FILE_ATTRIBUTE_DATA
13645:
13646:  Function jxPathAddSeparator( const Path : string) : string
13647:  Function jxPathAddExtension( const Path, Extension : string) : string
13648:  Function jxPathAppend( const Path, Append : string) : string
13649:  Function jxPathBuildRoot( const Drive : Byte) : string
13650:  Function jxPathCanonicalize( const Path : string) : string
13651:  Function jxPathCommonPrefix( const Path1, Path2 : string) : Integer
13652:  Function jxPathCompactPath(const DC:HDC;const Path:string;const Width:Integer;CmpFmt:TCompactPath):string
13653:  Procedure jxPathExtractElements( const Source : string; var Drive, Path, FileName, Ext : string)
13654:  Function jxPathExtractFileDirFixed( const S : string) : string
13655:  Function jxPathExtractFileNameNoExt( const Path : string) : string
13656:  Function jxPathExtractPathDepth( const Path : string; Depth : Integer) : string
13657:  Function jxPathGetDepth( const Path : string) : Integer
13658:  Function jxPathGetLongName( const Path : string) : string
13659:  Function jxPathGetShortName( const Path : string) : string
13660:  Function jxPathGetLongName( const Path : string) : string
13661:  Function jxPathGetShortName( const Path : string) : string
13662:  Function jxPathGetRelativePath( Origin, Destination : string) : string
13663:  Function jxPathGetTempPath : string
13664:  Function jxPathIsAbsolute( const Path : string) : Boolean
13665:  Function jxPathIsChild( const Path, Base : string) : Boolean
13666:  Function jxPathIsDiskDevice( const Path : string) : Boolean
13667:  Function jxPathIsUNC( const Path : string) : Boolean
13668:  Function jxPathRemoveSeparator( const Path : string) : string
13669:  Function jxPathRemoveExtension( const Path : string) : string
13670:  Function jxPathGetPhysicalPath( const LocalizedPath : string) : string
13671:  Function jxPathGetLocalizedPath( const PhysicalPath : string) : string
13672:   JxTFileListOption', '( flFullNames, flRecursive, flMaskedSubfolders)
13673:   JxTFileListOptions', 'set of TFileListOption
13674:   JxTJclAttributeMatch', '( amAny, amExact, amSubSetOf, amSuperSetOf, amCustom )
13675:   TFileHandler', 'Procedure ( const FileName : string)
13676:   TFileHandlerEx', 'Procedure ( const Directory : string; const FileInfo : TSearchRec)
13677:  Function BuildFileList( const Path : string; const Attr : Integer; const List : TStrings) : Boolean
13678:  //Function AdvBuildFileList( const Path : string; const Attr : Integer; const Files : TStrings; const
       AttributeMatch:TJclAttributeMatch;const Optis:TFileListOptions;const SubfoldersMask:string;const
       FileMatchFunc:TFileMatchFunc):Bool;
13679:  Function jxVerifyFileAttributeMask( var RejectedAttributes, RequiredAttributes : Int) : Boolean
13680:  Function jxIsFileAttributeMatch(FileAttributes,RejectedAttributes,RequiredAttributes:Int):Boolean;
13681:  Function jxFileAttributesStr( const FileInfo : TSearchRec) : string
13682:  Function jxIsFileNameMatch(FileName:string;const Mask:string;const CaseSensitive:Boolean):Boolean;
13683:  Procedure jxEnumFiles(const Path:string; HandleFile:TFileHandlerEx;
       RejectedAttributes:Integer;RequiredAttributes : Integer; Abort : TObject)
13684:  Procedure jxEnumDirectories(const Root:string;const HandleDirectory:TFileHandler;const
       IncludeHiddenDirects:Boolean;const SubDirectoriesMask:string;Abort:TObject;ResolveSymLinks:Bool)
13685:  Procedure jxCreateEmptyFile( const FileName : string)
13686:  Function jxCloseVolume( var Volume : THandle) : Boolean
13687:  Function jxDeleteDirectory( const DirectoryName : string; MoveToRecycleBin : Boolean) : Boolean
13688:  Function jxCopyDirectory( ExistingDirectoryName, NewDirectoryName : string) : Boolean
13689:  Function jxMoveDirectory( ExistingDirectoryName, NewDirectoryName : string) : Boolean
13690:  Function jxDelTree( const Path : string) : Boolean
13691:  //Function DelTreeEx(const Path:string;AbortOnFailure:Boolean; Progress:TDelTreeProgress):Boolean
13692:  Function jxDiskInDrive( Drive : Char) : Boolean
13693:  Function jxDirectoryExists( const Name : string; ResolveSymLinks : Boolean) : Boolean
13694:  Function jxFileCreateTemp( var Prefix : string) : THandle
13695:  Function jxFileBackup( const FileName : string; Move : Boolean) : Boolean
13696:  Function jxFileCopy( const ExistingFileName, NewFileName : string; ReplaceExisting : Boolean) : Boolean
13697:  Function jxFileDelete( const FileName : string; MoveToRecycleBin : Boolean) : Boolean
13698:  Function jxFileExists( const FileName : string) : Boolean
```

```
13699:  Function jxFileMove( const ExistingFileName, NewFileName : string; ReplaceExisting : Boolean) : Boolean
13700:  Function jxFileRestore( const FileName : string) : Boolean
13701:  Function jxGetBackupFileName( const FileName : string) : string
13702:  Function jxIsBackupFileName( const FileName : string) : Boolean
13703:  Function jxFileGetDisplayName( const FileName : string) : string
13704:  Function jxFileGetGroupName( const FileName : string; ResolveSymLinks : Boolean) : string
13705:  Function jxFileGetOwnerName( const FileName : string; ResolveSymLinks : Boolean) : string
13706:  Function jxFileGetSize( const FileName : string) : Int64
13707:  Function jxFileGetTempName( const Prefix : string) : string
13708:  Function jxFileGetTypeName( const FileName : string) : string
13709:  Function jxFindUnusedFileName(FileName:string; const FileExt : string; NumberPrefix : string) : string
13710:  Function jxForceDirectories( Name : string) : Boolean
13711:  Function jxGetDirectorySize( const Path : string) : Int64
13712:  Function jxGetDriveTypeStr( const Drive : Char) : string
13713:  Function jxGetFileAgeCoherence( const FileName : string) : Boolean
13714:  Procedure jxGetFileAttributeList( const Items : TStrings; const Attr : Integer)
13715:  Procedure jxGetFileAttributeListEx( const Items : TStrings; const Attr : Integer)
13716:  Function jxGetFileInformation( const FileName : string; out FileInfo : TSearchRec) : Boolean;
13717:  Function jxGetFileInformation1( const FileName : string) : TSearchRec;
13718:  //Function GetFileStatus(const FileName:string;out StatBuf:TStatBuf64;const
       ResolveSymLinks:Boolean):Integer
13719:  Function jxGetFileLastWrite( const FName : string) : TFileTime;
13720:  Function jxGetFileLastWrite1( const FName : string; out LocalTime : TDateTime) : Boolean;
13721:  Function jxGetFileLastAccess( const FName : string) : TFileTime;
13722:  Function jxGetFileLastAccess1( const FName : string; out LocalTime : TDateTime) : Boolean;
13723:  Function jxGetFileCreation( const FName : string) : TFileTime;
13724:  Function jxGetFileCreation1( const FName : string; out LocalTime : TDateTime) : Boolean;
13725:  Function jxGetFileLastWrite( const FName : string;out TimeStamp:Integer;ResolveSymLinks : Bool):Bool;
13726:  Function jxGetFileLastWrite1(const FName:string; out LocalTime:TDateTime;ResolveSymLinks:Bool): Bool;
13727:  Function jxGetFileLastWrite2( const FName : string; ResolveSymLinks : Boolean) : Integer;
13728:  Function jxGetFileLastAccess(const FName:string; out TimeStamp:Integer;ResolveSymLinks: Bool): Bool;
13729:  Function jxGetFileLastAccess1(const FName:string; out LocalTime:TDateTime;ResolveSymLinks:Bool):Bool;
13730:  Function jxGetFileLastAccess2(const FName:string; ResolveSymLinks:Boolean): Integer;
13731:  Function jxGetFileLastAttrChange(const FName:string;out TimeStamp:Integer;ResolveSymLinks:Bool): Bool;
13732:  Function jxGetFileLastAttrChange1(const FName:string; out LocalTime:TDateTime;ResolveSymLinks:Bool):Bool;
13733:  Function jxGetFileLastAttrChange2( const FName : string; ResolveSymLinks:Boolean): Integer;
13734:  Function jxGetModulePath( const Module : HMODULE) : string
13735:  Function jxGetSizeOfFile( const FileName : string) : Int64;
13736:  Function jxGetSizeOfFile1( const FileInfo : TSearchRec) : Int64;
13737:  Function jxGetSizeOfFile2( Handle : THandle) : Int64;
13738:  Function jxGetStandardFileInfo( const FileName : string) : TWin32FileAttributeData
13739:  Function jxIsDirectory( const FileName : string; ResolveSymLinks : Boolean) : Boolean
13740:  Function jxIsRootDirectory( const CanonicFileName : string) : Boolean
13741:  Function jxLockVolume( const Volume : string; var Handle : THandle) : Boolean
13742:  Function jxOpenVolume( const Drive : Char) : THandle
13743:  Function jxSetDirLastWrite( const DirName : string; const DateTime : TDateTime) : Boolean
13744:  Function jxSetDirLastAccess( const DirName : string; const DateTime : TDateTime) : Boolean
13745:  Function jxSetDirCreation( const DirName : string; const DateTime : TDateTime) : Boolean
13746:  Function jxSetFileLastWrite( const FileName : string; const DateTime : TDateTime) : Boolean
13747:  Function jxSetFileLastAccess( const FileName : string; const DateTime : TDateTime) : Boolean
13748:  Function jxSetFileCreation( const FileName : string; const DateTime : TDateTime) : Boolean
13749:  Procedure jxShredFile( const FileName : string; Times : Integer)
13750:  Function jxUnlockVolume( var Handle : THandle) : Boolean
13751:  Function jxCreateSymbolicLink( const Name, Target : string) : Boolean
13752:  Function jxSymbolicLinkTarget( const Name : string) : string
13753:   TAttributeInterest', '( aiIgnored, aiRejected, aiRequired )
13754:   SIRegister_TJclCustomFileAttrMask(CL);
13755:   SIRegister_TJclFileAttributeMask(CL);
13756:   TFileSearchOption', '( fsIncludeSubDirectories, fsIncludeHiddenS'
13757:    +'ubDirectories, fsLastChangeAfter, fsLastChangeBefore, fsMaxSize, fsMinSize)
13758:   TFileSearchOptions', 'set of TFileSearchOption
13759:   TFileSearchTaskID', 'Integer
13760:   TFileSearchTerminationEvent', 'Procedure ( const ID : TFileSearc'
13761:    +'hTaskID; const Aborted : Boolean)
13762:   TFileEnumeratorSyncMode', '( smPerFile, smPerDirectory )
13763:   SIRegister_IJclFileEnumerator(CL);
13764:   SIRegister_TJclFileEnumerator(CL);
13765:  Function JxFileSearch : IJclFileEnumerator
13766:   JxTFileFlag', '( ffDebug, ffInfoInferred, ffPatched,ffPreRelease,ffPrivateBuild, ffSpecialBuild )
13767:   JxTFileFlags', 'set of TFileFlag
13768:   FindClass('TOBJECT'),'EJclFileVersionInfoError
13769:   SIRegister_TJclFileVersionInfo(CL);
13770:  Function jxOSIdentToString( const OSIdent : DWORD) : string
13771:  Function jxOSFileTypeToString( const OSFileType : DWORD; const OSFileSubType : DWORD) : string
13772:  Function jxVersionResourceAvailable( const FileName : string) : Boolean
13773:   TFileVersionFormat', '( vfMajorMinor, vfFull )
13774:  Function jxFormatVersionString( const HiV, LoV : Word) : string;
13775:  Function jxFormatVersionString1( const Major, Minor, Build, Revision : Word) : string;
13776:  //Function FormatVersionString2( const FixedInfo : TVSFixedFileInfo;VersionFormat:TFileVersionFormat):str;
13777:  //Procedure VersionExtractFileInfo(const FixedInfo:TVSFixedFileInfo;var Major,Minor,Build,Revision:Word);
13778:  //Procedure VersionExtractProductInfo(const FixedInfo:TVSFixedFileInfo;var Major,Minor,Build,
       Revision:Word);
13779:  //Function VersionFixedFileInfo( const FileName : string; var FixedInfo : TVSFixedFileInfo) : Boolean
13780:  Function jxVersionFixedFileInfoString( const FileName : string; VersionFormat : TFileVersionFormat; const
       NotAvailableText : string) : string
13781:   SIRegister_TJclTempFileStream(CL);
13782:   FindClass('TOBJECT'),'TJclCustomFileMapping
13783:   SIRegister_TJclFileMappingView(CL);
13784:   TJclFileMappingRoundOffset', '( rvDown, rvUp )
```

```
13785:   SIRegister_TJclCustomFileMapping(CL);
13786:   SIRegister_TJclFileMapping(CL);
13787:   SIRegister_TJclSwapFileMapping(CL);
13788:   SIRegister_TJclFileMappingStream(CL);
13789:   TJclMappedTextReaderIndex', '( tiNoIndex, tiFull )
13790:   //PPCharArray', '^TPCharArray // will not work
13791:   SIRegister_TJclMappedTextReader(CL);
13792:   SIRegister_TJclFileMaskComparator(CL);
13793:   FindClass('TOBJECT'),'EJclPathError
13794:   FindClass('TOBJECT'),'EJclFileUtilsError
13795:   FindClass('TOBJECT'),'EJclTempFileStreamError
13796:   FindClass('TOBJECT'),'EJclTempFileStreamError
13797:   FindClass('TOBJECT'),'EJclFileMappingError
13798:   FindClass('TOBJECT'),'EJclFileMappingViewError
13799:  Function jxPathGetLongName2( const Path : string) : string
13800:  Function jxWin32DeleteFile( const FileName : string; MoveToRecycleBin : Boolean) : Boolean
13801:  Function jxWin32MoveFileReplaceExisting( const SrcFileName, DstFileName : string) : Boolean
13802:  Function jxWin32BackupFile( const FileName : string; Move : Boolean) : Boolean
13803:  Function jxWin32RestoreFile( const FileName : string) : Boolean
13804:  Function jxSamePath( const Path1, Path2 : string) : Boolean
13805:  Procedure jxPathListAddItems( var List : string; const Items : string)
13806:  Procedure jxPathListIncludeItems( var List : string; const Items : string)
13807:  Procedure jxPathListDelItems( var List : string; const Items : string)
13808:  Procedure jxPathListDelItem( var List : string; const Index : Integer)
13809:  Function jxPathListItemCount( const List : string) : Integer
13810:  Function jxPathListGetItem( const List : string; const Index : Integer) : string
13811:  Procedure jxPathListSetItem( var List : string; const Index : Integer; const Value : string)
13812:  Function jxPathListItemIndex( const List, Item : string) : Integer
13813:  Function jxParamName(Idx:Int;const Separator:string;const AllowedPrefixChars:string;TrimName:Bool):string;
13814:  Function jxParamValue(Index : Integer; const Separator : string; TrimValue : Boolean) : string;
13815:  Function jxParamValue1(const SearchName:string; const Separator : string; CaseSensitive : Boolean; const
       AllowedPrefixCharacters : string; TrimValue : Boolean) : string;
13816:  Function jxParamPos( const SearchName : string; const Separator : string; CaseSensitive : Boolean; const
       AllowedPrefixCharacters : string) : Integer
13817: end;
13818:
13819: procedure SIRegister_FileUtil(CL: TPSPascalCompiler);
13820: begin
13821:  'UTF8FileHeader','String #$ef#$bb#$bf);
13822:  Function lCompareFilenames( const Filename1, Filename2 : string) : integer
13823:  Function lCompareFilenamesIgnoreCase( const Filename1, Filename2 : string) : integer
13824:  Function lCompareFilenames( const Filename1, Filename2 : string; ResolveLinks : boolean) : integer
13825:  Function lCompareFilenames(Filename1:PChar;Len1:int;Filename2:PChar;Len2:int;ResolveLinks:boolean):int;
13826:  Function lFilenameIsAbsolute( const TheFilename : string) : boolean
13827:  Function lFilenameIsWinAbsolute( const TheFilename : string) : boolean
13828:  Function lFilenameIsUnixAbsolute( const TheFilename : string) : boolean
13829:  Procedure lCheckIfFileIsExecutable( const AFilename : string)
13830:  Procedure lCheckIfFileIsSymlink( const AFilename : string)
13831:  Function lFileIsReadable( const AFilename : string) : boolean
13832:  Function lFileIsWritable( const AFilename : string) : boolean
13833:  Function lFileIsText( const AFilename : string) : boolean
13834:  Function lFileIsText( const AFilename : string; out FileReadable : boolean) : boolean
13835:  Function lFileIsExecutable( const AFilename : string) : boolean
13836:  Function lFileIsSymlink( const AFilename : string) : boolean
13837:  Function lFileIsHardLink( const AFilename : string) : boolean
13838:  Function lFileSize( const Filename : string) : int64;
13839:  Function lGetFileDescription( const AFilename : string) : string
13840:  Function lReadAllLinks( const Filename : string; ExceptionOnError : boolean) : string
13841:  Function lTryReadAllLinks( const Filename : string) : string
13842:  Function lDirPathExists( const FileName : String) : Boolean
13843:  Function lForceDirectory( DirectoryName : string) : boolean
13844:  Function lDeleteDirectory( const DirectoryName : string; OnlyChildren : boolean) : boolean
13845:  Function lProgramDirectory : string
13846:  Function lDirectoryIsWritable( const DirectoryName : string) : boolean
13847:  Function lExtractFileNameOnly( const AFilename : string) : string
13848:  Function lExtractFileNameWithoutExt( const AFilename : string) : string
13849:  Function lCompareFileExt( const Filename, Ext : string; CaseSensitive : boolean) : integer;
13850:  Function lCompareFileExt( const Filename, Ext : string) : integer;
13851:  Function lFilenameIsPascalUnit( const Filename : string) : boolean
13852:  Function lAppendPathDelim( const Path : string) : string
13853:  Function lChompPathDelim( const Path : string) : string
13854:  Function lTrimFilename( const AFilename : string) : string
13855:  Function lCleanAndExpandFilename( const Filename : string) : string
13856:  Function lCleanAndExpandDirectory( const Filename : string) : string
13857:  Function lCreateAbsoluteSearchPath( const SearchPath, BaseDirectory : string) : string
13858:  Function lCreateRelativePath( const Filename, BaseDirectory : string; UsePointDirectory : boolean;
       AlwaysRequireSharedBaseFolder : Boolean) : string
13859:  Function lCreateAbsolutePath( const Filename, BaseDirectory : string) : string
13860:  Function lFileIsInPath( const Filename, Path : string) : boolean
13861:  Function lFileIsInDirectory( const Filename, Directory : string) : boolean
13862:   TSearchFileInPathFlag', '( sffDontSearchInBasePath, sffSearchLoUpCase )
13863:   TSearchFileInPathFlags', 'set of TSearchFileInPathFlag
13864:  'AllDirectoryEntriesMask','String '*
13865:  Function lGetAllFilesMask : string
13866:  Function lGetExeExt : string
13867:  Function lSearchFileInPath( const Filename, BasePath, SearchPath, Delimiter : string; Flags :
       TSearchFileInPathFlags) : string
13868:  Function lSearchAllFilesInPath( const Filename, BasePath, SearchPath, Delimiter:string;Flags :
       TSearchFileInPathFlags) : TStrings
```

```
13869:  Function lFindDiskFilename( const Filename : string) : string
13870:  Function lFindDiskFileCaseInsensitive( const Filename : string) : string
13871:  Function lFindDefaultExecutablePath( const Executable : string; const BaseDir: string):string
13872:  Function lGetDarwinSystemFilename( Filename : string) : string
13873:   SIRegister_TFileIterator(CL);
13874:   TFileFoundEvent', 'Procedure ( FileIterator : TFileIterator)
13875:   TDirectoryFoundEvent', 'Procedure ( FileIterator : TFileIterator)
13876:   TDirectoryEnterEvent', 'Procedure ( FileIterator : TFileIterator)
13877:   SIRegister_TFileSearcher(CL);
13878:  Function lFindAllFiles(const SearchPath:String;SearchMsk:String;SearchSubDirs:Bool):TStringList
13879:  Function lFindAllDirectories( const SearchPath : string; SearchSubDirs : Boolean) : TStringList
13880:  // TCopyFileFlag', '( cffOverwriteFile, cffCreateDestDirectory, cffPreserveTime )
13881:  // TCopyFileFlags', 'set of TCopyFileFlag
13882:  Function lCopyFile( const SrcFilename, DestFilename : string; Flags : TCopyFileFlags) : boolean
13883:  Function lCopyFile( const SrcFilename, DestFilename : string; PreserveTime : boolean) : boolean
13884:  Function lCopyDirTree( const SourceDir, TargetDir : string; Flags : TCopyFileFlags) : Boolean
13885:  Function lReadFileToString( const Filename : string) : string
13886:  Function lGetTempFilename( const Directory, Prefix : string) : string
13887:  {Function NeedRTLAnsi : boolean
13888:  Procedure SetNeedRTLAnsi( NewValue : boolean)
13889:  Function UTF8ToSys( const s : string) : string
13890:  Function SysToUTF8( const s : string) : string
13891:  Function ConsoleToUTF8( const s : string) : string
13892:  Function UTF8ToConsole( const s : string) : string}
13893:  Function FileExistsUTF8( const Filename : string) : boolean
13894:  Function FileAgeUTF8( const FileName : string) : Longint
13895:  Function DirectoryExistsUTF8( const Directory : string) : Boolean
13896:  Function ExpandFileNameUTF8( const FileName : string) : string
13897:  Function ExpandUNCFileNameUTF8( const FileName : string) : string
13898:  Function ExtractShortPathNameUTF8( const FileName : String) : String
13899:  Function FindFirstUTF8(const Path: string; Attr : Longint; out Rslt : TSearchRec) : Longint
13900:  Function FindNextUTF8( var Rslt : TSearchRec) : Longint
13901:  Procedure FindCloseUTF8( var F : TSearchrec)
13902:  Function FileSetDateUTF8( const FileName : String; Age : Longint) : Longint
13903:  Function FileGetAttrUTF8( const FileName : String) : Longint
13904:  Function FileSetAttrUTF8( const Filename : String; Attr : longint) : Longint
13905:  Function DeleteFileUTF8( const FileName : String) : Boolean
13906:  Function RenameFileUTF8( const OldName, NewName : String) : Boolean
13907:  Function FileSearchUTF8( const Name, DirList : String; ImplicitCurrentDir : Boolean) : String
13908:  Function FileIsReadOnlyUTF8( const FileName : String) : Boolean
13909:  Function GetCurrentDirUTF8 : String
13910:  Function SetCurrentDirUTF8( const NewDir : String) : Boolean
13911:  Function CreateDirUTF8( const NewDir : String) : Boolean
13912:  Function RemoveDirUTF8( const Dir : String) : Boolean
13913:  Function ForceDirectoriesUTF8( const Dir : string) : Boolean
13914:  Function FileOpenUTF8( const FileName : string; Mode : Integer) : THandle
13915:  Function FileCreateUTF8( const FileName : string) : THandle;
13916:  Function FileCreateUTF81( const FileName : string; Rights : Cardinal) : THandle;
13917:  Function ParamStrUTF8( Param : Integer) : string
13918:  Function GetEnvironmentStringUTF8( Index : Integer) : string
13919:  Function GetEnvironmentVariableUTF8( const EnvVar : string) : String
13920:  Function GetAppConfigDirUTF8( Global : Boolean; Create : boolean) : string
13921:  Function GetAppConfigFileUTF8(Global:Boolean; SubDir:boolean; CreateDir : boolean) : string
13922:  Function SysErrorMessageUTF8( ErrorCode : Integer) : String
13923: end;
13924:
13925: procedure SIRegister_Keyboard(CL: TPSPascalCompiler);
13926: begin
13927:   //VK_F23 = 134;
13928:   //{$EXTERNALSYM VK_F24}
13929:   //VK_F24 = 135;
13930:  TVirtualKeyCode', 'Integer
13931:  'VK_MOUSEWHEELUP','integer'(134);
13932:  'VK_MOUSEWHEELDOWN','integer'(135);
13933:  Function glIsKeyDown( c : Char) : Boolean;
13934:  Function glIsKeyDown1( vk : TVirtualKeyCode) : Boolean;
13935:  Function glKeyPressed( minVkCode : TVirtualKeyCode) : TVirtualKeyCode
13936:  Function glVirtualKeyCodeToKeyName( vk : TVirtualKeyCode) : String
13937:  Function glKeyNameToVirtualKeyCode( const keyName : String) : TVirtualKeyCode
13938:  Function glCharToVirtualKeyCode( c : Char) : TVirtualKeyCode
13939:  Procedure glKeyboardNotifyWheelMoved( wheelDelta : Integer)
13940: end;
13941:
13942: procedure SIRegister_GLCrossPlatform(CL: TPSPascalCompiler);
13943: begin
13944:   TGLPoint', 'TPoint
13945:   //PGLPoint', '^TGLPoint // will not work
13946:   TGLRect', 'TRect
13947:   //PGLRect', '^TGLRect // will not work
13948:   TDelphiColor', 'TColor
13949:   TGLPicture', 'TPicture
13950:   TGLGraphic', 'TGraphic
13951:   TGLBitmap', 'TBitmap
13952:   //TGraphicClass', 'class of TGraphic
13953:   TGLTextLayout', '( tlTop, tlCenter, tlBottom )
13954:   TGLMouseButton', '( mbLeft, mbRight, mbMiddle )
13955:   TGLMouseEvent', 'Procedure ( Sender : TObject; Button : TGLMouse'
13956:    +'Button; Shift : TShiftState; X, Y : Integer)
13957:   TGLMouseMoveEvent', 'TMouseMoveEvent
```

```
13958:   TGLKeyEvent', 'TKeyEvent
13959:   TGLKeyPressEvent', 'TKeyPressEvent
13960:   EGLOSError', 'EWin32Error
13961:   EGLOSError', 'EWin32Error
13962:   EGLOSError', 'EOSError
13963:  'glsAllFilter','string'All // sAllFilter
13964:  Function GLPoint( const x, y : Integer) : TGLPoint
13965:  Function GLRGB( const r, g, b : Byte) : TColor
13966:  Function GLColorToRGB( color : TColor) : TColor
13967:  Function GLGetRValue( rgb : DWORD) : Byte
13968:  Function GLGetGValue( rgb : DWORD) : Byte
13969:  Function GLGetBValue( rgb : DWORD) : Byte
13970:  Procedure GLInitWinColors
13971:  Function GLRect( const aLeft, aTop, aRight, aBottom : Integer) : TGLRect
13972:  Procedure GLInflateGLRect( var aRect : TGLRect; dx, dy : Integer)
13973:  Procedure GLIntersectGLRect( var aRect : TGLRect; const rect2 : TGLRect)
13974:  Procedure GLInformationDlg( const msg : String)
13975:  Function GLQuestionDlg( const msg : String) : Boolean
13976:  Function GLInputDlg( const aCaption, aPrompt, aDefault : String) : String
13977:  Function GLSavePictureDialog( var aFileName : String; const aTitle : String) : Boolean
13978:  Function GLOpenPictureDialog( var aFileName : String; const aTitle : String) : Boolean
13979:  Function GLApplicationTerminated : Boolean
13980:  Procedure GLRaiseLastOSError
13981:  Procedure GLFreeAndNil( var anObject: TObject)
13982:  Function GLGetDeviceLogicalPixelsX( device : Cardinal) : Integer
13983:  Function GLGetCurrentColorDepth : Integer
13984:  Function GLPixelFormatToColorBits( aPixelFormat : TPixelFormat) : Integer
13985:  Function GLBitmapScanLine( aBitmap : TGLBitmap; aRow : Integer) : Pointer
13986:  Procedure GLSleep( length : Cardinal)
13987:  Procedure GLQueryPerformanceCounter( var val : Int64)
13988:  Function GLQueryPerformanceFrequency( var val : Int64) : Boolean
13989:  Function GLStartPrecisionTimer : Int64
13990:  Function GLPrecisionTimerLap( const precisionTimer : Int64) : Double
13991:  Function GLStopPrecisionTimer( const precisionTimer : Int64) : Double
13992:  Function GLRDTSC : Int64
13993:  Procedure GLLoadBitmapFromInstance( ABitmap : TBitmap; AName : string)
13994:  Function GLOKMessageBox( const Text, Caption : string) : Integer
13995:  Procedure GLShowHTMLUrl( Url : String)
13996:  Procedure GLShowCursor( AShow : boolean)
13997:  Procedure GLSetCursorPos( AScreenX, AScreenY : integer)
13998:  Procedure GLGetCursorPos( var point : TGLPoint)
13999:  Function GLGetScreenWidth : integer
14000:  Function GLGetScreenHeight : integer
14001:  Function GLGetTickCount : int64
14002:  function RemoveSpaces(const str : String) : String;
14003:   TNormalMapSpace','( nmsObject, nmsTangent )
14004:  Procedure CalcObjectSpaceLightVectors(Light:TAffineVector;Vertices TAffineVectorList;Colors:TVectorList)
14005:  Procedure SetupTangentSpace( Vertices, Normals, TexCoords, Tangents, BiNormals : TAffineVectorList)
14006:  Procedure CalcTangentSpaceLightVectors( Light : TAffineVector; Vertices, Normals, Tangents, BiNormals :
       TAffineVectorList; Colors : TVectorList)
14007:  Function CreateObjectSpaceNormalMap( Width,Height:Integer;HiNormals,
       HiTexCoords:TAffineVectorList):TGLBitmap
14008:  Function CreateTangentSpaceNormalMap( Width, Height : Integer; HiNormals, HiTexCoords, LoNormals,
       LoTexCoords, Tangents, BiNormals : TAffineVectorList) : TGLBitmap
14009: end;
14010:
14011: procedure SIRegister_GLStarRecord(CL: TPSPascalCompiler);
14012: begin
14013:   TGLStarRecord', 'record RA: Word; DEC: SmallInt; BVColorIndex: Byte; VMagnitude: Byte; end
14014:  // PGLStarRecord', '^TGLStarRecord // will not work
14015:  Function StarRecordPositionZUp( const starRecord : TGLStarRecord) : TAffineVector
14016:  Function StarRecordPositionYUp( const starRecord : TGLStarRecord) : TAffineVector
14017:  Function StarRecordColor( const starRecord : TGLStarRecord; bias : Single) : TVector
14018: end;
14019:
14020:
14021: procedure SIRegister_GeometryBB(CL: TPSPascalCompiler);
14022: begin
14023:   TAABB', 'record min : TAffineVector; max : TAffineVector; end
14024:   //PAABB', '^TAABB // will not work
14025:  TBSphere', 'record Center : TAffineVector; Radius : single; end
14026:  TClipRect', 'record Left : Single; Top:Single; Right:Single; Bottom : Single; end
14027:  TSpaceContains', '(scNoOverlap, scContainsFully, scContainsPartially )
14028:  Function AddBB( var c1 : THmgBoundingBox; const c2 : THmgBoundingBox) : THmgBoundingBox
14029:  Procedure AddAABB( var aabb : TAABB; const aabb1 : TAABB)
14030:  Procedure SetBB( var c : THmgBoundingBox; const v : TVector)
14031:  Procedure SetAABB( var bb : TAABB; const v : TVector)
14032:  Procedure BBTransform( var c : THmgBoundingBox; const m : TMatrix)
14033:  Procedure AABBTransform( var bb : TAABB; const m : TMatrix)
14034:  Procedure AABBScale( var bb : TAABB; const v : TAffineVector)
14035:  Function BBMinX( const c : THmgBoundingBox) : Single
14036:  Function BBMaxX( const c : THmgBoundingBox) : Single
14037:  Function BBMinY( const c : THmgBoundingBox) : Single
14038:  Function BBMaxY( const c : THmgBoundingBox) : Single
14039:  Function BBMinZ( const c : THmgBoundingBox) : Single
14040:  Function BBMaxZ( const c : THmgBoundingBox) : Single
14041:  Procedure AABBInclude( var bb : TAABB; const p : TAffineVector)
14042:  Procedure AABBFromSweep( var SweepAABB : TAABB; const Start, Dest : TVector; const Radius : Single)
14043:  Function AABBIntersection( const aabb1, aabb2 : TAABB) : TAABB
```

```
14044:  Function BBToAABB( const aBB : THmgBoundingBox) : TAABB
14045:  Function AABBToBB( const anAABB : TAABB) : THmgBoundingBox;
14046:  Function AABBToBB1( const anAABB : TAABB; const m : TMatrix) : THmgBoundingBox;
14047:  Procedure OffsetAABB( var aabb : TAABB; const delta : TAffineVector);
14048:  Procedure OffsetAABB1( var aabb : TAABB; const delta : TVector);
14049:  Function IntersectAABBs( const aabb1, aabb2 : TAABB; const m1To2, m2To1 : TMatrix) : Boolean;
14050:  Function IntersectAABBsAbsoluteXY( const aabb1, aabb2 : TAABB) : Boolean
14051:  Function IntersectAABBsAbsoluteXZ( const aabb1, aabb2 : TAABB) : Boolean
14052:  Function IntersectAABBsAbsolute( const aabb1, aabb2 : TAABB) : Boolean
14053:  Function AABBFitsInAABBAbsolute( const aabb1, aabb2 : TAABB) : Boolean
14054:  Function PointInAABB( const p : TAffineVector; const aabb : TAABB) : Boolean;
14055:  Function PointInAABB1( const p : TVector; const aabb : TAABB) : Boolean;
14056:  Function PlaneIntersectAABB( Normal : TAffineVector; d : single; aabb : TAABB) : boolean
14057:  Function TriangleIntersectAABB( const aabb : TAABB; v1, v2, v3 : TAffineVector) : boolean
14058:  Procedure ExtractAABBCorners( const AABB : TAABB; var AABBCorners : TAABBCorners)
14059:  Procedure AABBToBSphere( const AABB : TAABB; var BSphere : TBSphere)
14060:  Procedure BSphereToAABB( const BSphere : TBSphere; var AABB : TAABB);
14061:  Function BSphereToAABB1( const center : TAffineVector; radius : Single) : TAABB;
14062:  Function BSphereToAABB2( const center : TVector; radius : Single) : TAABB;
14063:  Function AABBContainsAABB( const mainAABB, testAABB : TAABB) : TSpaceContains
14064:  Function BSphereContainsAABB( const mainBSphere : TBSphere; const testAABB : TAABB) : TSpaceContains
14065:  Function BSphereContainsBSphere( const mainBSphere, testBSphere : TBSphere) : TSpaceContains
14066:  Function AABBContainsBSphere( const mainAABB : TAABB; const testBSphere : TBSphere) : TSpaceContains
14067:  Function PlaneContainsBSphere(const Location,Normal:TAffineVector;const
       testBSphere:TBSphere):TSpaceContains
14068:  Function FrustumContainsBSphere( const Frustum : TFrustum; const testBSphere : TBSphere) : TSpaceContains
14069:  Function FrustumContainsAABB( const Frustum : TFrustum; const testAABB : TAABB) : TSpaceContains
14070:  Function ClipToAABB( const v : TAffineVector; const AABB : TAABB) : TAffineVector
14071:  Function BSphereIntersectsBSphere( const mainBSphere, testBSphere : TBSphere) : boolean
14072:  Procedure IncludeInClipRect( var clipRect : TClipRect; x, y : Single)
14073:  Function AABBToClipRect(const aabb:TAABB;modelViewProjection:TMatrix;viewportSizeX,
       viewportSizeY:Int):TClipRect
14074: end;
14075:
14076: procedure SIRegister_GeometryCoordinates(CL: TPSPascalCompiler);
14077: begin
14078:  Procedure Cylindrical_Cartesian( const r, theta, z1 : single; var x, y, z : single);
14079:  Procedure Cylindrical_Cartesian1( const r, theta, z1 : double; var x, y, z : double);
14080:  Procedure Cylindrical_Cartesian2( const r,theta,z1 : single; var x, y, z : single; var ierr : integer);
14081:  Procedure Cylindrical_Cartesian3( const r,theta,z1 : double; var x, y, z : double; var ierr : integer);
14082:  Procedure Cartesian_Cylindrical( const x, y, z1 : single; var r, theta, z : single);
14083:  Procedure Cartesian_Cylindrical1( const x, y, z1 : double; var r, theta, z : double);
14084:  Procedure Spherical_Cartesian( const r, theta, phi : single; var x, y, z : single);
14085:  Procedure Spherical_Cartesian1( const r, theta, phi : double; var x, y, z : double);
14086:  Procedure Spherical_Cartesian2( const r,theta, phi : single; var x, y, z : single; var ierr : integer);
14087:  Procedure Spherical_Cartesian3( const r,theta, phi : double; var x, y, z : double; var ierr : integer);
14088:  Procedure Cartesian_Spherical( const x, y, z : single; var r, theta, phi : single);
14089:  Procedure Cartesian_Spherical1( const v : TAffineVector; var r, theta, phi : Single);
14090:  Procedure Cartesian_Spherical2( const x, y, z : double; var r, theta, phi : double);
14091:  Procedure ProlateSpheroidal_Cartesian( const xi, eta, phi, a : single; var x, y, z : single);
14092:  Procedure ProlateSpheroidal_Cartesian1( const xi, eta, phi, a : double; var x, y, z : double);
14093:  Procedure ProlateSpheroidal_Cartesian2(const xi,eta,phi,a:single;var x,y,z:single;var ierr: integer);
14094:  Procedure ProlateSpheroidal_Cartesian3(const xi,eta,phi,a:double;var x,y,z:double;var ierr: integer);
14095:  Procedure OblateSpheroidal_Cartesian( const xi, eta, phi, a : single; var x, y, z : single);
14096:  Procedure OblateSpheroidal_Cartesian1( const xi, eta, phi, a : double; var x, y, z : double);
14097:  Procedure OblateSpheroidal_Cartesian2(const xi,eta,phi,a:single; var x,y,z: single;var ierr:integer);
14098:  Procedure OblateSpheroidal_Cartesian3( const xi,eta,phi,a:double; var x,y,z:double;var ierr:integer);
14099:  Procedure BipolarCylindrical_Cartesian( const u, v, z1, a : single; var x, y, z : single);
14100:  Procedure BipolarCylindrical_Cartesian1(const u, v, z1, a : double; var x, y, z : double);
14101:  Procedure BipolarCylindrical_Cartesian2(const u,v,z1,a: single;var x,y,z:single; var ierr : integer);
14102:  Procedure BipolarCylindrical_Cartesian3(const u,v,z1,a: double;var x,y,z:double; var ierr : integer);
14103: end;
14104:
14105: procedure SIRegister_VectorGeometry(CL: TPSPascalCompiler);
14106: begin
14107:  'EPSILON','Single').setExtended( 1e-40);
14108:  'EPSILON2','Single').setExtended( 1e-30);  }
14109:  TRenderContextClippingInfo', 'record origin : TVector; clippingD'
14110:    +'irection : TVector; viewPortRadius : Single; farClippingDistance:Single;frustum:TFrustum; end
14111:  THmgPlane', 'TVector
14112:   TDoubleHmgPlane', 'THomogeneousDblVector
14113:  {TTransType', '( ttScaleX, ttScaleY, ttScaleZ, ttShearXY, ttShear'
14114:    +'XZ, ttShearYZ, ttRotateX, ttRotateY, ttRotateZ, ttTranslateX, ttTranslateY'
14115:    +', ttTranslateZ, ttPerspectiveX, ttPerspectiveY, ttPerspectiveZ, ttPerspectiveW )}
14116:   TSingleArray', 'array of Single
14117:   TTransformations','array [0..15] of Single)
14118:   TPackedRotationMatrix','array [0..2] of Smallint)
14119:   TVertex', 'TAffineVector
14120:   //TVectorGL', 'THomogeneousFltVector
14121:   //TMatrixGL', 'THomogeneousFltMatrix
14122:   //  TPackedRotationMatrix = array [0..2] of SmallInt;
14123:  Function glTexPointMake( const s, t : Single) : TTexPoint
14124:  Function glAffineVectorMake( const x, y, z : Single) : TAffineVector;
14125:  Function glAffineVectorMake1( const v : TVectorGL) : TAffineVector;
14126:  Procedure glSetAffineVector( var v : TAffineVector; const x, y, z : Single);
14127:  Procedure glSetVector( var v : TAffineVector; const x, y, z : Single);
14128:  Procedure glSetVector1( var v : TAffineVector; const vSrc : TVectorGL);
14129:  Procedure glSetVector2( var v : TAffineVector; const vSrc : TAffineVector);
14130:  Procedure glSetVector3( var v : TAffineDblVector; const vSrc : TAffineVector);
```

```
14131:  Procedure glSetVector4( var v : TAffineDblVector; const vSrc : TVectorGL);
14132:  Function glVectorMake( const v : TAffineVector; w : Single) : TVectorGL;
14133:  Function glVectorMake1( const x, y, z : Single; w : Single) : TVectorGL;
14134:  Function glPointMake( const x, y, z : Single) : TVectorGL;
14135:  Function glPointMake1( const v : TAffineVector) : TVectorGL;
14136:  Function glPointMake2( const v : TVectorGL) : TVectorGL;
14137:  Procedure glSetVector5( var v : TVectorGL; const x, y, z : Single; w : Single);
14138:  Procedure glSetVector6( var v : TVectorGL; const av : TAffineVector; w : Single);
14139:  Procedure glglSetVector7( var v : TVectorGL; const vSrc : TVectorGL);
14140:  Procedure glMakePoint( var v : TVectorGL; const x, y, z : Single);
14141:  Procedure glMakePoint1( var v : TVectorGL; const av : TAffineVector);
14142:  Procedure glMakePoint2( var v : TVectorGL; const av : TVectorGL);
14143:  Procedure glMakeVector( var v : TAffineVector; const x, y, z : Single);
14144:  Procedure glMakeVector1( var v : TVectorGL; const x, y, z : Single);
14145:  Procedure glMakeVector2( var v : TVectorGL; const av : TAffineVector);
14146:  Procedure glMakeVector3( var v : TVectorGL; const av : TVectorGL);
14147:  Procedure glRstVector( var v : TAffineVector);
14148:  Procedure glRstVector1( var v : TVectorGL);
14149:  Function glVectorAdd( const v1, v2 : TAffineVector) : TAffineVector;
14150:  Procedure glVectorAdd1( const v1, v2 : TAffineVector; var vr : TAffineVector);
14151:  //Procedure VectorAdd2( const v1, v2 : TAffineVector; vr : PAffineVector);
14152:  Function glVectorAdd3( const v1, v2 : TVectorGL) : TVectorGL;
14153:  Procedure glVectorAdd4( const v1, v2 : TVectorGL; var vr : TVectorGL);
14154:  Function glVectorAdd5( const v : TAffineVector; const f : Single) : TAffineVector;
14155:  Function glVectorAdd6( const v : TVectorGL; const f : Single) : TVectorGL;
14156:  Procedure glAddVector7( var v1 : TAffineVector; const v2 : TAffineVector);
14157:  Procedure glAddVector8( var v1 : TAffineVector; const v2 : TVectorGL);
14158:  Procedure glAddVector9( var v1 : TVectorGL; const v2 : TVectorGL);
14159:  Procedure glAddVector10( var v : TAffineVector; const f : Single);
14160:  Procedure glAddVector11( var v : TVectorGL; const f : Single);
14161:  //Procedure TexPointArrayAdd(const src:PTexPointArray;const delta:TTexPoint;const
      nb:Int;dest:PTexPointArray);
14162:  //Procedure TexPointArrayScaleAndAdd(const src:PTexPointArray;const delta:TTexPoint;const
      nb:Integer;const scale: TTexPoint; dest : PTexPointArray);
14163:  //Procedure VectorArrayAdd(const src:PAffineVectorArray;const delta:TAffineVector;const nb:Integer;dest:
      PAffineVectorArray);
14164:  Function glVectorSubtract( const V1, V2 : TAffineVector) : TAffineVector;
14165:  Procedure glVectorSubtract1( const v1, v2 : TAffineVector; var result : TAffineVector);
14166:  Procedure glVectorSubtract2( const v1, v2 : TAffineVector; var result : TVectorGL);
14167:  Procedure glVectorSubtract3( const v1 : TVectorGL; v2 : TAffineVector; var result : TVectorGL);
14168:  Function glVectorSubtract4( const V1, V2 : TVectorGL) : TVectorGL;
14169:  Procedure glVectorSubtract5( const v1, v2 : TVectorGL; var result : TVectorGL);
14170:  Procedure glVectorSubtract6( const v1, v2 : TVectorGL; var result : TAffineVector);
14171:  Function glVectorSubtract7( const v1 : TAffineVector; delta : Single) : TAffineVector;
14172:  Function glVectorSubtract8( const v1 : TVectorGL; delta : Single) : TVectorGL;
14173:  Procedure glSubtractVector9( var V1 : TAffineVector; const V2 : TAffineVector);
14174:  Procedure glSubtractVector10( var V1 : TVectorGL; const V2 : TVectorGL);
14175:  Procedure glCombineVector( var vr : TAffineVector; const v : TAffineVector; var f : Single);
14176:  //Procedure CombineVector1( var vr : TAffineVector; const v : TAffineVector; pf : PFloat);
14177:  Function glTexPointCombine( const t1, t2 : TTexPoint; f1, f2 : Single) : TTexPoint
14178:  Function glVectorCombine2( const V1, V2 : TAffineVector; const F1, F2 : Single) : TAffineVector;
14179:  Function glVectorCombine33( const V1, V2, V3 : TAffineVector; const F1, F2, F3 : Single) : TAffineVector;
14180:  Procedure glVectorCombine34(const V1,V2,V3:TAffineVector; const F1,F2,F3: Single; var vr : TAffineVector);
14181:  Procedure glCombineVector5( var vr : TVectorGL; const v : TVectorGL; var f : Single);
14182:  Procedure glCombineVector6( var vr : TVectorGL; const v : TAffineVector; var f : Single);
14183:  Function glVectorCombine7( const V1, V2 : TVectorGL; const F1, F2 : Single) : TVectorGL;
14184:  Function glVectorCombine8( const V1 : TVectorGL;const V2: TAffineVector; const F1,F2:Single): TVectorGL;
14185:  Procedure glVectorCombine9(const V1:TVectorGL;const V2:TAffineVector;const F1,F2:Single;var vr:TVectorGL);
14186:  Procedure glVectorCombine10( const V1, V2 : TVectorGL; const F1, F2 : Single; var vr : TVectorGL);
14187:  Procedure glVectorCombine11( const V1, V2 : TVectorGL; const F2 : Single; var vr : TVectorGL);
14188:  Function glVectorCombine3( const V1, V2, V3 : TVectorGL; const F1, F2, F3 : Single) : TVectorGL;
14189:  Procedure glVectorCombine31( const V1, V2, V3 : TVectorGL; const F1, F2, F3:Single; var vr : TVectorGL);
14190:  Function glVectorDotProduct( const V1, V2 : TAffineVector) : Single;
14191:  Function glVectorDotProduct1( const V1, V2 : TVectorGL) : Single;
14192:  Function glVectorDotProduct2( const V1 : TVectorGL; const V2 : TAffineVector) : Single;
14193:  Function glPointProject( const p, origin, direction : TAffineVector) : Single;
14194:  Function glPointProject1( const p, origin, direction : TVectorGL) : Single;
14195:  Function glVectorCrossProduct( const V1, V2 : TAffineVector) : TAffineVector;
14196:  Function glVectorCrossProduct1( const V1, V2 : TVectorGL) : TVectorGL;
14197:  Procedure glVectorCrossProduct2( const v1, v2 : TVectorGL; var vr : TVectorGL);
14198:  Procedure glVectorCrossProduct3( const v1, v2 : TAffineVector; var vr : TVectorGL);
14199:  Procedure glVectorCrossProduct4( const v1, v2 : TVectorGL; var vr : TAffineVector);
14200:  Procedure glVectorCrossProduct5( const v1, v2 : TAffineVector; var vr : TAffineVector);
14201:  Function glLerp( const start, stop, t : Single) : Single
14202:  Function glAngleLerp( start, stop, t : Single) : Single
14203:  Function glDistanceBetweenAngles( angle1, angle2 : Single) : Single
14204:  Function glTexPointLerp( const t1, t2 : TTexPoint; t : Single) : TTexPoint;
14205:  Function glVectorLerp( const v1, v2 : TAffineVector; t : Single) : TAffineVector;
14206:  Procedure glVectorLerp1( const v1, v2 : TAffineVector; t : Single; var vr : TAffineVector);
14207:  Function glVectorLerp2( const v1, v2 : TVectorGL; t : Single) : TVectorGL;
14208:  Procedure glVectorLerp3( const v1, v2 : TVectorGL; t : Single; var vr : TVectorGL);
14209:  Function glVectorAngleLerp( const v1, v2 : TAffineVector; t : Single) : TAffineVector;
14210:  Function glVectorAngleCombine( const v1, v2 : TAffineVector; f : Single) : TAffineVector;
14211: // Procedure VectorArrayLerp( const src1, src2:PVectorArray; t:Single; n:Integer; dest:PVectorArray);
14212: // Procedure VectorArrayLerp1( const src1, src2 : PAffineVectorArray; t : Single; n : Integer; dest :
      PAffineVectorArray);
14213:  Function glVectorLength( const x, y : Single) : Single;
14214:  Function glVectorLength1( const x, y, z : Single) : Single;
14215:  Function glVectorLength2( const v : TAffineVector) : Single;
```

```
14216:  Function glVectorLength3( const v : TVectorGL) : Single;
14217:  Function glVectorLength4( const v : array of Single) : Single;
14218:  Function glVectorNorm( const x, y : Single) : Single;
14219:  Function glVectorNorm1( const v : TAffineVector) : Single;
14220:  Function glVectorNorm2( const v : TVectorGL) : Single;
14221:  Function glVectorNorm3( var V : array of Single) : Single;
14222:  Procedure glNormalizeVector( var v : TAffineVector);
14223:  Procedure glNormalizeVector1( var v : TVectorGL);
14224:  Function glVectorNormalize( const v : TAffineVector) : TAffineVector;
14225:  Function glVectorNormalize1( const v : TVectorGL) : TVectorGL;
14226: // Procedure NormalizeVectorArray( list : PAffineVectorArray; n : Integer);
14227:  Function glVectorAngleCosine( const V1, V2 : TAffineVector) : Single
14228:  Function glVectorNegate( const v : TAffineVector) : TAffineVector;
14229:  Function glVectorNegate1( const v : TVectorGL) : TVectorGL;
14230:  Procedure glNegateVector( var V : TAffineVector);
14231:  Procedure glNegateVector2( var V : TVectorGL);
14232:  Procedure glNegateVector3( var V : array of Single);
14233:  Procedure glScaleVector( var v : TAffineVector; factor : Single);
14234:  Procedure glScaleVector1( var v : TAffineVector; const factor : TAffineVector);
14235:  Procedure glScaleVector2( var v : TVectorGL; factor : Single);
14236:  Procedure glScaleVector3( var v : TVectorGL; const factor : TVectorGL);
14237:  Function glVectorScale( const v : TAffineVector; factor : Single) : TAffineVector;
14238:  Procedure glVectorScale1( const v : TAffineVector; factor : Single; var vr : TAffineVector);
14239:  Function glVectorScale2( const v : TVectorGL; factor : Single) : TVectorGL;
14240:  Procedure glVectorScale3( const v : TVectorGL; factor : Single; var vr : TVectorGL);
14241:  Procedure glVectorScale4( const v : TVectorGL; factor : Single; var vr : TAffineVector);
14242:  Procedure glDivideVector( var v : TVectorGL; const divider : TVectorGL);
14243:  Function glVectorEquals( const V1, V2 : TVectorGL) : Boolean;
14244:  Function glVectorEquals1( const V1, V2 : TAffineVector) : Boolean;
14245:  Function glAffineVectorEquals( const V1, V2 : TVectorGL) : Boolean;
14246:  Function glVectorIsNull( const v : TVectorGL) : Boolean;
14247:  Function glVectorIsNull1( const v : TAffineVector) : Boolean;
14248:  Function glVectorSpacing( const v1, v2 : TTexPoint) : Single;
14249:  Function glVectorSpacing1( const v1, v2 : TAffineVector) : Single;
14250:  Function glVectorSpacing2( const v1, v2 : TVectorGL) : Single;
14251:  Function glVectorDistance( const v1, v2 : TAffineVector) : Single;
14252:  Function glVectorDistance1( const v1, v2 : TVectorGL) : Single;
14253:  Function glVectorDistance2( const v1, v2 : TAffineVector) : Single;
14254:  Function glVectorDistance21( const v1, v2 : TVectorGL) : Single;
14255:  Function glVectorPerpendicular( const V, N : TAffineVector) : TAffineVector
14256:  Function glVectorReflect( const V, N : TAffineVector) : TAffineVector
14257:  Procedure glRotateVector( var vector : TVectorGL; const axis : TAffineVector; angle : Single);
14258:  Procedure glRotateVector1( var vector : TVectorGL; const axis : TVectorGL; angle : Single);
14259:  Procedure glRotateVectorAroundY( var v : TAffineVector; alpha : Single)
14260:  Function glVectorRotateAroundX( const v : TAffineVector; alpha : Single) : TAffineVector;
14261:  Function glVectorRotateAroundY( const v : TAffineVector; alpha : Single) : TAffineVector;
14262:  Procedure glVectorRotateAroundY1(const v : TAffineVector; alpha : Single; var vr : TAffineVector);
14263:  Function glVectorRotateAroundZ( const v : TAffineVector; alpha : Single) : TAffineVector;
14264:  Procedure glAbsVector( var v : TVectorGL);
14265:  Procedure glAbsVector1( var v : TAffineVector);
14266:  Function glVectorAbs( const v : TVectorGL) : TVectorGL;
14267:  Function glVectorAbs1( const v : TAffineVector) : TAffineVector;
14268:  Procedure glSetMatrix( var dest : THomogeneousDblMatrix; const src : TMatrixGL);
14269:  Procedure glSetMatrix1( var dest : TAffineMatrix; const src : TMatrixGL);
14270:  Procedure glSetMatrix2( var dest : TMatrixGL; const src : TAffineMatrix);
14271:  Procedure glSetMatrixRow( var dest : TMatrixGL; rowNb : Integer; const aRow : TVectorGL);
14272:  Function glCreateScaleMatrix( const v : TAffineVector) : TMatrixGL;
14273:  Function glCreateScaleMatrix1( const v : TVectorGL) : TMatrixGL;
14274:  Function glCreateTranslationMatrix( const V : TAffineVector) : TMatrixGL;
14275:  Function glCreateTranslationMatrix1( const V : TVectorGL) : TMatrixGL;
14276:  Function glCreateScaleAndTranslationMatrix( const scale, offset : TVectorGL) : TMatrixGL;
14277:  Function glCreateRotationMatrixX( const sine, cosine : Single) : TMatrixGL;
14278:  Function glCreateRotationMatrixX1( const angle : Single) : TMatrixGL;
14279:  Function glCreateRotationMatrixY( const sine, cosine : Single) : TMatrixGL;
14280:  Function glCreateRotationMatrixY1( const angle : Single) : TMatrixGL;
14281:  Function glCreateRotationMatrixZ( const sine, cosine : Single) : TMatrixGL;
14282:  Function glCreateRotationMatrixZ1( const angle : Single) : TMatrixGL;
14283:  Function glCreateRotationMatrix( const anAxis : TAffineVector; angle : Single) : TMatrixGL;
14284:  Function glCreateRotationMatrix1( const anAxis : TVectorGL; angle : Single) : TMatrixGL;
14285:  Function glCreateAffineRotationMatrix( const anAxis : TAffineVector; angle:Single):TAffineMatrix
14286:  Function glMatrixMultiply( const M1, M2 : TAffineMatrix) : TAffineMatrix;
14287:  Function glMatrixMultiply1( const M1, M2 : TMatrixGL) : TMatrixGL;
14288:  Procedure glMatrixMultiply2( const M1, M2 : TMatrixGL; var MResult : TMatrixGL);
14289:  Function glVectorTransform( const V : TVectorGL; const M : TMatrixGL) : TVectorGL;
14290:  Function glVectorTransform1( const V : TVectorGL; const M : TAffineMatrix) : TVectorGL;
14291:  Function glVectorTransform2( const V : TAffineVector; const M : TMatrixGL) : TAffineVector;
14292:  Function glVectorTransform3( const V : TAffineVector; const M : TAffineMatrix) : TAffineVector;
14293:  Function glMatrixDeterminant( const M : TAffineMatrix) : Single;
14294:  Function glMatrixDeterminant1( const M : TMatrixGL) : Single;
14295:  Procedure glAdjointMatrix( var M : TMatrixGL);
14296:  Procedure glAdjointMatrix1( var M : TAffineMatrix);
14297:  Procedure glScaleMatrix( var M : TAffineMatrix; const factor : Single);
14298:  Procedure glScaleMatrix1( var M : TMatrixGL; const factor : Single);
14299:  Procedure glTranslateMatrix( var M : TMatrixGL; const v : TAffineVector);
14300:  Procedure glTranslateMatrix1( var M : TMatrixGL; const v : TVectorGL);
14301:  Procedure glNormalizeMatrix( var M : TMatrixGL)
14302:  Procedure glTransposeMatrix( var M : TAffineMatrix);
14303:  Procedure glTransposeMatrix1( var M : TMatrixGL);
14304:  Procedure glInvertMatrix( var M : TMatrixGL);
```

```
14305:  Procedure glInvertMatrix1( var M : TAffineMatrix);
14306:  Function glAnglePreservingMatrixInvert( const mat : TMatrixGL) : TMatrixGL
14307:  Function glMatrixDecompose( const M : TMatrixGL; var Tran : TTransformations) : Boolean
14308:  Function glPlaneMake( const p1, p2, p3 : TAffineVector) : THmgPlane;
14309:  Function glPlaneMake1( const p1, p2, p3 : TVectorGL) : THmgPlane;
14310:  Function glPlaneMake2( const point, normal : TAffineVector) : THmgPlane;
14311:  Function glPlaneMake3( const point, normal : TVectorGL) : THmgPlane;
14312:  Procedure glSetPlane( var dest : TDoubleHmgPlane; const src : THmgPlane)
14313:  Procedure glNormalizePlane( var plane : THmgPlane)
14314:  Function glPlaneEvaluatePoint( const plane : THmgPlane; const point : TAffineVector) : Single;
14315:  Function glPlaneEvaluatePoint1( const plane : THmgPlane; const point : TVectorGL) : Single;
14316:  Function glCalcPlaneNormal( const p1, p2, p3 : TAffineVector) : TAffineVector;
14317:  Procedure glCalcPlaneNormal1( const p1, p2, p3 : TAffineVector; var vr : TAffineVector);
14318:  Procedure glCalcPlaneNormal2( const p1, p2, p3 : TVectorGL; var vr : TAffineVector);
14319:  Function glPointIsInHalfSpace( const point, planePoint, planeNormal : TVectorGL) : Boolean;
14320:  Function glPointIsInHalfSpace1( const point, planePoint, planeNormal : TAffineVector) : Boolean;
14321:  Function glPointPlaneDistance( const point, planePoint, planeNormal : TVectorGL) : Single;
14322:  Function glPointPlaneDistance1( const point, planePoint, planeNormal : TAffineVector) : Single;
14323:  Function glPointSegmentClosestPoint( const point, segmentStart, segmentStop:TAffineVector):TAffineVector
14324:  Function glPointSegmentDistance( const point, segmentStart, segmentStop : TAffineVector) : single
14325:  Function glPointLineClosestPoint( const point, linePoint, lineDirection : TAffineVector) : TAffineVector
14326:  Function glPointLineDistance( const point, linePoint, lineDirection : TAffineVector) : Single
14327:  Procedure SglegmentSegmentClosestPoint( const S0Start, S0Stop, S1Start, S1Stop : TAffineVector; var
       Segment0Closest, Segment1Closest : TAffineVector)
14328:  Function glSegmentSegmentDistance(const S0Start,S0Stop,S1Start,S1Stop:TAffineVector):single
14329:  TEulerOrder', '( eulXYZ, eulXZY, eulYXZ, eulYZX, eulZXY, eulZYX)
14330:  Function glQuaternionMake( const Imag : array of Single; Real : Single) : TQuaternion
14331:  Function glQuaternionConjugate( const Q : TQuaternion) : TQuaternion
14332:  Function glQuaternionMagnitude( const Q : TQuaternion) : Single
14333:  Procedure glNormalizeQuaternion( var Q : TQuaternion)
14334:  Function glQuaternionFromPoints( const V1, V2 : TAffineVector) : TQuaternion
14335:  Procedure glQuaternionToPoints( const Q : TQuaternion; var ArcFrom, ArcTo : TAffineVector)
14336:  Function glQuaternionFromMatrix( const mat : TMatrixGL) : TQuaternion
14337:  Function glQuaternionToMatrix( quat : TQuaternion) : TMatrixGL
14338:  Function glQuaternionToAffineMatrix( quat : TQuaternion) : TAffineMatrix
14339:  Function glQuaternionFromAngleAxis( const angle : Single; const axis : TAffineVector) : TQuaternion
14340:  Function glQuaternionFromRollPitchYaw( const r, p, y : Single) : TQuaternion
14341:  Function glQuaternionFromEuler( const x, y, z : Single; eulerOrder : TEulerOrder) : TQuaternion
14342:  Function glQuaternionMultiply( const qL, qR : TQuaternion) : TQuaternion
14343:  Function glQuaternionSlerp( const QStart, QEnd : TQuaternion; Spin : Integer; t : Single) : TQuaternion;
14344:  Function glQuaternionSlerp1( const source, dest : TQuaternion; const t : Single) : TQuaternion;
14345:  Function glLnXP1( X : Extended) : Extended
14346:  Function glLog10( X : Extended) : Extended
14347:  Function glLog2( X : Extended) : Extended;
14348:  Function glLog21( X : Single) : Single;
14349:  Function glLogN( Base, X : Extended) : Extended
14350:  Function glIntPower( Base : Extended; Exponent : Integer) : Extended
14351:  Function glPower( const Base, Exponent : Single) : Single;
14352:  Function glPower1( Base : Single; Exponent : Integer) : Single;
14353:  Function glDegToRad( const Degrees : Extended) : Extended;
14354:  Function glDegToRad1( const Degrees : Single) : Single;
14355:  Function glRadToDeg( const Radians : Extended) : Extended;
14356:  Function glRadToDeg1( const Radians : Single) : Single;
14357:  Function glNormalizeAngle( angle : Single) : Single
14358:  Function glNormalizeDegAngle( angle : Single) : Single
14359:  Procedure glSinCos( const Theta : Extended; var Sin, Cos : Extended);
14360:  Procedure glSinCos1( const Theta : Double; var Sin, Cos : Double);
14361:  Procedure glSinCos( const Theta : Single; var Sin, Cos : Single);
14362:  Procedure glSinCos1( const theta, radius : Double; var Sin, Cos : Extended);
14363:  Procedure glSinCos2( const theta, radius : Double; var Sin, Cos : Double);
14364:  Procedure glSinCos3( const theta, radius : Single; var Sin, Cos : Single);
14365:  Procedure glPrepareSinCosCache( var s, c : array of Single; startAngle, stopAngle : Single)
14366:  Function glArcCos( const X : Extended) : Extended;
14367:  Function glArcCos1( const x : Single) : Single;
14368:  Function glArcSin( const X : Extended) : Extended;
14369:  Function glArcSin1( const X : Single) : Single;
14370:  Function glArcTan21( const Y, X : Extended) : Extended;
14371:  Function glArcTan21( const Y, X : Single) : Single;
14372:  Function glFastArcTan2( y, x : Single) : Single
14373:  Function glTan( const X : Extended) : Extended;
14374:  Function glTan1( const X : Single) : Single;
14375:  Function glCoTan( const X : Extended) : Extended;
14376:  Function glCoTan1( const X : Single) : Single;
14377:  Function glSinh( const x : Single) : Single;
14378:  Function glSinh1( const x : Double) : Double;
14379:  Function glCosh( const x : Single) : Single;
14380:  Function glCosh1( const x : Double) : Double;
14381:  Function glRSqrt( v : Single) : Single
14382:  Function glRLength( x, y : Single) : Single
14383:  Function glISqrt( i : Integer) : Integer
14384:  Function glILength( x, y : Integer) : Integer;
14385:  Function glILength1( x, y, z : Integer) : Integer;
14386:  Procedure glRegisterBasedExp
14387:  Procedure glRandomPointOnSphere( var p : TAffineVector)
14388:  Function glRoundInt( v : Single) : Single;
14389:  Function glRoundInt1( v : Extended) : Extended;
14390:  Function glTrunc( v : Single) : Integer;
14391:  Function glTrunc64( v : Extended) : Int64;
14392:  Function glInt( v : Single) : Single;
```

```
14393:  Function glInt1( v : Extended) : Extended;
14394:  Function glFrac( v : Single) : Single;
14395:  Function glFrac1( v : Extended) : Extended;
14396:  Function glRound( v : Single) : Integer;
14397:  Function glRound64( v : Single) : Int64;
14398:  Function glRound641( v : Extended) : Int64;
14399:  Function glTrunc( X : Extended) : Int64
14400:  Function glRound( X : Extended) : Int64
14401:  Function glFrac( X : Extended) : Extended
14402:  Function glCeil( v : Single) : Integer;
14403:  Function glCeil64( v : Extended) : Int64;
14404:  Function glFloor( v : Single) : Integer;
14405:  Function glFloor64( v : Extended) : Int64;
14406:  Function glScaleAndRound( i : Integer; var s : Single) : Integer
14407:  Function glSign( x : Single) : Integer
14408:  Function glIsInRange( const x, a, b : Single) : Boolean;
14409:  Function glIsInRange1( const x, a, b : Double) : Boolean;
14410:  Function glIsInCube( const p, d : TAffineVector) : Boolean;
14411:  Function glIsInCube1( const p, d : TVectorGL) : Boolean;
14412:  //Function MinFloat( values : PSingleArray; nbItems : Integer) : Single;
14413:  //Function MinFloat1( values : PDoubleArray; nbItems : Integer) : Double;
14414:  //Function MinFloat2( values : PExtendedArray; nbItems : Integer) : Extended;
14415:  Function glMinFloat3( const v1, v2 : Single) : Single;
14416:  Function glMinFloat4( const v : array of Single) : Single;
14417:  Function glMinFloat5( const v1, v2 : Double) : Double;
14418:  Function glMinFloat6( const v1, v2 : Extended) : Extended;
14419:  Function glMinFloat7( const v1, v2, v3 : Single) : Single;
14420:  Function glMinFloat8( const v1, v2, v3 : Double) : Double;
14421:  Function glMinFloat9( const v1, v2, v3 : Extended) : Extended;
14422:  //Function MaxFloat10( values : PSingleArray; nbItems : Integer) : Single;
14423:  //Function MaxFloat( values : PDoubleArray; nbItems : Integer) : Double;
14424:  //Function MaxFloat1( values : PExtendedArray; nbItems : Integer) : Extended;
14425:  Function glMaxFloat2( const v : array of Single) : Single;
14426:  Function glMaxFloat3( const v1, v2 : Single) : Single;
14427:  Function glMaxFloat4( const v1, v2 : Double) : Double;
14428:  Function glMaxFloat5( const v1, v2 : Extended) : Extended;
14429:  Function glMaxFloat6( const v1, v2, v3 : Single) : Single;
14430:  Function glMaxFloat7( const v1, v2, v3 : Double) : Double;
14431:  Function glMaxFloat8( const v1, v2, v3 : Extended) : Extended;
14432:  Function glMinInteger9( const v1, v2 : Integer) : Integer;
14433:  Function glMinInteger( const v1, v2 : Cardinal) : Cardinal;
14434:  Function glMaxInteger( const v1, v2 : Integer) : Integer;
14435:  Function glMaxInteger1( const v1, v2 : Cardinal) : Cardinal;
14436:  Function glTriangleArea( const p1, p2, p3 : TAffineVector) : Single;
14437:  //Function PolygonArea( const p : PAffineVectorArray; nSides : Integer) : Single;
14438:  Function glTriangleSignedArea( const p1, p2, p3 : TAffineVector) : Single;
14439:  //Function PolygonSignedArea( const p : PAffineVectorArray; nSides : Integer) : Single;
14440:  //Procedure ScaleFloatArray( values : PSingleArray; nb : Integer; var factor : Single);
14441:  Procedure glScaleFloatArray( var values : TSingleArray; factor : Single);
14442:  //Procedure OffsetFloatArray( values : PSingleArray; nb : Integer; var delta : Single);
14443:  Procedure glOffsetFloatArray1( var values : array of Single; delta : Single);
14444:  //Procedure OffsetFloatArray2( valuesDest, valuesDelta : PSingleArray; nb : Integer);
14445:  Function glMaxXYZComponent( const v : TVectorGL) : Single;
14446:  Function glMaxXYZComponent1( const v : TAffineVector) : single;
14447:  Function glMinXYZComponent( const v : TVectorGL) : Single;
14448:  Function glMinXYZComponent1( const v : TAffineVector) : single;
14449:  Function glMaxAbsXYZComponent( v : TVectorGL) : Single
14450:  Function glMinAbsXYZComponent( v : TVectorGL) : Single
14451:  Procedure glMaxVector( var v : TVectorGL; const v1 : TVectorGL);
14452:  Procedure glMaxVector1( var v : TAffineVector; const v1 : TAffineVector);
14453:  Procedure glMinVector( var v : TVectorGL; const v1 : TVectorGL);
14454:  Procedure glMinVector1( var v : TAffineVector; const v1 : TAffineVector);
14455:  Procedure glSortArrayAscending( var a : array of Extended)
14456:  Function glClampValue( const aValue, aMin, aMax : Single) : Single;
14457:  Function glClampValue1( const aValue, aMin : Single) : Single;
14458:  Function glGeometryOptimizationMode : String
14459:  Procedure glBeginFPUOnlySection
14460:  Procedure glEndFPUOnlySection
14461:  Function glConvertRotation( const Angles : TAffineVector) : TVectorGL
14462:  Function glMakeAffineDblVector( var v : array of Double) : TAffineDblVector
14463:  Function glMakeDblVector( var v : array of Double) : THomogeneousDblVector
14464:  Function glVectorAffineDblToFlt( const v : TAffineDblVector) : TAffineVector
14465:  Function glVectorDblToFlt( const v : THomogeneousDblVector) : THomogeneousVector
14466:  Function glVectorAffineFltToDbl( const v : TAffineVector) : TAffineDblVector
14467:  Function glVectorFltToDbl( const v : TVectorGL) : THomogeneousDblVector
14468:  Function glPointInPolygon( var xp, yp : array of Single; x, y : Single) : Boolean
14469:  Procedure glDivMod( Dividend : Integer; Divisor : Word; var Result, Remainder : Word)
14470:  Function glTurn( const Matrix : TMatrixGL; angle : Single) : TMatrixGL;
14471:  Function glTurn1( const Matrix : TMatrixGL; const MasterUp:TAffineVector;Angle:Single):TMatrixGL;
14472:  Function glPitch( const Matrix : TMatrixGL; Angle : Single) : TMatrixGL;
14473:  Function glPitch1( const Matrix:TMatrixGL;const MasterRight:TAffineVector;Angle:Single):TMatrixGL;
14474:  Function glRoll( const Matrix: TMatrixGL; Angle : Single) : TMatrixGL;
14475:  Function glRoll1(const Matrix: TMatrixGL;const MasterDirection:TAffineVector;Angle: Single): TMatrixGL;
14476:  Function glRayCastMinDistToPoint( const rayStart, rayVector: TVectorGL;const point:TVectorGL):Single
14477:  Function glRayCastIntersectsSphere( const rayStart, rayVector : TVectorGL; const
       sphereCenter:TVectorGL;const sphereRadius : Single) : Boolean;
14478:  Function glRayCastSphereIntersect( const rayStart, rayVector : TVectorGL; const sphereCenter:TVectorGL;
       const sphereRadius : Single; var i1, i2 : TVectorGL) : Integer;
14479:  Function glSphereVisibleRadius( distance, radius : Single) : Single
```

```
14480:  Function glExtractFrustumFromModelViewProjection( const modelViewProj : TMatrixGL) : TFrustum
14481:  Function glIsVolumeClipped( const objPos : TVectorGL; const objRadius : Single; const rcci :
       TRenderContextClippingInfo) : Boolean;
14482:  Function glIsVolumeClipped1( const objPos : TAffineVector; const objRadius : Single; const rcci :
       TRenderContextClippingInfo) : Boolean;
14483:  Function glIsVolumeClipped2(const min,max:TAffineVector;const rcci : TRenderContextClippingInfo) : Bool;
14484:  Function glIsVolumeClipped3(const objPos:TAffineVector;const objRadius:Single;const
       Frustum:TFrustum):Bool;
14485:  Function glMakeParallelProjectionMatrix( const plane : THmgPlane; const dir : TVectorGL) : TMatrixGL
14486:  Function glMakeShadowMatrix( const planePoint, planeNormal, lightPos : TVectorGL) : TMatrixGL
14487:  Function glMakeReflectionMatrix( const planePoint, planeNormal : TAffineVector) : TMatrixGL
14488:  Function glPackRotationMatrix( const mat : TMatrixGL) : TPackedRotationMatrix
14489:  Function glUnPackRotationMatrix( const packedMatrix : TPackedRotationMatrix) : TMatrixGL
14490:  'cPI','Single').setExtended( 3.141592654);
14491:  'cPIdiv180','Single').setExtended( 0.017453292);
14492:  'c180divPI','Single').setExtended( 57.29577951);
14493:  'c2PI','Single').setExtended( 6.283185307);
14494:  'cPIdiv2','Single').setExtended( 1.570796326);
14495:  'cPIdiv4','Single').setExtended( 0.785398163);
14496:  'c3PIdiv4','Single').setExtended( 2.35619449);
14497:  'cInv2PI','Single').setExtended( 1 / 6.283185307);
14498:  'cInv360','Single').setExtended( 1 / 360);
14499:  'c180','Single').setExtended( 180);
14500:  'c360','Single').setExtended( 360);
14501:  'cOneHalf','Single').setExtended( 0.5);
14502:  'cLn10','Single').setExtended( 2.302585093);
14503:  {'MinSingle','Extended').setExtended( 1.5e-45);
14504:  'MaxSingle','Extended').setExtended( 3.4e+38);
14505:  'MinDouble','Extended').setExtended( 5.0e-324);
14506:  'MaxDouble','Extended').setExtended( 1.7e+308);
14507:  'MinExtended','Extended').setExtended( 3.4e-4932);
14508:  'MaxExtended','Extended').setExtended( 1.1e+4932);
14509:  'MinComp','Extended').setExtended( - 9.223372036854775807e+18);
14510:  'MaxComp','Extended').setExtended( 9.223372036854775807e+18);}
14511: end;
14512:
14513: procedure SIRegister_GLVectorFileObjects(CL: TPSPascalCompiler);
14514: begin
14515:   AddClassN(FindClass('TOBJECT'),'TMeshObjectList
14516:   (FindClass('TOBJECT'),'TFaceGroups
14517:   TMeshAutoCentering', '( macCenterX, macCenterY, macCenterZ, macUseBarycenter )
14518:   TMeshAutoCenterings', 'set of TMeshAutoCentering
14519:   TMeshObjectMode', '( momTriangles, momTriangleStrip, momFaceGroups )
14520:   SIRegister_TBaseMeshObject(CL);
14521:   (FindClass('TOBJECT'),'TSkeletonFrameList
14522:   TSkeletonFrameTransform', '( sftRotation, sftQuaternion )
14523:   SIRegister_TSkeletonFrame(CL);
14524:   SIRegister_TSkeletonFrameList(CL);
14525:   (FindClass('TOBJECT'),'TSkeleton
14526:   (FindClass('TOBJECT'),'TSkeletonBone
14527:   SIRegister_TSkeletonBoneList(CL);
14528:   SIRegister_TSkeletonRootBoneList(CL);
14529:   SIRegister_TSkeletonBone(CL);
14530:   (FindClass('TOBJECT'),'TSkeletonColliderList
14531:   SIRegister_TSkeletonCollider(CL);
14532:   SIRegister_TSkeletonColliderList(CL);
14533:   (FindClass('TOBJECT'),'TGLBaseMesh
14534:   TBlendedLerpInfo', 'record frameIndex1 : Integer; frameIndex2 : '
14535:    +'Integer; lerpFactor : Single; weight : Single; externalPositions : TAffine'
14536:    +'VectorList; externalRotations : TAffineVectorList; externalQuaternions : T'
14537:    +'QuaternionList; end
14538:   SIRegister_TSkeleton(CL);
14539:   TMeshObjectRenderingOption', '( moroGroupByMaterial )
14540:   TMeshObjectRenderingOptions', 'set of TMeshObjectRenderingOption
14541:   SIRegister_TMeshObject(CL);
14542:   SIRegister_TMeshObjectList(CL);
14543:   //TMeshObjectListClass', 'class of TMeshObjectList
14544:   (FindClass('TOBJECT'),'TMeshMorphTargetList
14545:   SIRegister_TMeshMorphTarget(CL);
14546:   SIRegister_TMeshMorphTargetList(CL);
14547:   SIRegister_TMorphableMeshObject(CL);
14548:   TVertexBoneWeight', 'record BoneID : Integer; Weight : Single; end
14549:   //PVertexBoneWeightArray', '^TVertexBoneWeightArray // will not wo'rk
14550:   //PVerticesBoneWeights', '^TVerticesBoneWeights // will not work
14551:   TVertexBoneWeightDynArray', 'array of TVertexBoneWeight
14552:   SIRegister_TSkeletonMeshObject(CL);
14553:   SIRegister_TFaceGroup(CL);
14554:   TFaceGroupMeshMode', '( fgmmTriangles, fgmmTriangleStrip, fgmmFl'
14555:    +'atTriangles, fgmmTriangleFan, fgmmQuads )
14556:   SIRegister_TFGVertexIndexList(CL);
14557:   SIRegister_TFGVertexNormalTexIndexList(CL);
14558:   SIRegister_TFGIndexTexCoordList(CL);
14559:   SIRegister_TFaceGroups(CL);
14560:   TMeshNormalsOrientation', '( mnoDefault, mnoInvert )
14561:   SIRegister_TVectorFile(CL);
14562:   //TVectorFileClass', 'class of TVectorFile
14563:   SIRegister_TGLGLSMVectorFile(CL);
14564:   SIRegister_TGLBaseMesh(CL);
14565:   SIRegister_TGLFreeForm(CL);
```

```
14566:   TGLActorOption', '( aoSkeletonNormalizeNormals )
14567:   TGLActorOptions', 'set of TGLActorOption
14568:   'cDefaultGLActorOptions','LongInt').Value.ts32:= ord(aoSkeletonNormalizeNormals);
14569:   (FindClass('TOBJECT'),'TGLActor
14570:   TActorAnimationReference', '( aarMorph, aarSkeleton, aarNone )
14571:   SIRegister_TActorAnimation(CL);
14572:   TActorAnimationName', 'String
14573:   SIRegister_TActorAnimations(CL);
14574:   SIRegister_TGLBaseAnimationControler(CL);
14575:   SIRegister_TGLAnimationControler(CL);
14576:   TActorFrameInterpolation', '( afpNone, afpLinear )
14577:   TActorAnimationMode', '( aamNone, aamPlayOnce, aamLoop, aamBounc'
14578:    +'eForward, aamBounceBackward, aamLoopBackward, aamExternal )
14579:   SIRegister_TGLActor(CL);
14580:   SIRegister_TVectorFileFormat(CL);
14581:   SIRegister_TVectorFileFormatsList(CL);
14582:   (FindClass('TOBJECT'),'EInvalidVectorFile
14583:  Function GetVectorFileFormats : TVectorFileFormatsList
14584:  Function VectorFileFormatsFilter : String
14585:  Function VectorFileFormatsSaveFilter : String
14586:  Function VectorFileFormatExtensionByIndex( index : Integer) : String
14587:  Procedure RegisterVectorFileFormat( const aExtension, aDescription : String; aClass : TVectorFileClass)
14588:  Procedure UnregisterVectorFileClass( aClass : TVectorFileClass)
14589: end;
14590:
14591: procedure SIRegister_AxCtrls(CL: TPSPascalCompiler);
14592: begin
14593:  'Class_DColorPropPage','TGUID '{5CFF5D59-5946-11D0-BDEF-00A024D1875C}
14594:  'Class_DFontPropPage','TGUID '{5CFF5D5B-5946-11D0-BDEF-00A024D1875C}
14595:  'Class_DPicturePropPage','TGUID '{5CFF5D5A-5946-11D0-BDEF-00A024D1875C}
14596:  'Class_DStringPropPage','TGUID '{F42D677E-754B-11D0-BDFB-00A024D1875C}
14597:   SIRegister_TOleStream(CL);
14598:   (FindClass('TOBJECT'),'TConnectionPoints
14599:   TConnectionKind', '( ckSingle, ckMulti )
14600:   SIRegister_TConnectionPoint(CL);
14601:   SIRegister_TConnectionPoints(CL);
14602:   TDefinePropertyPage', 'Procedure ( const GUID : TGUID)
14603:   (FindClass('TOBJECT'),'TActiveXControlFactory
14604:   SIRegister_TActiveXControl(CL);
14605:   //TActiveXControlClass', 'class of TActiveXControl
14606:   SIRegister_TActiveXControlFactory(CL);
14607:   SIRegister_TActiveFormControl(CL);
14608:   SIRegister_TActiveForm(CL);
14609:   //TActiveFormClass', 'class of TActiveForm
14610:   SIRegister_TActiveFormFactory(CL);
14611:   (FindClass('TOBJECT'),'TPropertyPageImpl
14612:   SIRegister_TPropertyPage(CL);
14613:   //TPropertyPageClass', 'class of TPropertyPage
14614:   SIRegister_TPropertyPageImpl(CL);
14615:   SIRegister_TActiveXPropertyPage(CL);
14616:   SIRegister_TActiveXPropertyPageFactory(CL);
14617:   SIRegister_TCustomAdapter(CL);
14618:   SIRegister_TAdapterNotifier(CL);
14619:   SIRegister_IFontAccess(CL);
14620:   SIRegister_TFontAdapter(CL);
14621:   SIRegister_IPictureAccess(CL);
14622:   SIRegister_TPictureAdapter(CL);
14623:   SIRegister_TOleGraphic(CL);
14624:   SIRegister_TStringsAdapter(CL);
14625:   SIRegister_TReflectorWindow(CL);
14626:  Procedure EnumDispatchProperties(Dispatch:IDispatch;PropType:TGUID;VTCode:Int;PropList:TStrings);
14627:  Procedure GetOleFont( Font : TFont; var OleFont : IFontDisp)
14628:  Procedure SetOleFont( Font : TFont; OleFont : IFontDisp)
14629:  Procedure GetOlePicture( Picture : TPicture; var OlePicture : IPictureDisp)
14630:  Procedure SetOlePicture( Picture : TPicture; OlePicture : IPictureDisp)
14631:  Procedure GetOleStrings( Strings : TStrings; var OleStrings : IStrings)
14632:  Procedure SetOleStrings( Strings : TStrings; OleStrings : IStrings)
14633:  Function ParkingWindow : HWND
14634: end;
14635:
14636: procedure SIRegister_synaip(CL: TPSPascalCompiler);
14637: begin
14638:  // TIp6Bytes = array [0..15] of Byte;
14639: {:binary form of IPv6 adress (for string conversion routines)}
14640:  // TIp6Words = array [0..7] of Word;
14641:   AddTypeS('TIp6Bytes', 'array [0..15] of Byte;');
14642:   AddTypeS('TIp6Words', 'array [0..7] of Word;');
14643:   AddTypeS('TIPAdr', 'record Oct1 : Byte; Oct2 : Byte; Oct3 : Byte; Oct4: Byte; end');
14644:  Function synaIsIP( const Value : string) : Boolean');
14645:  Function synaIsIP6( const Value : string) : Boolean');
14646:  Function synaIPToID( Host : string) : Ansistring');
14647:  Function synaStrToIp6( value : string) : TIp6Bytes');
14648:  Function synaIp6ToStr( value : TIp6Bytes) : string');
14649:  Function synaStrToIp( value : string) : integer');
14650:  Function synaIpToStr( value : integer) : string');
14651:  Function synaReverseIP( Value : AnsiString) : AnsiString');
14652:  Function synaReverseIP6( Value : AnsiString) : AnsiString');
14653:  Function synaExpandIP6( Value : AnsiString) : AnsiString');
14654:  Function xStrToIP( const Value : String) : TIPAdr');
```

```
14655:  Function xIPToStr( const Adresse : TIPAdr) : String');
14656:  Function IPToCardinal( const Adresse : TIPAdr) : Cardinal');
14657:  Function CardinalToIP( const Value : Cardinal) : TIPAdr');
14658: end;
14659:
14660: procedure SIRegister_synacode(CL: TPSPascalCompiler);
14661: begin
14662:  AddTypeS('TSpecials', 'set of Char');
14663:  Const('SpecialChar','TSpecials').SetSet( '=()[]<>:;,@/?\"_');
14664:  Const('URLFullSpecialChar','TSpecials').SetSet( ';/?:@=&#+');
14665:  Const('TableBase64'ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz0123456789+/=');
14666:  Const('TableBase64mod'ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz0123456789+,=');
14667:  Const('TableUU'(`!"#$%&''()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_');
14668:  Const('TableXX'(+-0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz');
14669:  Function DecodeTriplet( const Value : AnsiString; Delimiter : Char) : AnsiString');
14670:  Function DecodeQuotedPrintable( const Value : AnsiString) : AnsiString');
14671:  Function DecodeURL( const Value : AnsiString) : AnsiString');
14672:  Function EncodeTriplet( const Value : AnsiString; Delimiter : Char; Specials : TSpecials) : AnsiString');
14673:  Function EncodeQuotedPrintable( const Value : AnsiString) : AnsiString');
14674:  Function EncodeSafeQuotedPrintable( const Value : AnsiString) : AnsiString');
14675:  Function EncodeURLElement( const Value : AnsiString) : AnsiString');
14676:  Function EncodeURL( const Value : AnsiString) : AnsiString');
14677:  Function Decode4to3( const Value, Table : AnsiString) : AnsiString');
14678:  Function Decode4to3Ex( const Value, Table : AnsiString) : AnsiString');
14679:  Function Encode3to4( const Value, Table : AnsiString) : AnsiString');
14680:  Function synDecodeBase64( const Value : AnsiString) : AnsiString');
14681:  Function synEncodeBase64( const Value : AnsiString) : AnsiString');
14682:  Function DecodeBase64mod( const Value : AnsiString) : AnsiString');
14683:  Function EncodeBase64mod( const Value : AnsiString) : AnsiString');
14684:  Function DecodeUU( const Value : AnsiString) : AnsiString');
14685:  Function EncodeUU( const Value : AnsiString) : AnsiString');
14686:  Function DecodeXX( const Value : AnsiString) : AnsiString');
14687:  Function DecodeYEnc( const Value : AnsiString) : AnsiString');
14688:  Function UpdateCrc32( Value : Byte; Crc32 : Integer) : Integer');
14689:  Function synCrc32( const Value : AnsiString) : Integer');
14690:  Function UpdateCrc16( Value : Byte; Crc16 : Word) : Word');
14691:  Function Crc16( const Value : AnsiString) : Word');
14692:  Function synMD5( const Value : AnsiString) : AnsiString');
14693:  Function HMAC_MD5( Text, Key : AnsiString) : AnsiString');
14694:  Function MD5LongHash( const Value : AnsiString; Len : integer) : AnsiString');
14695:  Function synSHA1( const Value : AnsiString) : AnsiString');
14696:  Function HMAC_SHA1( Text, Key : AnsiString) : AnsiString');
14697:  Function SHA1LongHash( const Value : AnsiString; Len : integer) : AnsiString');
14698:  Function synMD4( const Value : AnsiString) : AnsiString');
14699: end;
14700:
14701: procedure SIRegister_synachar(CL: TPSPascalCompiler);
14702: begin
14703:   AddTypeS('TMimeChar', '( ISO_8859_1, ISO_8859_2, ISO_8859_3, ISO_8859_4, I'
14704:    +'SO_8859_5, ISO_8859_6, ISO_8859_7, ISO_8859_8, ISO_8859_9, ISO_8859_10, IS'
14705:    +'O_8859_13, ISO_8859_14, ISO_8859_15, CP1250, CP1251, CP1252, CP1253, CP125'
14706:    +'4, CP1255, CP1256, CP1257, CP1258, KOI8_R, CP895, CP852, UCS_2, UCS_4, UTF'
14707:    +'_8, UTF_7, UTF_7mod, UCS_2LE, UCS_4LE, UTF_16, UTF_16LE, UTF_32, UTF_32LE,'
14708:    +' C99, JAVA, ISO_8859_16, KOI8_U, KOI8_RU, CP862, CP866, MAC, MACCE, MACICE'
14709:    +', MACCRO, MACRO, MACCYR, MACUK, MACGR, MACTU, MACHEB, MACAR, MACTH, ROMAN8'
14710:    +', NEXTSTEP, ARMASCII, GEORGIAN_AC, GEORGIAN_PS, KOI8_T, MULELAO, CP1133, T'
14711:    +'IS620, CP874, VISCII, TCVN, ISO_IR_14, JIS_X0201, JIS_X0208, JIS_X0212, GB'
14712:    +'1988_80, GB2312_80, ISO_IR_165, ISO_IR_149, EUC_JP, SHIFT_JIS, CP932, ISO_'
14713:    +'2022_JP, ISO_2022_JP1, ISO_2022_JP2, GB2312, CP936, GB18030, ISO_2022_CN, '
14714:    +'ISO_2022_CNE, HZ, EUC_TW, BIG5, CP950, BIG5_HKSCS, EUC_KR, CP949, CP1361, '
14715:    +'ISO_2022_KR, CP737, CP775, CP853, CP855, CP857, CP858, CP860, CP861, CP863'
14716:    +', CP864, CP865, CP869, CP1125 )');
14717:   AddTypeS('TMimeSetChar', 'set of TMimeChar');
14718:  Function CharsetConversion(const Value:AnsiString;CharFrom:TMimeChar;CharTo:TMimeChar):AnsiString;
14719:  Function CharsetConversionEx(const Value:AnsiString;CharFrom:TMimeChar;CharTo:TMimeChar; const
      TransformTable : array of Word) : AnsiString');
14720:  Function CharsetConversionTrans( Value : AnsiString; CharFrom : TMimeChar; CharTo : TMimeChar; const
      TransformTable : array of Word; Translit : Boolean) : AnsiString');
14721:  Function GetCurCP : TMimeChar');
14722:  Function GetCurOEMCP : TMimeChar');
14723:  Function GetCPFromID( Value : AnsiString) : TMimeChar');
14724:  Function GetIDFromCP( Value : TMimeChar) : AnsiString');
14725:  Function NeedCharsetConversion( const Value : AnsiString) : Boolean');
14726:  Function IdealCharsetCoding(const Value:AnsiString;CharFrom:TMimeChar;CharTo:TMimeSetChar):TMimeChar;
14727:  Function GetBOM( Value : TMimeChar) : AnsiString');
14728:  Function StringToWide( const Value : AnsiString) : WideString');
14729:  Function WideToString( const Value : WideString) : AnsiString');
14730: end;
14731:
14732: procedure SIRegister_synamisc(CL: TPSPascalCompiler);
14733: begin
14734:   AddTypeS('TProxySetting', 'record Host : string; Port : string; Bypass : string; end');
14735:  Procedure WakeOnLan( MAC, IP : string)');
14736:  Function GetDNS : string');
14737:  Function GetIEProxy( protocol : string) : TProxySetting');
14738:  Function GetLocalIPs : string');
14739: end;
14740:
14741:
```

```
14742: procedure SIRegister_synaser(CL: TPSPascalCompiler);
14743: begin
14744:  AddConstantN('synCR','Char #$0d);
14745:  Const('synLF','Char #$0a);
14746:  Const('cSerialChunk','LongInt'( 8192);
14747:  Const('LockfileDirectory','String '/var/lock');
14748:  Const('PortIsClosed','LongInt'( - 1);
14749:  Const('ErrAlreadyOwned','LongInt'( 9991);
14750:  Const('ErrAlreadyInUse','LongInt'( 9992);
14751:  Const('ErrWrongParameter','LongInt'( 9993);
14752:  Const('ErrPortNotOpen','LongInt'( 9994);
14753:  Const('ErrNoDeviceAnswer','LongInt'( 9995);
14754:  Const('ErrMaxBuffer','LongInt'( 9996);
14755:  Const('ErrTimeout','LongInt'( 9997);
14756:  Const('ErrNotRead','LongInt'( 9998);
14757:  Const('ErrFrame','LongInt'( 9999);
14758:  Const('ErrOverrun','LongInt'( 10000);
14759:  Const('ErrRxOver','LongInt'( 10001);
14760:  Const('ErrRxParity','LongInt'( 10002);
14761:  Const('ErrTxFull','LongInt'( 10003);
14762:  Const('dcb_Binary','LongWord')( $00000001);
14763:  Const('dcb_ParityCheck','LongWord')( $00000002);
14764:  Const('dcb_OutxCtsFlow','LongWord')( $00000004);
14765:  Const('dcb_OutxDsrFlow','LongWord')( $00000008);
14766:  Const('dcb_DtrControlMask','LongWord')( $00000030);
14767:  Const('dcb_DtrControlDisable','LongWord')( $00000000);
14768:  Const('dcb_DtrControlEnable','LongWord')( $00000010);
14769:  Const('dcb_DtrControlHandshake','LongWord')( $00000020);
14770:  Const('dcb_DsrSensivity','LongWord')( $00000040);
14771:  Const('dcb_TXContinueOnXoff','LongWord')( $00000080);
14772:  Const('dcb_OutX','LongWord')( $00000100);
14773:  Const('dcb_InX','LongWord')( $00000200);
14774:  Const('dcb_ErrorChar','LongWord')( $00000400);
14775:  Const('dcb_NullStrip','LongWord')( $00000800);
14776:  Const('dcb_RtsControlMask','LongWord')( $00003000);
14777:  Const('dcb_RtsControlDisable','LongWord')( $00000000);
14778:  Const('dcb_RtsControlEnable','LongWord')( $00001000);
14779:  Const('dcb_RtsControlHandshake','LongWord')( $00002000);
14780:  Const('dcb_RtsControlToggle','LongWord')( $00003000);
14781:  Const('dcb_AbortOnError','LongWord')( $00004000);
14782:  Const('dcb_Reserveds','LongWord')( $FFFF8000);
14783:  Const('synSB1','LongInt'( 0);
14784:  Const('SB1andHalf','LongInt'( 1);
14785:  Const('synSB2','LongInt'( 2);
14786:  Const('synINVALID_HANDLE_VALUE','LongInt'( THandle ( - 1 ));
14787:  Const('CS7fix','LongWord')( $0000020);
14788:   AddTypeS('synTDCB', 'record DCBlength : DWORD; BaudRate : DWORD; Flags : Long'
14789:    +'int; wReserved : Word; XonLim : Word; XoffLim : Word; ByteSize : Byte; Par'
14790:    +'ity : Byte; StopBits : Byte; XonChar : CHAR; XoffChar : CHAR; ErrorChar : '
14791:    +'CHAR; EofChar : CHAR; EvtChar : CHAR; wReserved1 : Word; end');
14792:   //AddTypeS('PDCB', '^TDCB // will not work');
14793:  //Const('MaxRates','LongInt'( 18);
14794:  //Const('MaxRates','LongInt'( 30);
14795:  //Const('MaxRates','LongInt'( 19);
14796:  Const('O_SYNC','LongWord')( $0080);
14797:  Const('synOK','LongInt'( 0);
14798:  Const('synErr','LongInt'( integer ( - 1 ));
14799:   AddTypeS('THookSerialReason', '( HR_SerialClose, HR_Connect, HR_CanRead, HR_CanWrite, HR_ReadCount,
       HR_WriteCount, HR_Wait )');
14800:  Type('THookSerialStatus',Procedure(Sender: TObject; Reason:THookSerialReason; const Value:string)');
14801:   SIRegister_ESynaSerError(CL);
14802:   SIRegister_TBlockSerial(CL);
14803:  Function GetSerialPortNames : string');
14804: end;
14805:
14806: procedure SIRegister_synaicnv(CL: TPSPascalCompiler);
14807: begin
14808:  Const('DLLIconvName','String 'libiconv.so');
14809:  Const('DLLIconvName','String 'iconv.dll');
14810:   AddTypeS('size_t', 'Cardinal');
14811:   AddTypeS('iconv_t', 'Integer');
14812:   //AddTypeS('iconv_t', 'Pointer');
14813:   AddTypeS('argptr', 'iconv_t');
14814:  Function SynaIconvOpen( const tocode, fromcode : Ansistring) : iconv_t');
14815:  Function SynaIconvOpenTranslit( const tocode, fromcode : Ansistring) : iconv_t');
14816:  Function SynaIconvOpenIgnore( const tocode, fromcode : Ansistring) : iconv_t');
14817:  Function SynaIconv( cd : iconv_t; inbuf : AnsiString; var outbuf : AnsiString) : integer');
14818:  Function SynaIconvClose( var cd : iconv_t) : integer');
14819:  Function SynaIconvCtl( cd : iconv_t; request : integer; argument : argptr) : integer');
14820:  Function IsIconvloaded : Boolean');
14821:  Function InitIconvInterface : Boolean');
14822:  Function DestroyIconvInterface : Boolean');
14823:  Const('ICONV_TRIVIALP','LongInt'( 0);
14824:  Const('ICONV_GET_TRANSLITERATE','LongInt'( 1);
14825:  Const('ICONV_SET_TRANSLITERATE','LongInt'( 2);
14826:  Const('ICONV_GET_DISCARD_ILSEQ','LongInt'( 3);
14827:  Const('ICONV_SET_DISCARD_ILSEQ','LongInt'( 4);
14828: end;
14829:
```

```
14830: procedure SIRegister_pingsend(CL: TPSPascalCompiler);
14831: begin
14832:  Const 'ICMP_ECHO','LongInt'( 8);
14833:  Const('ICMP_ECHOREPLY','LongInt'( 0);
14834:  Const('ICMP_UNREACH','LongInt'( 3);
14835:  Const('ICMP_TIME_EXCEEDED','LongInt'( 11);
14836:  Const('ICMP6_ECHO','LongInt'( 128);
14837:  Const('ICMP6_ECHOREPLY','LongInt'( 129);
14838:  Const('ICMP6_UNREACH','LongInt'( 1);
14839:  Const('ICMP6_TIME_EXCEEDED','LongInt'( 3);
14840:   AddTypeS('TICMPError', '( IE_NoError, IE_Other, IE_TTLExceed, IE_UnreachOt'
14841:    +'her, IE_UnreachRoute, IE_UnreachAdmin, IE_UnreachAddr, IE_UnreachPort )');
14842:   SIRegister_TPINGSend(CL);
14843:  Function PingHost( const Host : string) : Integer');
14844:  Function TraceRouteHost( const Host : string) : string');
14845: end;
14846:
14847: procedure SIRegister_asn1util(CL: TPSPascalCompiler);
14848: begin
14849:  AddConstantN('synASN1_BOOL','LongWord')( $01);
14850:  Const('synASN1_INT','LongWord')( $02);
14851:  Const('synASN1_OCTSTR','LongWord')( $04);
14852:  Const('synASN1_NULL','LongWord')( $05);
14853:  Const('synASN1_OBJID','LongWord')( $06);
14854:  Const('synASN1_ENUM','LongWord')( $0a);
14855:  Const('synASN1_SEQ','LongWord')( $30);
14856:  Const('synASN1_SETOF','LongWord')( $31);
14857:  Const('synASN1_IPADDR','LongWord')( $40);
14858:  Const('synASN1_COUNTER','LongWord')( $41);
14859:  Const('synASN1_GAUGE','LongWord')( $42);
14860:  Const('synASN1_TIMETICKS','LongWord')( $43);
14861:  Const('synASN1_OPAQUE','LongWord')( $44);
14862:  Function synASNEncOIDItem( Value : Integer) : AnsiString');
14863:  Function synASNDecOIDItem( var Start : Integer; const Buffer : AnsiString) : Integer');
14864:  Function synASNEncLen( Len : Integer) : AnsiString');
14865:  Function synASNDecLen( var Start : Integer; const Buffer : AnsiString) : Integer');
14866:  Function synASNEncInt( Value : Integer) : AnsiString');
14867:  Function synASNEncUInt( Value : Integer) : AnsiString');
14868:  Function synASNObject( const Data : AnsiString; ASNType : Integer) : AnsiString');
14869:  Function synASNItem(var Start:Integer;const Buffer:AnsiString;var ValueType:Integer):AnsiString;
14870:  Function synMibToId( Mib : String) : AnsiString');
14871:  Function synIdToMib( const Id : AnsiString) : String');
14872:  Function synIntMibToStr( const Value : AnsiString) : AnsiString');
14873:  Function ASNdump( const Value : AnsiString) : AnsiString');
14874:  Function GetMailServers( const DNSHost, Domain : AnsiString; const Servers:TStrings): Boolean');
14875:  Function LDAPResultDump( const Value : TLDAPResultList) : AnsiString');
14876: end;
14877:
14878: procedure SIRegister_ldapsend(CL: TPSPascalCompiler);
14879: begin
14880:  Const('cLDAPProtocol','String '389');
14881:  Const('LDAP_ASN1_BIND_REQUEST','LongWord')( $60);
14882:  Const('LDAP_ASN1_BIND_RESPONSE','LongWord')( $61);
14883:  Const('LDAP_ASN1_UNBIND_REQUEST','LongWord')( $42);
14884:  Const('LDAP_ASN1_SEARCH_REQUEST','LongWord')( $63);
14885:  Const('LDAP_ASN1_SEARCH_ENTRY','LongWord')( $64);
14886:  Const('LDAP_ASN1_SEARCH_DONE','LongWord')( $65);
14887:  Const('LDAP_ASN1_SEARCH_REFERENCE','LongWord')( $73);
14888:  Const('LDAP_ASN1_MODIFY_REQUEST','LongWord')( $66);
14889:  Const('LDAP_ASN1_MODIFY_RESPONSE','LongWord')( $67);
14890:  Const('LDAP_ASN1_ADD_REQUEST','LongWord')( $68);
14891:  Const('LDAP_ASN1_ADD_RESPONSE','LongWord')( $69);
14892:  Const('LDAP_ASN1_DEL_REQUEST','LongWord')( $4A);
14893:  Const('LDAP_ASN1_DEL_RESPONSE','LongWord')( $6B);
14894:  Const('LDAP_ASN1_MODIFYDN_REQUEST','LongWord')( $6C);
14895:  Const('LDAP_ASN1_MODIFYDN_RESPONSE','LongWord')( $6D);
14896:  Const('LDAP_ASN1_COMPARE_REQUEST','LongWord')( $6E);
14897:  Const('LDAP_ASN1_COMPARE_RESPONSE','LongWord')( $6F);
14898:  Const('LDAP_ASN1_ABANDON_REQUEST','LongWord')( $70);
14899:  Const('LDAP_ASN1_EXT_REQUEST','LongWord')( $77);
14900:  Const('LDAP_ASN1_EXT_RESPONSE','LongWord')( $78);
14901:   SIRegister_TLDAPAttribute(CL);
14902:   SIRegister_TLDAPAttributeList(CL);
14903:   SIRegister_TLDAPResult(CL);
14904:   SIRegister_TLDAPResultList(CL);
14905:   AddTypeS('TLDAPModifyOp', '( MO_Add, MO_Delete, MO_Replace )');
14906:   AddTypeS('TLDAPSearchScope', '( SS_BaseObject, SS_SingleLevel, SS_WholeSubtree )');
14907:   AddTypeS('TLDAPSearchAliases', '( SA_NeverDeref, SA_InSearching, SA_FindingBaseObj, SA_Always )');
14908:   SIRegister_TLDAPSend(CL);
14909:  Function LDAPResultDump( const Value : TLDAPResultList) : AnsiString');
14910: end;
14911:
14912:
14913: procedure SIRegister_slogsend(CL: TPSPascalCompiler);
14914: begin
14915:  Const('cSysLogProtocol','String '514');
14916:  Const('FCL_Kernel','LongInt'( 0);
14917:  Const('FCL_UserLevel','LongInt'( 1);
14918:  Const('FCL_MailSystem','LongInt'( 2);
```

```
14919:  Const('FCL_System','LongInt'( 3);
14920:  Const('FCL_Security','LongInt'( 4);
14921:  Const('FCL_Syslogd','LongInt'( 5);
14922:  Const('FCL_Printer','LongInt'( 6);
14923:  Const('FCL_News','LongInt'( 7);
14924:  Const('FCL_UUCP','LongInt'( 8);
14925:  Const('FCL_Clock','LongInt'( 9);
14926:  Const('FCL_Authorization','LongInt'( 10);
14927:  Const('FCL_FTP','LongInt'( 11);
14928:  Const('FCL_NTP','LongInt'( 12);
14929:  Const('FCL_LogAudit','LongInt'( 13);
14930:  Const('FCL_LogAlert','LongInt'( 14);
14931:  Const('FCL_Time','LongInt'( 15);
14932:  Const('FCL_Local0','LongInt'( 16);
14933:  Const('FCL_Local1','LongInt'( 17);
14934:  Const('FCL_Local2','LongInt'( 18);
14935:  Const('FCL_Local3','LongInt'( 19);
14936:  Const('FCL_Local4','LongInt'( 20);
14937:  Const('FCL_Local5','LongInt'( 21);
14938:  Const('FCL_Local6','LongInt'( 22);
14939:  Const('FCL_Local7','LongInt'( 23);
14940:   Type(TSyslogSeverity','(Emergency, Alert, Critical, Error, Warning,Notice,Info,Debug);
14941:   SIRegister_TSyslogMessage(CL);
14942:   SIRegister_TSyslogSend(CL);
14943:  Function ToSysLog(const SyslogServer:string;Facil:Byte;Sever:TSyslogSeverity;const
      Content:string):Boolean;
14944: end;
14945:
14946:
14947: procedure SIRegister_mimemess(CL: TPSPascalCompiler);
14948: begin
14949:   AddTypeS('TMessPriority', '( MP_unknown, MP_low, MP_normal, MP_high )');
14950:   SIRegister_TMessHeader(CL);
14951:   //AddTypeS('TMessHeaderClass', 'class of TMessHeader');
14952:   SIRegister_TMimeMess(CL);
14953: end;
14954:
14955: procedure SIRegister_mimepart(CL: TPSPascalCompiler);
14956: begin
14957:   (FindClass('TOBJECT'),'TMimePart');
14958:   AddTypeS('THookWalkPart', 'Procedure ( const Sender : TMimePart)');
14959:   AddTypeS('TMimePrimary', '( MP_TEXT, MP_MULTIPART, MP_MESSAGE, MP_BINARY )');
14960:   AddTypeS('TMimeEncoding', '( ME_7BIT, ME_8BIT, ME_QUOTED_PRINTABLE, ME_BASE64, ME_UU, ME_XX )');
14961:   SIRegister_TMimePart(CL);
14962:  Const('MaxMimeType','LongInt'( 25);
14963:  Function GenerateBoundary : string');
14964: end;
14965:
14966: procedure SIRegister_mimeinln(CL: TPSPascalCompiler);
14967: begin
14968:  Function InlineDecode( const Value : string; CP : TMimeChar) : string');
14969:  Function InlineEncode( const Value : string; CP, MimeP : TMimeChar) : string');
14970:  Function NeedInline( const Value : AnsiString) : boolean');
14971:  Function InlineCodeEx( const Value : string; FromCP : TMimeChar) : string');
14972:  Function InlineCode( const Value : string) : string');
14973:  Function InlineEmailEx( const Value : string; FromCP : TMimeChar) : string');
14974:  Function InlineEmail( const Value : string) : string');
14975: end;
14976:
14977: procedure SIRegister_ftpsend(CL: TPSPascalCompiler);
14978: begin
14979:  Const('cFtpProtocol','String '21');
14980:  Const('cFtpDataProtocol','String '20');
14981:  Const('FTP_OK','LongInt'( 255);
14982:  Const('FTP_ERR','LongInt'( 254);
14983:   AddTypeS('TFTPStatus', 'Procedure ( Sender : TObject; Response : Boolean; const Value : string)');
14984:   SIRegister_TFTPListRec(CL);
14985:   SIRegister_TFTPList(CL);
14986:   SIRegister_TFTPSend(CL);
14987:  Function FtpGetFile( const IP, Port, FileName, LocalFile, User, Pass : string) : Boolean');
14988:  Function FtpPutFile( const IP, Port, FileName, LocalFile, User, Pass : string) : Boolean');
14989:  Function FtpInterServerTransfer(const FromIP,FromPort, FromFile, FromUser, FromPass : string; const ToIP,
      ToPort, ToFile, ToUser, ToPass : string) : Boolean');
14990: end;
14991:
14992: procedure SIRegister_httpsend(CL: TPSPascalCompiler);
14993: begin
14994:  Const('cHttpProtocol','String '80');
14995:   AddTypeS('TTransferEncoding', '( TE_UNKNOWN, TE_IDENTITY, TE_CHUNKED )');
14996:   SIRegister_THTTPSend(CL);
14997:  Function HttpGetText( const URL : string; const Response : TStrings) : Boolean');
14998:  Function HttpGetBinary( const URL : string; const Response : TStream) : Boolean');
14999:  Function HttpPostBinary( const URL : string; const Data : TStream) : Boolean');
15000:  Function HttpPostURL( const URL, URLData : string; const Data : TStream) : Boolean');
15001:  Function HttpPostFile(const URL,FieldName,FileName:string;const Data:TStream;const
      ResultData:TStrings):Bool;
15002: end;
15003:
15004: procedure SIRegister_smtpsend(CL: TPSPascalCompiler);
```

```
15005: begin
15006:  Const('cSmtpProtocol','String '25');
15007:   SIRegister_TSMTPSend(CL);
15008:  Function SendToRaw(const MailFr,MailTo,SMTPHost:string;const MailData:TStrings;const Usrname,
       Passw:string):Bool;
15009:  Function SendTo(const MailFrom,MailTo,Subject,SMTPHost:string;const MailData:TStrings):Boolean;
15010:  Function SendToEx(const MailFrom, MailTo, Subject, SMTPHost : string; const MailData : TStrings; const
       Username, Password : string):Boolean');
15011: end;
15012:
15013: procedure SIRegister_snmpsend(CL: TPSPascalCompiler);
15014: begin
15015:  Const('cSnmpProtocol','String '161');
15016:  Const('cSnmpTrapProtocol','String '162');
15017:  Const('SNMP_V1','LongInt'( 0);
15018:  Const('SNMP_V2C','LongInt'( 1);
15019:  Const('SNMP_V3','LongInt'( 3);
15020:  Const('PDUGetRequest','LongWord')( $A0);
15021:  Const('PDUGetNextRequest','LongWord')( $A1);
15022:  Const('PDUGetResponse','LongWord')( $A2);
15023:  Const('PDUSetRequest','LongWord')( $A3);
15024:  Const('PDUTrap','LongWord')( $A4);
15025:  Const('PDUGetBulkRequest','LongWord')( $A5);
15026:  Const('PDUInformRequest','LongWord')( $A6);
15027:  Const('PDUTrapV2','LongWord')( $A7);
15028:  Const('PDUReport','LongWord')( $A8);
15029:  Const('ENoError',LongInt 0;
15030:  Const('ETooBig','LongInt')( 1);
15031:  Const('ENoSuchName','LongInt'( 2);
15032:  Const('EBadValue','LongInt'( 3);
15033:  Const('EReadOnly','LongInt'( 4);
15034:  Const('EGenErr','LongInt'( 5);
15035:  Const('ENoAccess','LongInt'( 6);
15036:  Const('EWrongType','LongInt'( 7);
15037:  Const('EWrongLength','LongInt'( 8);
15038:  Const('EWrongEncoding','LongInt'( 9);
15039:  Const('EWrongValue','LongInt'( 10);
15040:  Const('ENoCreation','LongInt'( 11);
15041:  Const('EInconsistentValue','LongInt'( 12);
15042:  Const('EResourceUnavailable','LongInt'( 13);
15043:  Const('ECommitFailed','LongInt'( 14);
15044:  Const('EUndoFailed','LongInt'( 15);
15045:  Const('EAuthorizationError','LongInt'( 16);
15046:  Const('ENotWritable','LongInt'( 17);
15047:  Const('EInconsistentName','LongInt'( 18);
15048:   AddTypeS('TV3Flags', '( NoAuthNoPriv, AuthNoPriv, AuthPriv )');
15049:   AddTypeS('TV3Auth', '( AuthMD5, AuthSHA1 )');
15050:   AddTypeS('TV3Priv', '( PrivDES, Priv3DES, PrivAES )');
15051:   SIRegister_TSNMPMib(CL);
15052:   AddTypeS('TV3Sync', 'record EngineID : AnsiString; EngineBoots : integer; '
15053:    +'EngineTime : integer; EngineStamp : Cardinal; end');
15054:   SIRegister_TSNMPRec(CL);
15055:   SIRegister_TSNMPSend(CL);
15056:  Function SNMPGet( const OID, Community, SNMPHost : AnsiString; var Value : AnsiString) : Boolean');
15057:  Function SNMPSet( const OID, Community, SNMPHost, Value : AnsiString; ValueType : Integer) : Boolean');
15058:  Function SNMPGetNext(var OID:AnsiString;const Community,SNMPHost:AnsiString;var Value:AnsiString):Boolean;
15059:  Function SNMPGetTable(const BaseOID, Community, SNMPHost : AnsiString; const Value : TStrings): Boolean;
15060:  Function SNMPGetTableElement(const BaseOID,RowID,ColID,Community,SNMPHost:AnsiStr;var Value:AnsiStr):Bool;
15061:  Function SendTrap(const Dest,Source, Enterprise, Community : AnsiString; Generic, Specific, Seconds :
       Integer; const MIBName, MIBValue : AnsiString; MIBtype : Integer) : Integer');
15062:  Function RecvTrap(var Dest,Source,Enterprise,Community: AnsiString; var Generic, Specific, Seconds :
       Integer; const MIBName, MIBValue : TStringList) : Integer');
15063: end;
15064:
15065: procedure SIRegister_NetWork(CL: TPSPascalCompiler);
15066: begin
15067:  Function GetDomainName2: AnsiString');
15068:  Function GetDomainController( Domain : AnsiString) : AnsiString');
15069:  Function GetDomainUsers( Controller : AnsiString) : AnsiString');
15070:  Function GetDomainGroups( Controller : AnsiString) : AnsiString');
15071:  Function GetDateTime( Controller : AnsiString) : TDateTime');
15072:  Function GetFullName2( Controller, UserID : AnsiString) : AnsiString');
15073: end;
15074:
15075: procedure SIRegister_wwSystem(CL: TPSPascalCompiler);
15076: begin
15077:   AddTypeS('TwwDateOrder', '( doMDY, doDMY, doYMD )');
15078:   TwwDateTimeSelection','(wwdsDay,wwdsMonth,wwdsYear,wwdsHour,wwdsMinute,wwdsSecond,wwdsAMPM);
15079:  Function wwStrToDate( const S : string) : boolean');
15080:  Function wwStrToTime( const S : string) : boolean');
15081:  Function wwStrToDateTime( const S : string) : boolean');
15082:  Function wwStrToTimeVal( const S : string) : TDateTime');
15083:  Function wwStrToDateVal( const S : string) : TDateTime');
15084:  Function wwStrToDateTimeVal( const S : string) : TDateTime');
15085:  Function wwStrToInt( const S : string) : boolean');
15086:  Function wwStrToFloat( const S : string) : boolean');
15087:  Function wwGetDateOrder( const DateFormat : string) : TwwDateOrder');
15088:  Function wwNextDay( Year, Month, Day : Word) : integer');
15089:  Function wwPriorDay( Year, Month, Day : Word) : integer');
```

```
15090:  Function wwDoEncodeDate( Year, Month, Day : Word; var Date : TDateTime) : Boolean');
15091:  Function wwDoEncodeTime( Hour, Min, Sec, MSec : Word; var Time : TDateTime) : Boolean');
15092:  Function wwGetDateTimeCursorPosition(SelStart:int;Text:string;TimeOnly:Bool):TwwDateTimeSelection');
15093:  Function wwGetTimeCursorPosition( SelStart : integer; Text : string) : TwwDateTimeSelection');
15094:  Function wwScanDate( const S : string; var Date : TDateTime) : Boolean');
15095:  Function wwScanDateEpoch( const S : string; var Date : TDateTime; Epoch : integer) : Boolean');
15096:  Procedure wwSetDateTimeCursorSelection(dateCursor:TwwDateTimeSelection;edit:TCustomEdit;TimeOnly:Bool;
15097:  Function wwStrToFloat2( const S : string; var FloatValue : Extended; DisplayFormat: string): boolean');
15098: end;
15099:
15100: unit uPSI_Themes;
15101: Function ThemeServices : TThemeServices');
15102: Function ThemeControl( AControl : TControl) : Boolean');
15103: Function UnthemedDesigner( AControl : TControl) : Boolean');
15104: procedure SIRegister_UDDIHelper(CL: TPSPascalCompiler);
15105: begin
15106:  Function GetBindingkeyAccessPoint(const Operator : String; const key : String) : String');
15107: end;
15108: Unit uPSC_menus;
15109:  Function StripHotkey( const Text : string) : string');
15110:  Function GetHotkey( const Text : string) : string');
15111:  Function AnsiSameCaption( const Text1, Text2 : string) : Boolean');
15112:  Function IsAltGRPressed : boolean');
15113:
15114: procedure SIRegister_IdIMAP4Server(CL: TPSPascalCompiler);
15115: begin
15116:   TCommandEvent','Procedure(Thread:TIdPeerThread; const Tag,CmdStr:String;var Handled:Boolean);
15117:   SIRegister_TIdIMAP4Server(CL);
15118: end;
15119:
15120: procedure SIRegister_VariantSymbolTable(CL: TPSPascalCompiler);
15121: begin
15122:  'HASH_SIZE','LongInt'( 256);
15123:   CL.FindClass('TOBJECT'),'EVariantSymbolTable');
15124:   CL.AddTypeS('TSymbolType', '( stInteger, stFloat, stDate, stString )');
15125:   //CL.AddTypeS('PSymbol', '^TSymbol // will not work');
15126:   CL.AddTypeS('TSymbol', 'record Name : String; BlockLevel : integer; HashValue'
15127:    +' : Integer; Value : Variant; end');
15128:   //CL.AddTypeS('PSymbolArray', '^TSymbolArray // will not work');
15129:   SIRegister_TVariantSymbolTable(CL);
15130: end;
15131:
15132: procedure SIRegister_udf_glob(CL: TPSPascalCompiler);
15133: begin
15134:   SIRegister_TThreadLocalVariables(CL);
15135:  Function MakeResultString( Source, OptionalDest : PChar; Len : DWORD) : PChar');
15136:  //Function MakeResultQuad( Source, OptionalDest : PISC_QUAD) : PISC_QUAD');
15137:  Function ThreadLocals : TThreadLocalVariables');
15138:  Procedure WriteDebug( sz : String)');
15139:  CL.AddConstantN('UDF_SUCCESS','LongInt'( 0);
15140:  'UDF_FAILURE','LongInt'( 1);
15141:  'cSignificantlyLarger','LongInt'( 1024 * 4);
15142:  CL.AddTypeS('mTByteArray', 'array of byte;');
15143:  function ChangeOEPFromBytes(bFile:mTByteArray):Boolean;
15144:  function ChangeOEPFromFile(sFile:string; sDestFile:string):Boolean;
15145:  procedure CopyEXIF(const FileNameEXIFSource, FileNameEXIFTarget: string);
15146:  function IsNetworkConnected: Boolean;
15147:  function IsInternetConnected: Boolean;
15148:  function IsCOMConnected: Boolean;
15149:  function IsNetworkOn: Boolean;
15150:  function IsInternetOn: Boolean;
15151:  function IsCOMOn: Boolean;
15152:  Function SetTimer(hWnd : HWND; nIDEvent, uElapse: UINT; lpTimerFunc: TFNTimerProc):UINT;
15153:  Function KillTimer( hWnd : HWND; uIDEvent : UINT) : BOOL');
15154:  Function wIsWindowUnicode( hWnd : HWND) : BOOL');
15155:  Function wEnableWindow( hWnd : HWND; bEnable : BOOL) : BOOL');
15156:  Function wIsWindowEnabled( hWnd : HWND) : BOOL');
15157:  Function GetMenu( hWnd : HWND) : HMENU');
15158:  Function SetMenu( hWnd : HWND; hMenu : HMENU) : BOOL');
15159: end;
15160:
15161: procedure SIRegister_SockTransport(CL: TPSPascalCompiler);
15162: begin
15163:   SIRegister_IDataBlock(CL);
15164:   SIRegister_ISendDataBlock(CL);
15165:   SIRegister_ITransport(CL);
15166:   SIRegister_TDataBlock(CL);
15167:   //CL.AddTypeS('PIntArray', '^TIntArray // will not work');
15168:   //CL.AddTypeS('PVariantArray', '^TVariantArray // will not work');
15169:   CL.AddTypeS('TVarFlag', '( vfByRef, vfVariant )');
15170:   CL.AddTypeS('TVarFlags', 'set of TVarFlag');
15171:   SIRegister_TCustomDataBlockInterpreter(CL);
15172:   SIRegister_TSendDataBlock(CL);
15173:   'CallSig','LongWord')( $D800);
15174:   'ResultSig','LongWord')( $D400);
15175:   'asMask','LongWord')( $00FF);
15176:   CL.AddClassN(CL.FindClass('TOBJECT'),'EInterpreterError');
15177:   CL.AddClassN(CL.FindClass('TOBJECT'),'ESocketConnectionError');
15178:  Procedure CheckSignature( Sig : Integer)');
```

```
15179: end;
15180:
15181: procedure SIRegister_WinInet(CL: TPSPascalCompiler);
15182: begin
15183:   //CL.AddTypeS('HINTERNET', '___Pointer');
15184:   CL.AddTypeS('HINTERNET1', 'THANDLE');
15185:   CL.AddTypeS('HINTERNET', 'Integer');
15186:   CL.AddTypeS('HINTERNET2', '___Pointer');
15187:   //CL.AddTypeS('PHINTERNET', '^HINTERNET // will not work');
15188:   //CL.AddTypeS('LPHINTERNET', 'PHINTERNET');
15189:   CL.AddTypeS('INTERNET_PORT', 'Word');
15190:   //CL.AddTypeS('PINTERNET_PORT', '^INTERNET_PORT // will not work');
15191:   //CL.AddTypeS('LPINTERNET_PORT', 'PINTERNET_PORT');
15192:   Function InternetTimeFromSystemTime(const pst:TSystemTime;dwRFC:DWORD;lpszTime:LPSTR;cbTime:DWORD):BOOL;
15193:  'INTERNET_RFC1123_FORMAT','LongInt'( 0);
15194:  'INTERNET_RFC1123_BUFSIZE','LongInt'( 30);
15195:  Function InternetCrackUrl(lpszUrl:PChar; dwUrlLength,dwFlags:DWORD; var
       lpUrlComponents:TURLComponents):BOOL;
15196:  Function InternetCreateUrl(var lpUrlComponts:TURLCompons;dwFlags:DWORD;lpszUrl:PChar;var
       dwUrlLength:DWORD):BOOL;
15197:  Function InternetCloseHandle( hInet : HINTERNET) : BOOL');
15198:  Function
       InternetConnect(hInet:HINTERNET;lpszServerName:PChar;nServerPort:INTERNET_PORT;lpszUsername:PChar;
       lpszPassword:PChar;dwService:DWORD;dwFlags:DWORD;dwContext:DWORD):HINTERNET;
15199:  Function InternetOpenUrl(hInet:HINTERNET;lpszUrl:PChar;lpszHeaders:PChar;dwHeadLength:DWORD;dwFlags:DWORD
15200:  ;dwContext:DWORD):HINTERNET;
15201:  Function InternetOpen(lpszAgent:PChar;dwAccessType:DWORD;lpszProxy,
       lpszProxBypass:PChar;dwFlags:DWORD):HINTERNET;
15202:  Function InternetQueryDataAvailable(hFile:HINTERNET;var lpdwNumbOfBytesAvail:DWORD;dwFlags,
       dwContext:DWORD):BOOL;
15203:  Function InternetUnlockRequestFile( hLockRequestInfo : THANDLE) : BOOL');
15204:  Function
       InternetDial(hwndParent:HWND;lpszConnect:Pchar;dwFlags:DWORD;lpdwConnect:DWORD;dwReserved:DWORD):DWORD;
15205:  Function InternetHangUp( dwConnection : DWORD; dwReserved : DWORD) : DWORD');
15206:  Function InternetGoOnline( lpszURL : pchar; hwndParent : HWND; dwFlags : DWORD) : BOOL');
15207:  Function InternetAutodial( dwFlags : DWORD; dwReserved : DWORD) : BOOL');
15208:  Function InternetAutodialHangup( dwReserved : DWORD) : BOOL');
15209:  Function InternetGetConnectedState( lpdwFlags : DWORD; dwReserved : DWORD) : BOOL');
15210:  Function InternetCanonicalizeUrl(lpszUrl:PChar;lpszBuffer:PChar; var
       lpdwBufferLength:DWORD;dwFlags:DWORD):BOOL;
15211:  Function InternetCombineUrl( lpszBaseUrl, lpszRelativeUrl : PChar; lpszBuffer : PChar; var
       lpdwBufferLength : Function InternetCloseHandle( hInet : HINTERNET) : BOOL');
15212:  Function InternetConnect(hInet:HINTERNET;lpszServerName:PChar;nServerPort:INTERNET_PORT;lpszUsername:PChar
15213:  ;lpszPassword:PChar;dwService:DWORD;dwFlags:DWORD; dwContext:DWORD):HINTERNET;
15214:  Function InternetQueryDataAvailable(hFile:HINTERNET;var lpdwNumbOfBytesAvail:DWORD;dwFlgs,
       dwContext:DWORD):BOOL;
15215:  Function FtpFindFirstFile( hConnect : HINTERNET; lpszSearchFile : PChar; var lpFindFileData :
       TWin32FindData; dwFlags : DWORD; dwContext : DWORD) : HINTERNET');
15216:  Function WFtpGetFile( hConnect : HINTERNET; lpszRemoteFile : PChar; lpszNewFile : PChar; fFailIfExists :
       BOOL; dwFlagsAndAttributes : DWORD; dwFlags : DWORD; dwContext : DWORD) : BOOL');
15217:  Function
       WFtpPutFile(hConct:HINTERNET;lpszLocFile:PChar;lpszNewRemFile:PChar;dwFlags:DWORD;dwCotx:DWORD):BOOL;
15218:  Function FtpDeleteFile( hConnect : HINTERNET; lpszFileName : PChar) : BOOL');
15219:  Function FtpRenameFile(hConnect:HINTERNET;lpszExisting:PChar;lpszNew:PChar):BOOL;
15220:  Function
       FtpOpenFile(hConnect:HINTER;lpszFileName:PChar;dwAccess:DWORD;dwFlags:DWORD;dwContext:DWORD):HINTER;
15221:  Function FtpCreateDirectory( hConnect : HINTERNET; lpszDirectory : PChar) : BOOL');
15222:  Function FtpRemoveDirectory( hConnect : HINTERNET; lpszDirectory : PChar) : BOOL');
15223:  Function FtpSetCurrentDirectory(hConnect:HINTERNET; lpszDirectory : PChar) : BOOL');
15224:  Function FtpGetCurrentDirectory(hConnect:HINTER;lpszCurrentDir:PChar;var lpdwCurrentDir:DWORD):BOOL;
15225:  Function
       FtpCommand(hConnect:HINTER;fExpectResponse:BOOL;dwFlags:DWORD;lpszCommd:PChar;dwContxt:DWORD):BOOL;
15226:  Function IS_GOPHER_FILE( GopherType : DWORD) : BOOL');
15227:  Function IS_GOPHER_DIRECTORY( GopherType : DWORD) : BOOL');
15228:  Function IS_GOPHER_PHONE_SERVER( GopherType : DWORD) : BOOL');
15229:  Function IS_GOPHER_ERROR( GopherType : DWORD) : BOOL');
15230:  Function IS_GOPHER_INDEX_SERVER( GopherType : DWORD) : BOOL');
15231:  Function IS_GOPHER_TELNET_SESSION( GopherType : DWORD) : BOOL');
15232:  Function IS_GOPHER_BACKUP_SERVER( GopherType : DWORD) : BOOL');
15233:  Function IS_GOPHER_TN3270_SESSION( GopherType : DWORD) : BOOL');
15234:  Function IS_GOPHER_ASK( GopherType : DWORD) : BOOL');
15235:  Function IS_GOPHER_PLUS( GopherType : DWORD) : BOOL');
15236:  Function IS_GOPHER_TYPE_KNOWN( GopherType : DWORD) : BOOL');
15237:  Function
       GopherCreateLocator(lpszHost:PChar;nServerPort:INTERNET_PORT;lpszDisplayString:PChar;lpszSelectorString:
       PChar; dwGopherType:DWORD;lpszLocator:PChar; var lpdwBufferLength:DWORD):BOOL;
15238:  Function GopherGetLocatorType( lpszLocator : PChar; var lpdwGopherType : DWORD):BOOL');
15239:  Function
       GopherOpenFile(hConect:HINTERNET;lpszLocat:PChar;lpszView:PChar;dwFlgs:DWORD;dwContext:DWORD):HINTERNET;
15240:  Function HttpOpenRequest( hConnect:HINTERNET; lpszVerb : PChar; lpszObjectName : PChar; lpszVersion :
       PChar; lpszReferrer : PChar; lplpszAcceptTypes : PLPSTR; dwFlags : DWORD; dwContext:DWORD):HINTERNET;
15241:  Function
       HttpAddRequestHeaders(hReq:HINTERNET;lpszHeaders:PChar;dwHeadersLength:DWORD;dwModifiers:DWORD):BOOL;
15242:  Function HttpSendRequest(hRequest: HINTERNET; lpszHeaders : PChar;
       dwHeadersLength:DWORD;lpOptional:Tobject; dwOptionalLength:DWORD):BOOL;
15243:  Function InternetGetCookie(lpszUrl,lpszCookieName,lpszCookieData:PChar;var lpdwSize:DWORD):BOOL;
15244:  Function InternetAttemptConnect( dwReserved : DWORD) : DWORD');
15245:  Function InternetCheckConnection( lpszUrl : PChar; dwFlags : DWORD; dwReserved : DWORD) : BOOL');
15246:  Function InternetErrorDlg(hWnd:HWND;hRequest:HINTERNET;dwError,dwFlags:DWORD;var lppvData:TObject):DWORD;
```

```
15247:  Function InternetConfirmZoneCrossing( hWnd : HWND; szUrlPrev, szUrlNew : LPSTR; bPost : BOOL) : DWORD');
15248:  Function CreateUrlCacheGroup( dwFlags : DWORD; lpReserved : TObject) : Int64');
15249:  Function DeleteUrlCacheGroup( GroupId : Int64; dwFlags : DWORD; lpReserved : TObject) : Bool');
15250:  Function FindFirstUrlCacheEntry(lpszUrlSearchPattern PChar;var
        lpFirstCacheEntryInfo:TInternetCacheEntryInfo;var lpdwFirstCacheEntryInfoBufferSize:DWORD):THandle;
15251:  Function FindNextUrlCacheEntry(hEnumHandle:THandle;var lpNextCacheEntryInfo:TInternetCacheEntryInfo; var
        lpdwNextCacheEntryInfoBufferSize : DWORD) : BOOL;
15252:  Function FindCloseUrlCache( hEnumHandle : THandle):BOOL;
15253:  Function DeleteUrlCacheEntry( lpszUrlName : LPCSTR):BOOL;
15254:  Function
        InternetDial(hwndParent:HWND;lpszConnect:Pchar;dwFlgs:DWORD;lpdwConnect:DWORD;dwReserved:DWORD):DWORD;
15255:  Function InternetSetDialState( lpszConnectoid : PChar; dwState : DWORD; dwReserved: DWORD) : BOOL');
15256: end;
15257:
15258: procedure SIRegister_Wwstr(CL: TPSPascalCompiler);
15259: begin
15260:   AddTypeS('strCharSet', 'set of char');
15261:   TwwGetWordOption','(wwgwSkipLeadingBlanks, wwgwQuotesAsWords,wwgwStripQuotes , wwgwSpacesInWords);
15262:   AddTypeS('TwwGetWordOptions', 'set of TwwGetWordOption');
15263:  Procedure strBreakApart( s : string; delimeter : string; parts : TStrings)');
15264:  Function strGetToken( s : string; delimeter : string; var APos : integer) : string');
15265:  Procedure strStripPreceding( var s : string; delimeter : strCharSet)');
15266:  Procedure strStripTrailing( var s : string; delimeter : strCharSet)');
15267:  Procedure strStripWhiteSpace( var s : string)');
15268:  Function strRemoveChar( str : string; removeChar : char) : string');
15269:  Function wwstrReplaceChar( str : string; removeChar, replaceChar : char) : string');
15270:  Function strReplaceCharWithStr( str : string; removeChar : char; replaceStr : string) : string');
15271:  Function wwEqualStr( s1, s2 : string) : boolean');
15272:  Function strCount( s : string; delimeter : char) : integer');
15273:  Function strWhiteSpace : strCharSet');
15274:  Function wwExtractFileNameOnly( const FileName : string) : string');
15275:  Function wwGetWord(s:string; var APos:integer;Options:TwwGetWordOptions;DelimSet:strCharSet):string;
15276:  Function strTrailing( s : string; delimeter : char) : string');
15277:  Function strPreceding( s : string; delimeter : char) : string');
15278:  Function wwstrReplace( s, Find, Replace : string) : string');
15279: end;
15280:
15281: procedure SIRegister_DataBkr(CL: TPSPascalCompiler);
15282: begin
15283:   SIRegister_TRemoteDataModule(CL);
15284:   SIRegister_TCRemoteDataModule(CL);
15285:  Procedure RegisterPooled( const ClassID : string; Max, Timeout : Integer; Singleton : Boolean)');
15286:  Procedure UnregisterPooled( const ClassID : string)');
15287:  Procedure EnableSocketTransport( const ClassID : string)');
15288:  Procedure DisableSocketTransport( const ClassID : string)');
15289:  Procedure EnableWebTransport( const ClassID : string)');
15290:  Procedure DisableWebTransport( const ClassID : string)');
15291: end;
15292:
15293: procedure SIRegister_Mathbox(CL: TPSPascalCompiler);
15294: begin
15295:  Function mxArcCos( x : Real) : Real');
15296:  Function mxArcSin( x : Real) : Real');
15297:  Function Comp2Str( N : Comp) : String');
15298:  Function Int2StrPad0( N : LongInt; Len : Integer) : String');
15299:  Function Int2Str( N : LongInt) : String');
15300:  Function mxIsEqual( R1, R2 : Double) : Boolean');
15301:  Function LogXY( x, y : Real) : Real');
15302:  Function Pennies2Dollars( C : Comp) : String');
15303:  Function mxPower( X : Integer; Y : Integer) : Real');
15304:  Function Real2Str( N : Real; Width, Places : integer) : String');
15305:  Function mxStr2Comp( MyString : string) : Comp');
15306:  Function mxStr2Pennies( S : String) : Comp');
15307:  Function Str2Real( MyString : string) : Real');
15308:  Function XToTheY( x, y : Real) : Real');
15309: end;
15310:
15311: //************************Cindy Functions!*****************************
15312: procedure SIRegister_cyIndy(CL: TPSPascalCompiler);
15313: begin
15314:   CL.AddTypeS('TContentTypeMessage', '( cmPlainText, cmPlainText_Attach, cmHtml'
15315:    +'_Attach, cmHtml_RelatedAttach, cmAlterText_Html, cmAlterText_Html_Attach, '
15316:    +'cmAlterText_Html_RelatedAttach,cmAlterText_Html_Attach_RelatedAttach,cmReadNotification )');
15317:  MessagePlainText','String 'text/plain');
15318:  CL.AddConstantN('MessagePlainText_Attach','String 'multipart/mixed');
15319:  MessageAlterText_Html','String 'multipart/alternative');
15320:  MessageHtml_Attach','String 'multipart/mixed');
15321:  MessageHtml_RelatedAttach','String 'multipart/related; type="text/html"');
15322:  MessageAlterText_Html_Attach','String 'multipart/mixed');
15323:  MessageAlterText_Html_RelatedAttach','String')('multipart/related;type="multipart/alternative"';
15324:  MessageAlterText_Html_Attach_RelatedAttach','String 'multipart/mixed');
15325:  MessageReadNotification','String').( 'multipart/report; report-type="disposition-notification"';
15326:  Function ForceDecodeHeader( aHeader : String) : String');
15327:  Function Base64_EncodeString( Value : String; const aEncoding : TEncoding) : string');
15328:  Function Base64_DecodeToString( Value : String; const aBytesEncoding : TEncoding) : String;');
15329:  Function Base64_DecodeToBytes( Value : String) : TBytes;');
15330:  Function IdHttp_DownloadFile(aSrcUrlFile,aDestFile:String;const OnWorkEvent:TWorkEvent):Boolean;
15331:  Function Get_MD5( const aFileName : string) : string');
15332:  Function Get_MD5FromString( const aString : string) : string');
```

```
15333: end;
15334:
15335: procedure SIRegister_cySysUtils(CL: TPSPascalCompiler);
15336: begin
15337:  Function IsFolder( SRec : TSearchrec) : Boolean');
15338:  Function isFolderReadOnly( Directory : String) : Boolean');
15339:  Function DirectoryIsEmpty( Directory : String) : Boolean');
15340:  Function DirectoryWithSubDir( Directory : String) : Boolean');
15341:  Procedure GetSubDirs( FromDirectory : String; aList : TStrings)');
15342:  Function DiskFreeBytes( Drv : Char) : Int64');
15343:  Function DiskBytes( Drv : Char) : Int64');
15344:  Function GetFileBytes( Filename : String) : Int64');
15345:  Function GetFilesBytes( Directory, Filter : String) : Int64');
15346:  SE_CREATE_TOKEN_NAME','String 'SeCreateTokenPrivilege');
15347:  SE_ASSIGNPRIMARYTOKEN_NAME','String 'SeAssignPrimaryTokenPrivilege');
15348:  SE_LOCK_MEMORY_NAME','String 'SeLockMemoryPrivilege');
15349:  SE_INCREASE_QUOTA_NAME','String 'SeIncreaseQuotaPrivilege');
15350:  SE_UNSOLICITED_INPUT_NAME','String 'SeUnsolicitedInputPrivilege');
15351:  SE_MACHINE_ACCOUNT_NAME','String 'SeMachineAccountPrivilege');
15352:  SE_TCB_NAME','String 'SeTcbPrivilege');
15353:  SE_SECURITY_NAME','String 'SeSecurityPrivilege');
15354:  SE_TAKE_OWNERSHIP_NAME','String 'SeTakeOwnershipPrivilege');
15355:  SE_LOAD_DRIVER_NAME','String 'SeLoadDriverPrivilege');
15356:  SE_SYSTEM_PROFILE_NAME','String 'SeSystemProfilePrivilege');
15357:  SE_SYSTEMTIME_NAME','String 'SeSystemtimePrivilege');
15358:  SE_PROF_SINGLE_PROCESS_NAME','String 'SeProfileSingleProcessPrivilege');
15359:  SE_INC_BASE_PRIORITY_NAME','String 'SeIncreaseBasePriorityPrivilege');
15360:  SE_CREATE_PAGEFILE_NAME','String 'SeCreatePagefilePrivilege');
15361:  SE_CREATE_PERMANENT_NAME','String 'SeCreatePermanentPrivilege');
15362:  SE_BACKUP_NAME','String 'SeBackupPrivilege');
15363:  SE_RESTORE_NAME','String 'SeRestorePrivilege');
15364:  SE_SHUTDOWN_NAME','String 'SeShutdownPrivilege');
15365:  SE_DEBUG_NAME','String 'SeDebugPrivilege');
15366:  SE_AUDIT_NAME','String 'SeAuditPrivilege');
15367:  SE_SYSTEM_ENVIRONMENT_NAME','String 'SeSystemEnvironmentPrivilege');
15368:  SE_CHANGE_NOTIFY_NAME','String 'SeChangeNotifyPrivilege');
15369:  SE_REMOTE_SHUTDOWN_NAME','String 'SeRemoteShutdownPrivilege');
15370:  SE_UNDOCK_NAME','String 'SeUndockPrivilege');
15371:  SE_SYNC_AGENT_NAME','String 'SeSyncAgentPrivilege');
15372:  SE_ENABLE_DELEGATION_NAME','String 'SeEnableDelegationPrivilege');
15373:  SE_MANAGE_VOLUME_NAME','String 'SeManageVolumePrivilege');
15374: end;
15375:
15376:
15377: procedure SIRegister_cyWinUtils(CL: TPSPascalCompiler);
15378: begin
15379:   Type(TWindowsVersion', '( wvUnknown, wvWin31, wvWin95, wvWin98, wvWin'
15380:    +'Me, wvWinNt3, wvWinNt4, wvWin2000, wvWinXP, wvWinVista, wvWin7, wvWin8, wvWin8_Or_Upper )');
15381:  Function ShellGetExtensionName( FileName : String) : String');
15382:  Function ShellGetIconIndex( FileName : String) : Integer');
15383:  Function ShellGetIconHandle( FileName : String) : HIcon');
15384:  Procedure ShellThreadCopy( App_Handle : THandle; fromFile : string; toFile : string)');
15385:  Procedure ShellThreadMove( App_Handle : THandle; fromFile : string; toFile : string)');
15386:  Procedure ShellRenameDir( DirFrom, DirTo : string)');
15387:  Function cyShellExecute(Operation,FileName,Parameters,Directory:String;ShowCmd:Integer):Cardinal;
15388:  Procedure cyShellExecute1(ExeFilename,Parameters,ApplicationName,ApplicationClass:String;Restore:Boolean);
15389:  Procedure ShellExecuteAsModal( ExeFilename, ApplicationName, Directory : String)');
15390:  Procedure ShellExecuteExAsAdmin( hWnd : HWND; Filename : string; Parameters : string)');
15391:  Function ShellExecuteEx(aFileName: string; const Parameters:string; const Directory: string; const
       WaitCloseCompletion : boolean) : Boolean');
15392:  Procedure RestoreAndSetForegroundWindow( Hnd : Integer)');
15393:  Function RemoveDuplicatedPathDelimiter( Str : String) : String');
15394:  Function cyFileTimeToDateTime( _FT : TFileTime) : TDateTime');
15395:  Function GetModificationDate( Filename : String) : TDateTime');
15396:  Function GetCreationDate( Filename : String) : TDateTime');
15397:  Function GetLastAccessDate( Filename : String) : TDateTime');
15398:  Function FileDelete( Filename : String) : Boolean');
15399:  Function FileIsOpen( Filename : string) : boolean');
15400:  Procedure FilesDelete( FromDirectory : String; Filter : ShortString)');
15401:  Function DirectoryDelete( Directory : String) : Boolean');
15402:  Function GetPrinters( PrintersList : TStrings) : Integer');
15403:  Procedure SetDefaultPrinter( PrinterName : String)');
15404:  Procedure ShowDefaultPrinterWindowProperties( FormParent_Handle : Integer)');
15405:  Function WinToDosPath( WinPathName : String) : String');
15406:  Function DosToWinPath( DosPathName : String) : String');
15407:  Function cyGetWindowsVersion : TWindowsVersion');
15408:  Function NTSetPrivilege( sPrivilege : string; bEnabled : Boolean) : Boolean');
15409:  Procedure WindowsShutDown( Restart : boolean)');
15410:  Procedure CreateShortCut(FileSrc,Parametres,FileLnk,Descript,DossierDeTravail,
       FileIcon:string;NumIcone:integer);
15411:  Procedure GetWindowsFonts( FontsList : TStrings)');
15412:  Function GetAvailableFilename( DesiredFileName : String): String');
15413: end;
15414:
15415: procedure SIRegister_cyStrUtils(CL: TPSPascalCompiler);
15416: begin
15417:   Type(TStrLocateOption', '( strloCaseInsensitive, strloPartialKey )');
15418:   Type(TStrLocateOptions', 'set of TStrLocateOption');
15419:   Type(TStringRead', '( srFromLeft, srFromRight )');
```

```
15420:   Type(TStringReads', 'set of TStringRead');
15421:   Type(TCaseSensitive', '( csCaseSensitive, csCaseNotSensitive )');
15422:   Type(TWordsOption', '( woOnlyFirstWord, woOnlyFirstCar )');
15423:   Type(TWordsOptions', 'set of TWordsOption');
15424:   Type(TCarType', '(ctAlphabeticUppercase, ctAlphabeticLowercase, ctNumeric, ctOther )');
15425:   Type(TCarTypes', 'set of TCarType');
15426:   //CL.AddTypeS('TUnicodeCategories', 'set of TUnicodeCategory');
15427:  CarTypeAlphabetic','LongInt'):= ord(ctAlphabeticUppercase) or ord(ctAlphabeticLowercase);
15428:  Function Char_GetType( aChar : Char) : TCarType');
15429:  Function SubString_Count( Str : String; Separator : Char) : Integer');
15430:  Function SubString_AtPos( Str : String; Separator : Char; SubStringIndex : Word) : Integer');
15431:  Function SubString_Get( Str : String; Separator : Char; SubStringIndex : Word) : String');
15432:  Function SubString_Length( Str : String; Separator : Char; SubStringIndex : Word) : Integer');
15433:  Procedure SubString_Add( var Str : String; Separator : Char; Value : String)');
15434:  Procedure SubString_Insert(var Str:String;Separator:Char; SubStringIndex:Word; Value : String)');
15435:  Procedure SubString_Edit(var Str:String;Separator:Char;SubStringIndex:Word; NewValue : String)');
15436:  Function SubString_Remove(var Str:string; Separator:Char; SubStringIndex : Word) : Boolean');
15437:  Function SubString_Locate(Str:string;Separator:Char;SubString:String;Options:TStrLocateOptions):Integer;
15438:  Function SubString_Ribbon( Str : string; Separator : Char; Current: Word; MoveBy : Integer):Integer;');
15439:  Function SubString_Ribbon1(Str:string;Separator:Char;Current:String; MoveBy:Integer):String;');
15440:  Function String_Quote( Str : String) : String');
15441:  Function String_GetCar( Str : String; Position : Word; ReturnCarIfNotExists : Char) : Char');
15442:  Function String_ExtractCars(fromStr:String;CarTypes:TCarTypes;IncludeCars,ExcludeCars:String):String;
15443:  Function String_GetWord( Str : String; StringRead : TStringRead) : String');
15444:  Function String_GetInteger( Str : String; StringRead : TStringRead) : String');
15445:  Function String_ToInt( Str : String) : Integer');
15446:  Function String_Uppercase( Str : String; Options : TWordsOptions) : String');
15447:  Function String_Lowercase( Str : String; Options : TWordsOptions) : String');
15448:  Function String_Reverse( Str : String) : String');
15449:  Function String_Pos(SubStr:String;Str:String;fromPos:Integer;CaseSensitive:TCaseSensitive)Integer;
15450:  Function String_Pos1(SubStr:String;Str:String;StringRead:TStringRead; Occurrence:Word; CaseSensitive :
       TCaseSensitive):Integer;');
15451:  Function String_Copy( Str : String; fromIndex : Integer; toIndex : Integer) : String;');
15452:  Function String_Copy1(Str:String;StringRead:TStringRead;UntilFind:String;_Inclusive:Boolean):String;
15453:  Function String_Copy2(Str:String;Between1:String;Between1MustExist:Boolean; Between2:String;
       Between2MustExist : Boolean; CaseSensitive : TCaseSensitive) : String;');
15454:  Function String_Delete( Str : String; fromIndex : Integer; toIndex : Integer) : String;');
15455:  Function String_Delete1( Str : String; delStr : String; CaseSensitive:TCaseSensitive) : String;');
15456:  Function String_BoundsCut( Str : String; CutCar : Char; Bounds : TStringReads) : String');
15457:  Function String_BoundsAdd( Str : String; AddCar : Char; ReturnLength : Integer) : String');
15458:  Function String_Add(Str:String;StringRead:TStringRead;aCar:Char;ReturnLength:Integer):String');
15459:  Function String_End( Str : String; Cars : Word) : String');
15460:  Function String_Subst(OldStr:String; NewStr:String; Str:String; CaseSensitive : TCaseSensitive;
       AlwaysFindFromBeginning : Boolean) : String');
15461:  Function String_SubstCar( Str : String; Old, New : Char) : String');
15462:  Function String_Count( Str : String; SubStr : String; CaseSenSitive : TCaseSensitive) : Integer');
15463:  Function String_SameCars(Str1,Str2:String;StopCount_IfDiferent:Bool;CaseSensitive:TCaseSensitive):Integer;
15464:  Function String_IsNumbers( Str : String) : Boolean');
15465:  Function SearchPos( SubStr : String; Str : String; MaxErrors : Integer) : Integer');
15466:  Function StringToCsvCell( aStr : String) : String');
15467: end;
15468:
15469: procedure SIRegister_cyDateUtils(CL: TPSPascalCompiler);
15470: begin
15471:  Function LongDayName( aDate : TDate) : String');
15472:  Function LongMonthName( aDate : TDate) : String');
15473:  Function ShortYearOf( aDate : TDate) : byte');
15474:  Function DateToStrYYYYMMDD( aDate : TDate) : String');
15475:  Function StrYYYYMMDDToDate( aStr : String) : TDate');
15476:  Function SecondsToMinutes( Seconds : Integer) : Double');
15477:  Function MinutesToSeconds( Minutes : Double) : Integer');
15478:  Function MinutesToHours( Minutes : Integer) : Double');
15479:  Function HoursToMinutes( Hours : Double) : Integer');
15480:  Function ShortTimeStringToTime( ShortTimeStr : String; const ShortTimeFormat : String) : TDateTime');
15481:  Procedure cyAddMonths( var aMonth, aYear : Word; Months : Integer)');
15482:  Function MergeDateWithTime( aDate : TDate; aTime : TDateTime) : TDateTime');
15483:  Function GetMinutesBetween( DateTime1, DateTime2 : TDateTime) : Int64;');
15484:  Function GetMinutesBetween1(From_ShortTimeStr,To_ShortTimeStr:String;const ShortTimeFormat:String):Int64;
15485:  Function GetSecondsBetween( DateTime1, DateTime2 : TDateTime) : Int64;');
15486:  Function IntersectPeriods(Period1Begin,Period1End,Period2Begin,Period2End:TDateTime; var
       RsltBegin:TDateTime; RsltEnd : TDateTime) : Boolean;');
15487:  Function IntersectPeriods1(Period1Begin,Period1End,Period2Begin,Period2End:TDateTime):Boolean;
15488:  Function TryToEncodeDate( Year, Month, Day : Integer; var RsltDate : TDateTime) : Boolean');
15489: end;
15490:
15491: procedure SIRegister_cyObjUtils(CL: TPSPascalCompiler);
15492: begin
15493:   Type(TStringsSortType', '( stNone, stStringSensitive, stStringInsensitive, stExtended )');
15494:   Type(TStringsValueKind', '( skStringSensitive, skStringInsensitive, skExtended )');
15495:   Type(TcyLocateOption', '( lCaseInsensitive, lPartialKey )');
15496:   Type(TcyLocateOptions', 'set of TcyLocateOption');
15497:  Function StringsLocate( aList : TStrings; Value : String; Options : TcyLocateOptions) : Integer;');
15498:  Function StringsLocate1( aList : TStrings; Value : String; ValueKind : TStringsValueKind) : Integer;');
15499:  Function StringsAdd(aList:TStrings;Value:String;Unique:Boolean; SortType:TStringsSortType) : Integer');
15500:  Procedure StringsReplace(aList:TStrings;OldStr:String; NewStr:String;ValueKind : TStringsValueKind)');
15501:  Procedure StringsSort( aList : TStrings; SortType : TStringsSortType)');
15502:  Function TreeNodeLocate( ParentNode : TTreeNode; Value : String) : TTreeNode');
15503:  Function TreeNodeLocateOnLevel( TreeView : TTreeView; OnLevel : Integer; Value : String) : TTreeNode');
15504:  Function
       TreeNodeGetChildFromIndex(TreeView:TTreeView;ParentNode:TTreeNode;ChildIndex:Integer):TTreeNode');
```

```
15505:  Function TreeNodeGetParentOnLevel( ChildNode : TTreeNode; ParentLevel : Integer) : TTreeNode');
15506:  Procedure TreeNodeCopy(FromNode:TTreeNode;ToNode:TTreeNode;const CopyChildren:Boolean;const
        CopySubChildren:Bool;
15507:  Procedure RichEditSetStr( aRichEdit : TRichEdit; FormatedString : String)');
15508:  Procedure RichEditStringReplace(aRichEdit:TRichEdit;OldPattern,NewPattern:string;Flags:TReplaceFlags);
15509:  Function GetTopMostControlAtPos( FromControl : TWinControl; aControlPoint : TPoint) : TControl');
15510:  Procedure cyCenterControl( aControl : TControl)');
15511:  Function GetLastParent( aControl : TControl) : TWinControl');
15512:  Function GetControlBitmap( aControl : TWinControl) : TBitmap');
15513:  Function GetRichEditBitmap( aRichEdit : TRichEdit) : TBitmap');
15514: end;
15515:
15516: procedure SIRegister_cyBDE(CL: TPSPascalCompiler);
15517: begin
15518:  Function TablePackTable( Tab : TTable) : Boolean');
15519:  Function TableRegenIndexes( Tab : TTable) : Boolean');
15520:  Function TableShowDeletedRecords( Tab : TTable; Show : Boolean) : Boolean');
15521:  Function TableUndeleteRecord( Tab : TTable) : Boolean');
15522:  Function TableAddIndex(Tab:TTable;FieldName String;FieldExpression:String;IOpt:TIndexOptions):Bool;
15523:  Function TableDeleteIndex( Tab : TTable; IndexFieldName : String) : Boolean');
15524:  Function TableEmptyTable( Tab : TTable) : Boolean');
15525:  Function TableFindKey( aTable : TTable; Value : String) : Boolean');
15526:  Procedure TableFindNearest( aTable : TTable; Value : String)');
15527:  Function
        TableCreate(Owner:TComponent;DataBaseName:ShortString;TableName:String;IndexName:ShortString;ReadOnly :
        Boolean):TTable;
15528:  Function
        TableOpen(Tab:TTable;FileName:String;IndexFieldName:String;RecordIndexValue:Variant;GotoRecordIndexValue:Bool):Bool;
15529:  Function DateToBDESQLDate( aDate : TDate; const DateFormat : String) : String');
15530: end;
15531:
15532: procedure SIRegister_cyClasses(CL: TPSPascalCompiler);
15533: begin
15534:   SIRegister_TcyRunTimeDesign(CL);
15535:   SIRegister_TcyShadowText(CL);
15536:   SIRegister_TcyBgPicture(CL);
15537:   SIRegister_TcyGradient(CL);
15538:   SIRegister_tcyBevel(CL);
15539:   //CL.AddTypeS('TcyBevelClass', 'class of tcyBevel');
15540:   SIRegister_tcyBevels(CL);
15541:   SIRegister_TcyImagelistOptions(CL);
15542:  Procedure cyDrawBgPicture( aCanvas : TCanvas; aRect : TRect; aBgPicture : TcyBgPicture)');
15543: end;
15544:
15545: procedure SIRegister_cyGraphics(CL: TPSPascalCompiler);
15546: begin
15547:  Procedure cyGradientFill( aCanvas : TCanvas; aRect : TRect; fromColor, toColor : TColor;
        adgradOrientation : TdgradOrientation; Balance, AngleDegree : Word; balanceMode : TDgradBalanceMode;
        Maxdegrade : Byte;'+
15548:   SpeedPercent : Integer; const AngleClipRect : Boolean; const AngleBuffer : TBitmap)');
15549:  Procedure cyGradientFillVertical(aCanvas:TCanvas;aRect:TRect;fromColor,toColor:TColor;MaxDegrad : byte);
15550:  Procedure cyGradientFillHorizontal(aCanvas:TCanvas;aRect:TRect;fromColor,toColor:TColor;MaxDegrad:byte);
15551:  Procedure cyGradientFillShape( aCanvas : TCanvas; aRect : TRect; fromColor, toColor : TColor; MaxDegrad :
        Byte; toRect : TRect; OrientationShape : TDgradOrientationShape)');
15552:  Procedure cyGradientFillAngle( aCanvas : TCanvas; aRect : TRect; fromColor, toColor : TColor; MaxDegrad :
        Byte; AngleDegree : Word; const ClipRect : Boolean; const Buffer : TBitmap)');
15553:  Procedure DrawRectangleInside( aCanvas : TCanvas; InsideRect : TRect; FrameWidth : Integer)');
15554:  Procedure cyFrame( aCanvas : TCanvas; var InsideRect : TRect; Color : TColor; const Width : Integer);');
15555:  Procedure cyFrame1( Canvas : TCanvas; var InsideRect : TRect; LeftColor, TopColor, RightColor,
        BottomColor : TColor; const Width : Integer; const RoundRect : boolean);');
15556:  Procedure cyFrame3D(Canvas:TCanvas;var Rect:TRect;TopLeftColor,
        BottomRightColor:TColor;Width:Integer;const DrawLeft:Boolean;const DrawTop:Bool;const DrawRight:Bool;const
        DrawBottom:Bool;const RoundRect:bool;
15557:  Procedure cyDrawButtonFace(Canvas : TCanvas; var Rect : TRect; GradientColor1, GradientColor2 : TColor;
        aState : TButtonState; Focused, Hot : Boolean)');
15558:  Procedure cyDrawButton(Canvas:TCanvas; Caption:String;ARect:TRect; GradientColor1,GradientColor2:TColor;
        aState : TButtonState; Focused, Hot : Boolean)');
15559:  Procedure cyDrawSpeedButtonFace( Canvas : TCanvas; var Rect : TRect; GradientColor1, GradientColor2 :
        TColor; aState : TButtonState; Focused, Hot : Boolean)');
15560:  Procedure cyDrawSpeedButton( Canvas : TCanvas; Caption : String; ARect : TRect; GradientColor1,
        GradientColor2 : TColor; aState : TButtonState; Focused, Hot : Boolean)');
15561:  Procedure cyDrawCheckBox( Canvas : TCanvas; IsChecked : Boolean; ARect : TRect; const BgColor : TColor;
        const DarkFrameColor : TColor; const LightFrameColor : TColor; const MarkColor : TColor)');
15562:  Procedure cyDrawSingleLineText( Canvas : TCanvas; Text : String; ARect : TRect; Alignment : TAlignment;
        TextLayout : TTextLayout; const IndentX : Integer; const IndentY : Integer)');
15563:  Function DrawTextFormatFlags(aTextFormat:LongInt;Alignment
        TAlignment;Layout:TTextLayout;WordWrap:Bool):LongInt;
15564:  Function DrawTextFormatFlags1( aTextFormat : LongInt; Alignment : TAlignment; Layout : TTextLayout;
        WordWrap : Boolean; CaptionRender : TCaptionRender) : LongInt;');
15565:  Procedure cyDrawText( CanvasHandle : Cardinal; Text : String; var Rect : TRect; TextFormat : LongInt)');
15566:  Function cyCreateFontIndirect( fromFont : TFont; Angle : Double) : TFont;');
15567:  Function cyCreateFontIndirect1( fromFont : TFont; CaptionOrientation : TCaptionOrientation) : TFont;');
15568:  Procedure cyDrawVerticalText( Canvas : TCanvas; Text : String; var Rect : TRect; TextFormat : Longint;
        CaptionOrientation : TCaptionOrientation; Alignment : TAlignment; Layout : TTextLayout)');
15569:  Function DrawLeftTurnPageEffect( Canvas : TCanvas; PageColor : TColor; PageRect : TRect; PercentDone :
        Integer; const OnlyCalcFoldLine : Boolean) : TLineCoord');
15570:  Function DrawRightTurnPageEffect( Canvas : TCanvas; PageColor : TColor; PageRect : TRect; PercentDone :
        Integer; const OnlyCalcFoldLine : Boolean) : TLineCoord');
15571:  Function PictureIsTransparentAtPos( aPicture : TPicture; aPoint : TPoint):boolean');
```

```
15572:  Function IconIsTransparentAtPos( aIcon : TIcon; aPoint : TPoint) : boolean');
15573:  Function MetafileIsTransparentAtPos( aMetafile : TMetafile; aPoint : TPoint) : boolean');
15574:  Function PngImageIsTransparentAtPos( aPngImage : TPngImage; aPoint : TPoint) : boolean');
15575:  Procedure DrawCanvas( Destination : TCanvas; DestRect : TRect; Source : TCanvas; SourceRect : TRect);');
15576:  Procedure DrawCanvas1(Destination:TCanvas;
        DestRect:TRect;Src:TCanvas;SrcRect:TRect;TransparentColor:TColor; const aStyle:TBgStyle; const
        aPosition:TBgPosition; const IndentX : Integer; const IndentY : Integer;const IntervalX : Integer; const
        IntervalY : Integer; const RepeatX:Integer;const RepeatY:Integer);
15577:  Procedure DrawGraphic( Destination : TCanvas; DestRect : TRect; aGraphic : TGraphic; SrcRect : TRect;
        TransparentColor:TColor; const aStyle : TBgStyle; const aPosition : TBgPosition; const IndentX : Integer;
        const IndentY:Integer;const IntervalX:Integer;const IntervalY:Integer;const RepeatX:Integer;const
        RepeatY:Integer;
15578:  Procedure DrawGraphic1(Destination:TCanvas; DestRect:TRect;aGraphic : TGraphic; Transparent : Boolean;
        const aStyle : TBgStyle; const aPosition : TBgPosition; const IndentX : Integer; const IndentY : Integer;
        const  IntervalX:Integer; const IntervalY : Integer; const RepeatX:Integer; const RepeatY:Integer);');
15579:  Procedure DrawMosaicPortion( Destination : TCanvas; Portion : TRect; Pattern : TBitmap)');
15580:  Function ValidGraphic( aGraphic : TGraphic) : Boolean');
15581:  Function ColorSetPercentBrightness( Color : TColor; PercentLight : Integer) : TColor');
15582:  Function ColorModify( Color : TColor; incR, incG, incB : Integer) : TColor');
15583:  Function ColorSetPercentContrast( Color : TColor; IncPercent : Integer) : TColor');
15584:  Function ColorSetPercentPale( Color : TColor; IncPercent : integer) : TColor');
15585:  Function MediumColor( Color1, Color2 : TColor) : TColor');
15586:  Function ClientToScreenRect( aControl : TControl; aControlRect : TRect) : TRect');
15587:  Function ScreenToClientRect( aControl : TControl; aScreenRect : TRect) : TRect');
15588:  Function CombineRectKeepingCenterPosition( RectPos, AddRect : TRect) : TRect');
15589:  Procedure InflateRectPercent( var aRect : TRect; withPercent : Double)');
15590:  Function GetIntermediateRect( Rect1, Rect2 : TRect; Percent : Double) : TRect');
15591:  Function GetProportionalRect( fromRect, InsideRect : TRect) : TRect');
15592:  Function PointInRect( const aPt : TPoint; const aRect : TRect) : boolean');
15593:  Function PointInEllispe( const aPt : TPoint; const aRect : TRect) : boolean');
15594:  Function CanvasAcceleratorTextWidth( aCanvas : TCanvas; aText : String) : Integer');
15595: end;
15596:
15597: procedure SIRegister_cyTypes(CL: TPSPascalCompiler);
15598: begin
15599:   Type(TGlyphAlignment', '( gaLeft, gaCenter, gaRight )');
15600:   Type(TGlyphLayout', '( glTop, glCenter, glBottom )');
15601:   Type(TDisabledGlyphOptions', '( dgDoNotDraw, dgDrawNormal, dgDrawMonochrome )');
15602:   Type(TCaptionRender', '( crNormal, crPathEllipsis, crEndEllipsis, crWordEllipsis )');
15603:   Type(TCaptionOrientation', '( coHorizontal, coHorizontalReversed, coVertical, coVerticalReversed )');
15604:   Type(TBgPosition', '( bgCentered, bgTopLeft, bgTopCenter, bgTopRight,'
15605:    +' bgCenterRight, bgBottomRight, bgBottomCenter, bgBottomLeft, bgCenterLeft)');
15606:   Type(TBgStyle', '( bgNone, bgNormal, bgMosaic, bgStretch, bgStretchProportional )');
15607:   Type(TcyBevelCut', '( bcLowered, bcRaised, bcNone, bcTransparent, bcGradientToNext )');
15608:   Type(TDgradOrientation', '( dgdVertical, dgdHorizontal, dgdAngle, dgdRadial, dgdRectangle )');
15609:   Type(TDgradOrientationShape', '( osRadial, osRectangle )');
15610:   Type(TDgradBalanceMode(bmNormal,bmMirror,bmReverse,bmReverseFromColor,bmInvertReverse,
        bmInvertReverseFromColor);
15611:   Type(TRunTimeDesignJob', '( rjNothing, rjMove, rjResizeTop, rjResizeBottom, rjResizeLeft,
        rjResizeTopLeft,  rjResizeBottomLeft, rjResizeRight, rjResizeTopRight, rjResizeBottomRight )');
15612:   Type(TLineCoord', 'record BottomCoord : TPoint; TopCoord : TPoint; end');
15613:  cCaptionOrientationWarning','String')('Note that text orientation doesn''t work with all fonts!');
15614: end;
15615:
15616: procedure SIRegister_WinSvc(CL: TPSPascalCompiler);
15617: begin
15618:  Const SERVICES_ACTIVE_DATABASEA','String 'ServicesActive');
15619:  SERVICES_ACTIVE_DATABASEW','String') 'ServicesActive');
15620:  Const SERVICES_ACTIVE_DATABASE','String')' SERVICES_ACTIVE_DATABASEA');
15621:  Const SERVICES_FAILED_DATABASEA','String' 'ServicesFailed');
15622:  Const SERVICES_FAILED_DATABASEW','String' 'ServicesFailed');
15623:  Const SERVICES_FAILED_DATABASE','String' 'SERVICES_FAILED_DATABASEA');
15624:  Const SC_GROUP_IDENTIFIERA','String'). '+');
15625:  Const SC_GROUP_IDENTIFIERW','String') '+');
15626:  Const SC_GROUP_IDENTIFIER','string 'SC_GROUP_IDENTIFIERA');
15627:  Const SERVICE_NO_CHANGE','LongWord $FFFFFFFF);
15628:  Const SERVICE_ACTIVE','LongWord')( $00000001);
15629:  Const SERVICE_INACTIVE','LongWord $00000002);
15630:  Const SERVICE_CONTROL_STOP','LongWord $00000001);
15631:  Const SERVICE_CONTROL_PAUSE','LongWord $00000002);
15632:  Const SERVICE_CONTROL_CONTINUE','LongWord $00000003);
15633:  Const SERVICE_CONTROL_INTERROGATE','LongWord $00000004);
15634:  Const SERVICE_CONTROL_SHUTDOWN','LongWord $00000005);
15635:  Const SERVICE_STOPPED','LongWord $00000001);
15636:  Const SERVICE_START_PENDING','LongWord $00000002);
15637:  Const SERVICE_STOP_PENDING','LongWord $00000003);
15638:  Const SERVICE_RUNNING','LongWord $00000004);
15639:  Const SERVICE_CONTINUE_PENDING','LongWord $00000005);
15640:  Const SERVICE_PAUSE_PENDING','LongWord $00000006);
15641:  Const SERVICE_PAUSED','LongWord $00000007);
15642:  Const SERVICE_ACCEPT_STOP','LongWord $00000001);
15643:  Const SERVICE_ACCEPT_PAUSE_CONTINUE','LongWord $00000002);
15644:  Const SERVICE_ACCEPT_SHUTDOWN','LongWord $00000004);
15645:  Const SC_MANAGER_CONNECT','LongWord $0001);
15646:  Const SC_MANAGER_CREATE_SERVICE','LongWord $0002;
15647:  Const SC_MANAGER_ENUMERATE_SERVICE','LongWord $0004);
15648:  Const SC_MANAGER_LOCK','LongWord $0008);
15649:  Const SC_MANAGER_QUERY_LOCK_STATUS','LongWord $0010);
15650:  Const SC_MANAGER_MODIFY_BOOT_CONFIG','LongWord $0020);
```

```
15651:  Const SERVICE_QUERY_CONFIG','LongWord $0001);
15652:  Const SERVICE_CHANGE_CONFIG','LongWord $0002);
15653:  Const SERVICE_QUERY_STATUS','LongWord $0004);
15654:  Const SERVICE_ENUMERATE_DEPENDENTS','LongWord $0008);
15655:  Const SERVICE_START','LongWord $0010);
15656:  Const SERVICE_STOP','LongWord $0020);
15657:  Const SERVICE_PAUSE_CONTINUE','LongWord $0040);
15658:  Const SERVICE_INTERROGATE','LongWord $0080);
15659:  Const SERVICE_USER_DEFINED_CONTROL','LongWord $0100);
15660:  Const SERVICE_KERNEL_DRIVER','LongWord $00000001);
15661:  Const SERVICE_FILE_SYSTEM_DRIVER','LongWord $00000002);
15662:  Const SERVICE_ADAPTER','LongWord $00000004);
15663:  Const SERVICE_RECOGNIZER_DRIVER','LongWord $00000008);
15664:  Const SERVICE_WIN32_OWN_PROCESS','LongWord $00000010);
15665:  Const SERVICE_WIN32_SHARE_PROCESS','LongWord $00000020);
15666:  Const SERVICE_INTERACTIVE_PROCESS','LongWord $00000100);
15667:  Const SERVICE_BOOT_START','LongWord $00000000);
15668:  Const SERVICE_SYSTEM_START','LongWord $00000001);
15669:  Const SERVICE_AUTO_START','LongWord $00000002);
15670:  Const SERVICE_DEMAND_START','LongWord $00000003);
15671:  Const SERVICE_DISABLED','LongWord $00000004);
15672:  Const SERVICE_ERROR_IGNORE','LongWord $00000000);
15673:  Const SERVICE_ERROR_NORMAL','LongWord $00000001);
15674:  Const SERVICE_ERROR_SEVERE','LongWord $00000002);
15675:  Const SERVICE_ERROR_CRITICAL','LongWord $00000003);
15676:   CL.AddTypeS('SC_HANDLE', 'THandle');
15677:   //CL.AddTypeS('LPSC_HANDLE', '^SC_HANDLE // will not work');
15678:   CL.AddTypeS('SERVICE_STATUS_HANDLE', 'DWORD');
15679:   Const _SERVICE_STATUS', 'record dwServiceType : DWORD; dwCurrentState '
15680:    +': DWORD; dwControlsAccepted : DWORD; dwWin32ExitCode : DWORD; dwServiceSpe'
15681:    +'cificExitCode : DWORD; dwCheckPoint : DWORD; dwWaitHint : DWORD; end');
15682:   Const SERVICE_STATUS', '_SERVICE_STATUS');
15683:   Const TServiceStatus', '_SERVICE_STATUS');
15684:   CL.AddTypeS('_ENUM_SERVICE_STATUSA', 'record lpServiceName : PChar; lpDis'
15685:    +'playName : PChar; ServiceStatus : TServiceStatus; end');
15686:   ENUM_SERVICE_STATUSA', '_ENUM_SERVICE_STATUSA');
15687:   _ENUM_SERVICE_STATUS', '_ENUM_SERVICE_STATUSA');
15688:   TEnumServiceStatusA', '_ENUM_SERVICE_STATUSA');
15689:   TEnumServiceStatus', 'TEnumServiceStatusA');
15690:   SC_LOCK', '___Pointer');
15691:   _QUERY_SERVICE_LOCK_STATUSA', 'record fIsLocked:DWORD; lpLockOner: PChar;dwLockDuration:DWORD;end;
15692:   _QUERY_SERVICE_LOCK_STATUS', '_QUERY_SERVICE_LOCK_STATUSA');
15693:   QUERY_SERVICE_LOCK_STATUSA', '_QUERY_SERVICE_LOCK_STATUSA');
15694:   QUERY_SERVICE_LOCK_STATUS', 'QUERY_SERVICE_LOCK_STATUSA');
15695:   TQueryServiceLockStatusA', '_QUERY_SERVICE_LOCK_STATUSA');
15696:   //TQueryServiceLockStatusW', '_QUERY_SERVICE_LOCK_STATUSW');
15697:   TQueryServiceLockStatus', 'TQueryServiceLockStatusA');
15698:   _QUERY_SERVICE_CONFIGA', 'record dwServiceType : DWORD; dwStartT'
15699:    +'ype : DWORD; dwErrorControl : DWORD; lpBinaryPathName : PChar; lpLoadO'
15700:    +'rderGroup : PChar; dwTagId : DWORD; lpDependencies : PChar; lpServ'
15701:    +'iceStartName : PChar; lpDisplayName : PChar; end');
15702:   _QUERY_SERVICE_CONFIG', '_QUERY_SERVICE_CONFIGA');
15703:   QUERY_SERVICE_CONFIGA', '_QUERY_SERVICE_CONFIGA');
15704:   QUERY_SERVICE_CONFIG', 'QUERY_SERVICE_CONFIGA');
15705:   TQueryServiceConfigA', '_QUERY_SERVICE_CONFIGA');
15706:   TQueryServiceConfig', 'TQueryServiceConfigA');
15707:  Function CloseServiceHandle( hSCObject : SC_HANDLE) : BOOL');
15708:  Function ControlService(hService:SC_HANDLE;dwControl DWORD;var lpServiceStatus:TServiceStatus):BOOL;
15709:  Function CreateService( hSCManager : SC_HANDLE; lpServiceName, lpDisplayName : PChar; dwDesiredAccess,
       dwServiceType, dwStartType, dwErrorControl : DWORD; lpBinaryPathName, lpLoadOrderGroup : PChar;'
15710:   +' lpdwTagId : DWORD; lpDependencies, lpServiceStartName, lpPassword : PChar) : SC_HANDLE');
15711:  Function CreateServiceA( hSCManager : SC_HANDLE; lpServiceName, lpDisplayName : PChar; dwDesiredAccess,
       dwServiceType, dwStartType, dwErrorControl : DWORD; lpBinaryPathName, lpLoadOrderGroup : PChar; '
15712:   +'lpdwTagId : DWORD; lpDependencies, lpServiceStartName, lpPassword : PChar) : SC_HANDLE');
15713:  Function DeleteService( hService : SC_HANDLE) : BOOL');
15714:  Function EnumDependentServices( hService : SC_HANDLE; dwServiceState : DWORD; var lpServices :
       TEnumServiceStatus; cbBufSize : DWORD; var pcbBytesNeeded, lpServicesReturned : DWORD) : BOOL');
15715:  Function EnumServicesStatus( hSCManager : SC_HANDLE; dwServiceType, dwServiceState : DWORD; var
       lpServices : TEnumServiceStatus; cbBufSize : DWORD; var pcbBytesNeeded, lpServicesReturned, lpResumeHandle
       : DWORD):BOOL');
15716:  Function GetServiceKeyName(hSCManager:SC_HANDLE;pDisplayName,lpServiceName:PChar;var
       lpcchBuffer:DWORD):BOOL');
15717:  Function GetServiceDisplayName(hSCManager:SC_HANDLE;lpServiceNme,lpDisplayName:PChar;var
       lpcchBuffer:DWORD):BOOL;
15718:  Function LockServiceDatabase( hSCManager : SC_HANDLE) : SC_LOCK');
15719:  Function NotifyBootConfigStatus( BootAcceptable : BOOL) : BOOL');
15720:  Function OpenSCManager( lpMachineName, lpDatabaseName : PChar; dwDesiredAccess : DWORD) : SC_HANDLE');
15721:  Function OpenService(hSCManager:SC_HANDLE;lpServiceName:PChar;dwDesiredAccess:DWORD):SC_HANDLE');
15722:  Function QueryServiceLockStatus( hSCManager : SC_HANDLE; var lpLockStatus : TQueryServiceLockStatus;
       cbBufSize : DWORD; var pcbBytesNeeded : DWORD) : BOOL');
15723:  Function QueryServiceStatus(hService:SC_HANDLE;var lpServiceStatus:TServiceStatus):BOOL;
15724:  Function SetServiceStatus(hServiceStatus:SERVICE_STATUS_HANDLE;var lpServiceStatus:TServiceStatus):BOOL;
15725:  Function StartService(hService:SC_HANDLE;dwNumServiceArgs:DWORD;var lpServiceArgVectors:PChar):BOOL;
15726:  Function UnlockServiceDatabase( ScLock : SC_LOCK) : BOOL');
15727: end;
15728:
15729: procedure SIRegister_JvPickDate(CL: TPSPascalCompiler);
15730: begin
15731:  Function SelectDate( Sender : TWinControl; var Date : TDateTime; const DlgCaption : TCaption;
       AStartOfWeek : TDayOfWeekName; AWeekends: TDaysOfWeek;AWeekendColor:TColor;
       BtnHints:TStrings;MinDate:TDateTime;MaxDate: TDateTime):Boolean;
```

```
15732:  Function SelectDateStr(Sender:TWinControl;var StrDate:string;const
        DlgCaption:TCaption;AStartOfWeek:TDayOfWeekName;AWeekend:TDaysOfWeek;AWeekendClr:TColor;BtnHints:TStrings;MinDate:TDat
15733:  Function PopupDate(var Date:TDateTime; Edit:TWinControl; MinDate:TDateTime; MaxDate:TDateTime):Boolean;
15734:  Function CreatePopupCalendar(AOwner:TComponent;ABiDiMode:TBiDiMode;MinDate:TDateTime;MaxDate:TDateTime):
        TWinControl;
15735:  Procedure SetupPopupCalendar(PopupCalendar:TWinControl;AStartOfWeek:TDayOfWeekName;AWeekends:TDaysOfWeek;
        AWeekendColor:TColor;BtnHints:TStrings;FourDigitYear:Boolean;MinDate:TDateTime;MaxDate:TDateTime);
15736:  Function CreateNotifyThread(const
        FolderName:string;WatchSubtree:Bool;Filter:TFileChangeFilters):TJvNotifyThread;
15737: end;
15738:
15739: procedure SIRegister_JclNTFS2(CL: TPSPascalCompiler);
15740: begin
15741:   CL.AddClassN(CL.FindClass('TOBJECT'),'EJclNtfsError');
15742:   CL.AddTypeS('TFileCompressionState', '( fcNoCompression, fcDefaultCompression, fcLZNT1Compression )');
15743:  Function NtfsGetCompression2( const FileName : TFileName; var State : Short) : Boolean;');
15744:  Function NtfsGetCompression12( const FileName : TFileName) : TFileCompressionState;');
15745:  Function NtfsSetCompression2( const FileName : TFileName; const State : Short) : Boolean');
15746:  Procedure NtfsSetFileCompression2(const FileName : TFileName; const State : TFileCompressionState)');
15747:  Procedure NtfsSetDirectoryTreeCompression2(const Directory:string; const State:TFileCompressionState)');
15748:  Procedure NtfsSetDefaultFileCompression2(const Directory : string; const State:TFileCompressionState)');
15749:  Procedure NtfsSetPathCompression2(const Path:string;const State:TFileCompressionState;Recursive:Bool)');
15750:  Function NtfsSetSparse2( const FileName : string) : Boolean');
15751:  Function NtfsZeroDataByHandle2( const Handle : THandle; const First, Last : Int64) : Boolean');
15752:  Function NtfsZeroDataByName2( const FileName : string; const First, Last : Int64) : Boolean');
15753:  Function NtfsSparseStreamsSupported2( const Volume : string) : Boolean');
15754:  Function NtfsGetSparse2( const FileName : string) : Boolean');
15755:  Function NtfsDeleteReparsePoint2( const FileName : string; ReparseTag : DWORD) : Boolean');
15756:  Function NtfsSetReparsePoint2( const FileName : string; var ReparseData, Size : Longword) : Boolean');
15757:  Function NtfsGetReparseTag2( const Path : string; var Tag : DWORD) : Boolean');
15758:  Function NtfsReparsePointsSupported2( const Volume : string) : Boolean');
15759:  Function NtfsFileHasReparsePoint2( const Path : string) : Boolean');
15760:  Function NtfsIsFolderMountPoint2( const Path : string) : Boolean');
15761:  Function NtfsMountDeviceAsDrive2( const Device : WideString; Drive : Char) : Boolean');
15762:  Function NtfsMountVolume2( const Volume : WideChar; const MountPoint : WideString) : Boolean');
15763:   CL.AddTypeS('TOpLock', '( olExclusive, olReadOnly, olBatch, olFilter )');
15764:  Function NtfsOpLockAckClosePending2( Handle : THandle; Overlapped : TOverlapped) : Boolean');
15765:  Function NtfsOpLockBreakAckNo22( Handle : THandle; Overlapped : TOverlapped) : Boolean');
15766:  Function NtfsOpLockBreakAcknowledge2( Handle : THandle; Overlapped : TOverlapped) : Boolean');
15767:  Function NtfsOpLockBreakNotify2( Handle : THandle; Overlapped : TOverlapped) : Boolean');
15768:  Function NtfsRequestOpLock2( Handle : THandle; Kind : TOpLock; Overlapped : TOverlapped):Boolean');
15769:  Function NtfsCreateJunctionPoint2( const Source, Destination : string) : Boolean');
15770:  Function NtfsDeleteJunctionPoint2( const Source : string) : Boolean');
15771:  Function NtfsGetJunctionPointDestination2( const Source : string; var Destination: string):Boolean;
15772:   CL.AddTypeS('TStreamId', '( siInvalid, siStandard, siExtendedAttribute, siSec'
15773:    +'urity, siAlternate, siHardLink, siProperty, siObjectIdentifier, siReparsePoints,siSparseFile)');
15774:   CL.AddTypeS('TStreamIds', 'set of TStreamId');
15775:   TInternalFindStreamData', 'record FileHandle:THandle; Context: TObject; StreamIds:TStreamIds; end');
15776:   CL.AddTypeS('TFindStreamData', 'record Internal : TInternalFindStreamData; At'
15777:   +'tributes : DWORD; StreamID : TStreamId; Name: WideString; Size : Int64; end');
15778:  Function NtfsFindFirstStream2(const FileName:string;StreamIds:TStreamIds;var Data:TFindStreamData):Bool;
15779:  Function NtfsFindNextStream2( var Data : TFindStreamData) : Boolean');
15780:  Function NtfsFindStreamClose2( var Data : TFindStreamData) : Boolean');
15781:  Function NtfsCreateHardLink2( const LinkFileName, ExistingFileName : String) : Boolean');
15782:  Function NtfsCreateHardLinkA2( const LinkFileName, ExistingFileName : AnsiString) : Boolean');
15783:  Function NtfsCreateHardLinkW2( const LinkFileName, ExistingFileName : WideString) : Boolean');
15784:   CL.AddTypeS('TNtfsHardLinkInfo', 'record LinkCount : Cardinal; FileIndex : Int64; end');
15785:  Function NtfsGetHardLinkInfo2( const FileName : string; var Info : TNtfsHardLinkInfo) : Boolean');
15786:  Function NtfsFindHardLinks2(const Path:string;const FileIndexHigh,FileIndexLow:Card;const
        List:TStrings):Bool
15787:  Function NtfsDeleteHardLinks2( const FileName : string) : Boolean');
15788:   FindClass('TOBJECT'),'EJclFileSummaryError');
15789:   TJclFileSummaryAccess', '( fsaRead, fsaWrite, fsaReadWrite )');
15790:   TJclFileSummaryShare', '( fssDenyNone, fssDenyRead, fssDenyWrite, fssDenyAll )');
15791:   TJclFileSummaryPropSetCallback', 'Function ( const FMTID : TGUID) : Boolean');
15792:   CL.AddClassN(CL.FindClass('TOBJECT'),'TJclFileSummary');
15793:   SIRegister_TJclFilePropertySet(CL);
15794:   //CL.AddTypeS('TJclFilePropertySetClass', 'class of TJclFilePropertySet');
15795:   SIRegister_TJclFileSummary(CL);
15796:   SIRegister_TJclFileSummaryInformation(CL);
15797:   SIRegister_TJclDocSummaryInformation(CL);
15798:   SIRegister_TJclMediaFileSummaryInformation(CL);
15799:   SIRegister_TJclMSISummaryInformation(CL);
15800:   SIRegister_TJclShellSummaryInformation(CL);
15801:   SIRegister_TJclStorageSummaryInformation(CL);
15802:   SIRegister_TJclImageSummaryInformation(CL);
15803:   SIRegister_TJclDisplacedSummaryInformation(CL);
15804:   SIRegister_TJclBriefCaseSummaryInformation(CL);
15805:   SIRegister_TJclMiscSummaryInformation(CL);
15806:   SIRegister_TJclWebViewSummaryInformation(CL);
15807:   SIRegister_TJclMusicSummaryInformation(CL);
15808:   SIRegister_TJclDRMSummaryInformation(CL);
15809:   SIRegister_TJclVideoSummaryInformation(CL);
15810:   SIRegister_TJclAudioSummaryInformation(CL);
15811:   SIRegister_TJclControlPanelSummaryInformation(CL);
15812:   SIRegister_TJclVolumeSummaryInformation(CL);
15813:   SIRegister_TJclShareSummaryInformation(CL);
15814:   SIRegister_TJclLinkSummaryInformation(CL);
15815:   SIRegister_TJclQuerySummaryInformation(CL);
```

```
15816:   SIRegister_TJclImageInformation(CL);
15817:   SIRegister_TJclJpegSummaryInformation(CL);
15818: end;
15819:
15820: procedure SIRegister_Jcl8087(CL: TPSPascalCompiler);
15821: begin
15822:   AddTypeS('T8087Precision', '( pcSingle, pcReserved, pcDouble, pcExtended )');
15823:   T8087Rounding','( rcNearestOrEven, rcDownInfinity, rcUpInfinity, rcChopOrTruncate )');
15824:   T8087Infinity','( icProjective, icAffine )');
15825:   T8087Exception','(emInvalidOp,emDenormalizedOperand,emZeroDivide,emOverflow,emUnderflow,emPrecision;
15826:   CL.AddTypeS('T8087Exceptions', 'set of T8087Exception');
15827:  Function Get8087ControlWord : Word');
15828:  Function Get8087Infinity : T8087Infinity');
15829:  Function Get8087Precision : T8087Precision');
15830:  Function Get8087Rounding : T8087Rounding');
15831:  Function Get8087StatusWord( ClearExceptions : Boolean) : Word');
15832:  Function Set8087Infinity( const Infinity : T8087Infinity) : T8087Infinity');
15833:  Function Set8087Precision( const Precision : T8087Precision) : T8087Precision');
15834:  Function Set8087Rounding( const Rounding : T8087Rounding) : T8087Rounding');
15835:  Function Set8087ControlWord( const Control : Word) : Word');
15836:  Function ClearPending8087Exceptions : T8087Exceptions');
15837:  Function GetPending8087Exceptions : T8087Exceptions');
15838:  Function GetMasked8087Exceptions : T8087Exceptions');
15839:  Function SetMasked8087Exceptions(Exceptions: T8087Exceptions;ClearBefore:Boolean):T8087Exceptions');
15840:  Function Mask8087Exceptions( Exceptions:T8087Exceptions) : T8087Exceptions');
15841:  Function Unmask8087Exceptions(Exceptions:T8087Exceptions;ClearBefore : Boolean) : T8087Exceptions');
15842: end;
15843:
15844: procedure SIRegister_JvBoxProcs(CL: TPSPascalCompiler);
15845: begin
15846:  Procedure BoxMoveSelectedItems( SrcList, DstList : TWinControl)');
15847:  Procedure BoxMoveAllItems( SrcList, DstList : TWinControl)');
15848:  Procedure BoxDragOver(List:TWinControl;Source:TObject;X,Y:Int;State:TDragState;var
      Accept:Bool;Sorted:Bool;
15849:  Procedure BoxMoveFocusedItem( List : TWinControl; DstIndex : Integer)');
15850:  Procedure BoxMoveSelected( List : TWinControl; Items : TStrings)');
15851:  Procedure BoxSetItem( List : TWinControl; Index : Integer)');
15852:  Function BoxGetFirstSelection( List : TWinControl) : Integer');
15853:  Function BoxCanDropItem( List : TWinControl; X, Y : Integer; var DragIndex : Integer) : Boolean');
15854: end;
15855:
15856: procedure SIRegister_UrlMon(CL: TPSPascalCompiler);
15857: begin
15858:  //CL.AddConstantN('SZ_URLCONTEXT','POLEStr').SetString( 'URL Context');
15859:  //CL.AddConstantN('SZ_ASYNC_CALLEE','POLEStr').SetString( 'AsyncCallee');
15860:  CL.AddConstantN('MKSYS_URLMONIKER','LongInt').SetInt( 6);
15861:   type ULONG', 'Cardinal');
15862:      LPCWSTR', 'PChar');
15863:   CL.AddTypeS('LPWSTR', 'PChar');
15864:   LPSTR', 'PChar');
15865:   TBindVerb', 'ULONG');
15866:   TBindInfoF', 'ULONG');
15867:   TBindF', 'ULONG');
15868:   TBSCF', 'ULONG');
15869:   TBindStatus', 'ULONG');
15870:   TCIPStatus', 'ULONG');
15871:   TBindString', 'ULONG');
15872:   TPiFlags', 'ULONG');
15873:   TOIBdgFlags', 'ULONG');
15874:   TParseAction', 'ULONG');
15875:   TPSUAction', 'ULONG');
15876:   TQueryOption', 'ULONG');
15877:   TPUAF', 'ULONG');
15878:   TSZMFlags', 'ULONG');
15879:   TUrlZone', 'ULONG');
15880:   TUrlTemplate', 'ULONG');
15881:   TZAFlags', 'ULONG');
15882:   TUrlZoneReg', 'ULONG');
15883:  'URLMON_OPTION_USERAGENT','LongWord').SetUInt( $10000001);
15884:  CL.AddConstantN('URLMON_OPTION_USERAGENT_REFRESH','LongWord').SetUInt( $10000002);
15885:  const 'URLMON_OPTION_URL_ENCODING','LongWord').SetUInt( $10000004);
15886:  const 'URLMON_OPTION_USE_BINDSTRINGCREDS','LongWord').SetUInt( $10000008);
15887:  const 'CF_NULL','LongInt').SetInt( 0);
15888:  const 'CFSTR_MIME_NULL','LongInt').SetInt( 0);
15889:  const 'CFSTR_MIME_TEXT','String').SetString( 'text/plain');
15890:  const 'CFSTR_MIME_RICHTEXT','String').SetString( 'text/richtext');
15891:  const 'CFSTR_MIME_X_BITMAP','String').SetString( 'image/x-xbitmap');
15892:  const 'CFSTR_MIME_POSTSCRIPT','String').SetString( 'application/postscript');
15893:  const 'CFSTR_MIME_AIFF','String').SetString( 'audio/aiff');
15894:  const 'CFSTR_MIME_BASICAUDIO','String').SetString( 'audio/basic');
15895:  const 'CFSTR_MIME_WAV','String').SetString( 'audio/wav');
15896:  const 'CFSTR_MIME_X_WAV','String').SetString( 'audio/x-wav');
15897:  const 'CFSTR_MIME_GIF','String').SetString( 'image/gif');
15898:  const 'CFSTR_MIME_PJPEG','String').SetString( 'image/pjpeg');
15899:  const 'CFSTR_MIME_JPEG','String').SetString( 'image/jpeg');
15900:  const 'CFSTR_MIME_TIFF','String').SetString( 'image/tiff');
15901:  const 'CFSTR_MIME_X_PNG','String').SetString( 'image/x-png');
15902:  const 'CFSTR_MIME_BMP','String').SetString( 'image/bmp');
15903:  const 'CFSTR_MIME_X_ART','String').SetString( 'image/x-jg');
```

```
15904:  const 'CFSTR_MIME_X_EMF','String').SetString( 'image/x-emf');
15905:  const 'CFSTR_MIME_X_WMF','String').SetString( 'image/x-wmf');
15906:  const 'CFSTR_MIME_AVI','String').SetString( 'video/avi');
15907:  const 'CFSTR_MIME_MPEG','String').SetString( 'video/mpeg');
15908:  const 'CFSTR_MIME_FRACTALS','String').SetString( 'application/fractals');
15909:  const 'CFSTR_MIME_RAWDATA','String').SetString( 'application/octet-stream');
15910:  const 'CFSTR_MIME_RAWDATASTRM','String').SetString( 'application/octet-stream');
15911:  const 'CFSTR_MIME_PDF','String').SetString( 'application/pdf');
15912:  const 'CFSTR_MIME_X_AIFF','String').SetString( 'audio/x-aiff');
15913:  const 'CFSTR_MIME_X_REALAUDIO','String').SetString( 'audio/x-pn-realaudio');
15914:  const 'CFSTR_MIME_XBM','String').SetString( 'image/xbm');
15915:  const 'CFSTR_MIME_QUICKTIME','String').SetString( 'video/quicktime');
15916:  const 'CFSTR_MIME_X_MSVIDEO','String').SetString( 'video/x-msvideo');
15917:  const 'CFSTR_MIME_X_SGI_MOVIE','String').SetString( 'video/x-sgi-movie');
15918:  const 'CFSTR_MIME_HTML','String').SetString( 'text/html');
15919:  const 'MK_S_ASYNCHRONOUS','LongWord').SetUInt( $000401E8);
15920:  const 'S_ASYNCHRONOUS','LongWord').SetUInt( $000401E8);
15921:  const 'E_PENDING','LongWord').SetUInt( $8000000A);
15922:   CL.AddInterface(CL.FindInterface('IUNKNOWN'),IBinding, 'IBinding');
15923:   SIRegister_IPersistMoniker(CL);
15924:   SIRegister_IBindProtocol(CL);
15925:   SIRegister_IBinding(CL);
15926:  const 'BINDVERB_GET','LongWord').SetUInt( $00000000);
15927:  const 'BINDVERB_POST','LongWord').SetUInt( $00000001);
15928:  const 'BINDVERB_PUT','LongWord').SetUInt( $00000002);
15929:  const 'BINDVERB_CUSTOM','LongWord').SetUInt( $00000003);
15930:  const 'BINDINFOF_URLENCODESTGMEDDATA','LongWord').SetUInt( $00000001);
15931:  const 'BINDINFOF_URLENCODEDEXTRAINFO','LongWord').SetUInt( $00000002);
15932:  const 'BINDF_ASYNCHRONOUS','LongWord').SetUInt( $00000001);
15933:  const 'BINDF_ASYNCSTORAGE','LongWord').SetUInt( $00000002);
15934:  const 'BINDF_NOPROGRESSIVERENDERING','LongWord').SetUInt( $00000004);
15935:  const 'BINDF_OFFLINEOPERATION','LongWord').SetUInt( $00000008);
15936:  const 'BINDF_GETNEWESTVERSION','LongWord').SetUInt( $00000010);
15937:  const 'BINDF_NOWRITECACHE','LongWord').SetUInt( $00000020);
15938:  const 'BINDF_NEEDFILE','LongWord').SetUInt( $00000040);
15939:  const 'BINDF_PULLDATA','LongWord').SetUInt( $00000080);
15940:  const 'BINDF_IGNORESECURITYPROBLEM','LongWord').SetUInt( $00000100);
15941:  const 'BINDF_RESYNCHRONIZE','LongWord').SetUInt( $00000200);
15942:  const 'BINDF_HYPERLINK','LongWord').SetUInt( $00000400);
15943:  const 'BINDF_NO_UI','LongWord').SetUInt( $00000800);
15944:  const 'BINDF_SILENTOPERATION','LongWord').SetUInt( $00001000);
15945:  const 'BINDF_PRAGMA_NO_CACHE','LongWord').SetUInt( $00002000);
15946:  const 'BINDF_FREE_THREADED','LongWord').SetUInt( $00010000);
15947:  const 'BINDF_DIRECT_READ','LongWord').SetUInt( $00020000);
15948:  const 'BINDF_FORMS_SUBMIT','LongWord').SetUInt( $00040000);
15949:  const 'BINDF_GETFROMCACHE_IF_NET_FAIL','LongWord').SetUInt( $00080000);
15950:  //const 'BINDF_DONTUSECACHE','').SetString( BINDF_GETNEWESTVERSION);
15951:  //const 'BINDF_DONTPUTINCACHE','').SetString( BINDF_NOWRITECACHE);
15952:  //const 'BINDF_NOCOPYDATA','').SetString( BINDF_PULLDATA);
15953:  const 'BSCF_FIRSTDATANOTIFICATION','LongWord').SetUInt( $00000001);
15954:  const 'BSCF_INTERMEDIATEDATANOTIFICATION','LongWord').SetUInt( $00000002);
15955:  const 'BSCF_LASTDATANOTIFICATION','LongWord').SetUInt( $00000004);
15956:  const 'BSCF_DATAFULLYAVAILABLE','LongWord').SetUInt( $00000008);
15957:  const 'BSCF_AVAILABLEDATASIZEUNKNOWN','LongWord').SetUInt( $00000010);
15958:  const 'BINDSTATUS_FINDINGRESOURCE','LongInt').SetInt( 1);
15959:  const 'BINDSTATUS_CONNECTING','LongInt').SetInt( BINDSTATUS_FINDINGRESOURCE + 1);
15960:  const 'BINDSTATUS_REDIRECTING','LongInt').SetInt( BINDSTATUS_CONNECTING + 1);
15961:  const 'BINDSTATUS_BEGINDOWNLOADDATA','LongInt').SetInt( BINDSTATUS_REDIRECTING + 1);
15962:  const 'BINDSTATUS_DOWNLOADINGDATA','LongInt').SetInt( BINDSTATUS_BEGINDOWNLOADDATA + 1);
15963:  const 'BINDSTATUS_ENDDOWNLOADDATA','LongInt').SetInt( BINDSTATUS_DOWNLOADINGDATA + 1);
15964:  const 'BINDSTATUS_BEGINDOWNLOADCOMPONENTS','LongInt').SetInt( BINDSTATUS_ENDDOWNLOADDATA + 1);
15965:  const 'BINDSTATUS_INSTALLINGCOMPONENTS','LongInt').SetInt( BINDSTATUS_BEGINDOWNLOADCOMPONENTS + 1);
15966:  const 'BINDSTATUS_ENDDOWNLOADCOMPONENTS','LongInt').SetInt( BINDSTATUS_INSTALLINGCOMPONENTS + 1);
15967:  const 'BINDSTATUS_USINGCACHEDCOPY','LongInt').SetInt( BINDSTATUS_ENDDOWNLOADCOMPONENTS + 1);
15968:  const 'BINDSTATUS_SENDINGREQUEST','LongInt').SetInt( BINDSTATUS_USINGCACHEDCOPY + 1);
15969:  const 'BINDSTATUS_CLASSIDAVAILABLE','LongInt').SetInt( BINDSTATUS_SENDINGREQUEST + 1);
15970:  const 'BINDSTATUS_MIMETYPEAVAILABLE','LongInt').SetInt( BINDSTATUS_CLASSIDAVAILABLE + 1);
15971:  const 'BINDSTATUS_CACHEFILENAMEAVAILABLE','LongInt').SetInt( BINDSTATUS_MIMETYPEAVAILABLE + 1);
15972:  const 'BINDSTATUS_BEGINSYNCOPERATION','LongInt').SetInt( BINDSTATUS_CACHEFILENAMEAVAILABLE + 1);
15973:  const 'BINDSTATUS_ENDSYNCOPERATION','LongInt').SetInt( BINDSTATUS_BEGINSYNCOPERATION + 1);
15974:  const 'BINDSTATUS_BEGINUPLOADDATA','LongInt').SetInt( BINDSTATUS_ENDSYNCOPERATION + 1);
15975:  const 'BINDSTATUS_UPLOADINGDATA','LongInt').SetInt( BINDSTATUS_BEGINUPLOADDATA + 1);
15976:  const 'BINDSTATUS_ENDUPLOADDATA','LongInt').SetInt( BINDSTATUS_UPLOADINGDATA + 1);
15977:  const 'BINDSTATUS_PROTOCOLCLASSID','LongInt').SetInt( BINDSTATUS_ENDUPLOADDATA + 1);
15978:  const 'BINDSTATUS_ENCODING','LongInt').SetInt( BINDSTATUS_PROTOCOLCLASSID + 1);
15979:  const 'BINDSTATUS_VERIFIEDMIMETYPEAVAILABLE','LongInt').SetInt( BINDSTATUS_ENCODING + 1);
15980:  const 'BINDSTATUS_CLASSINSTALLLOCATION','LongInt').SetInt( BINDSTATUS_VERIFIEDMIMETYPEAVAILABLE + 1);
15981:  const 'BINDSTATUS_DECODING','LongInt').SetInt( BINDSTATUS_CLASSINSTALLLOCATION + 1);
15982:  const 'BINDSTATUS_LOADINGMIMEHANDLER','LongInt').SetInt( BINDSTATUS_DECODING + 1);
15983:  const 'BINDSTATUS_CONTENTDISPOSITIONATTACH','LongInt').SetInt( BINDSTATUS_LOADINGMIMEHANDLER + 1);
15984:  const 'BINDSTATUS_FILTERREPORTMIMETYPE','LongInt').SetInt( BINDSTATUS_CONTENTDISPOSITIONATTACH + 1);
15985:  const 'BINDSTATUS_CLSIDCANINSTANTIATE','LongInt').SetInt( BINDSTATUS_FILTERREPORTMIMETYPE + 1);
15986:  const 'BINDSTATUS_IUNKNOWNAVAILABLE','LongInt').SetInt( BINDSTATUS_CLSIDCANINSTANTIATE + 1);
15987:  const 'BINDSTATUS_DIRECTBIND','LongInt').SetInt( BINDSTATUS_IUNKNOWNAVAILABLE + 1);
15988:  const 'BINDSTATUS_RAWMIMETYPE','LongInt').SetInt( BINDSTATUS_DIRECTBIND + 1);
15989:  const 'BINDSTATUS_PROXYDETECTING','LongInt').SetInt( BINDSTATUS_RAWMIMETYPE + 1);
15990:  const 'BINDSTATUS_ACCEPTRANGES','LongInt').SetInt( BINDSTATUS_PROXYDETECTING + 1);
15991:  const 'BINDSTATUS_COOKIE_SENT','LongInt').SetInt( BINDSTATUS_ACCEPTRANGES + 1);
15992:  const 'BINDSTATUS_COMPACT_POLICY_RECEIVED','LongInt').SetInt( BINDSTATUS_COOKIE_SENT + 1);
```

```
15993:  const 'BINDSTATUS_COOKIE_SUPPRESSED','LongInt').SetInt( BINDSTATUS_COMPACT_POLICY_RECEIVED + 1);
15994:  const 'BINDSTATUS_COOKIE_STATE_UNKNOWN','LongInt').SetInt( BINDSTATUS_COOKIE_SUPPRESSED + 1);
15995:  const 'BINDSTATUS_COOKIE_STATE_ACCEPT','LongInt').SetInt( BINDSTATUS_COOKIE_STATE_UNKNOWN + 1);
15996:  const 'BINDSTATUS_COOKIE_STATE_REJECT','LongInt').SetInt( BINDSTATUS_COOKIE_STATE_ACCEPT + 1);
15997:  const 'BINDSTATUS_COOKIE_STATE_PROMPT','LongInt').SetInt( BINDSTATUS_COOKIE_STATE_REJECT + 1);
15998:  const 'BINDSTATUS_COOKIE_STATE_LEASH','LongInt').SetInt( BINDSTATUS_COOKIE_STATE_PROMPT + 1);
15999:  const 'BINDSTATUS_COOKIE_STATE_DOWNGRADE','LongInt').SetInt( BINDSTATUS_COOKIE_STATE_LEASH + 1);
16000:  const 'BINDSTATUS_POLICY_HREF','LongInt').SetInt( BINDSTATUS_COOKIE_STATE_DOWNGRADE + 1);
16001:  const 'BINDSTATUS_P3P_HEADER','LongInt').SetInt( BINDSTATUS_POLICY_HREF + 1);
16002:  const 'BINDSTATUS_SESSION_COOKIE_RECEIVED','LongInt').SetInt( BINDSTATUS_P3P_HEADER + 1);
16003:  const 'BINDSTATUS_PERSISTENT_COOKIE_RECEIVED','LongInt').SetInt( BINDSTATUS_SESSION_COOKIE_RECEIVED + 1);
16004:  const 'BINDSTATUS_SESSION_COOKIES_ALLOWED','LongInt').SetInt( BINDSTATUS_PERSISTENT_COOKIE_RECEIVED + 1);
16005:  const 'BINDSTATUS_CACHECONTROL','LongInt').SetInt( BINDSTATUS_SESSION_COOKIES_ALLOWED + 1);
16006:  const 'BINDSTATUS_CONTENTDISPOSITIONFILENAME','LongInt').SetInt( BINDSTATUS_CACHECONTROL + 1);
16007:  const 'BINDSTATUS_MIMETEXTPLAINMISMATCH','LongInt').SetInt( BINDSTATUS_CONTENTDISPOSITIONFILENAME + 1);
16008:  const 'BINDSTATUS_PUBLISHERAVAILABLE','LongInt').SetInt( BINDSTATUS_MIMETEXTPLAINMISMATCH + 1);
16009:  const 'BINDSTATUS_DISPLAYNAMEAVAILABLE','LongInt').SetInt( BINDSTATUS_PUBLISHERAVAILABLE + 1);
16010:  // PBindInfo', '^TBindInfo // will not work');
16011:   {_tagBINDINFO', 'record cbSize : ULONG; szExtraInfo : LPWSTR; stg'
16012:    +'medData : TStgMedium; grfBindInfoF : DWORD; dwBindVerb : DWORD; szCustomVe'
16013:    +'rb : LPWSTR; cbstgmedData : DWORD; dwOptions : DWORD; dwOptionsFlags : DWO'
16014:    +'RD; dwCodePage : DWORD; securityAttributes : TSecurityAttributes; iid : TG'
16015:    +'UID; pUnk : IUnknown; dwReserved : DWORD; end');
16016:   TBindInfo', '_tagBINDINFO');
16017:   BINDINFO', '_tagBINDINFO');}
16018:   _REMSECURITY_ATTRIBUTES', 'record nLength : DWORD; lpSecurityDes'
16019:    +'criptor : DWORD; bInheritHandle : BOOL; end');
16020:   TRemSecurityAttributes', '_REMSECURITY_ATTRIBUTES');
16021:   REMSECURITY_ATTRIBUTES', '_REMSECURITY_ATTRIBUTES');
16022:   //PRemBindInfo', '^TRemBindInfo // will not work');
16023:   {_tagRemBINDINFO', 'record cbSize : ULONG; szExtraInfo : LPWSTR; '
16024:    +'grfBindInfoF : DWORD; dwBindVerb : DWORD; szCustomVerb : LPWSTR; cbstgmedD'
16025:    +'ata : DWORD; dwOptions : DWORD; dwOptionsFlags : DWORD; dwCodePage : DWORD'
16026:    +'; securityAttributes : TRemSecurityAttributes; iid : TGUID; pUnk : IUnknow'
16027:    +'n; dwReserved : DWORD; end');
16028:   TRemBindInfo', '_tagRemBINDINFO');
16029:   RemBINDINFO', '_tagRemBINDINFO');}
16030:   //PRemFormatEtc', '^TRemFormatEtc // will not work');
16031:   tagRemFORMATETC','record cfFormat:DWORD; ptd:DWORD; dwAspect:DWORD;lindex:Longint;tymed:DWORD; end');
16032:   TRemFormatEtc', 'tagRemFORMATETC');
16033:   RemFORMATETC', 'tagRemFORMATETC');
16034:   SIRegister_IBindStatusCallback(CL);
16035:   SIRegister_IAuthenticate(CL);
16036:   SIRegister_IHttpNegotiate(CL);
16037:   SIRegister_IWindowForBindingUI(CL);
16038:  const 'CIP_DISK_FULL','LongInt').SetInt( 0);
16039:  const 'CIP_ACCESS_DENIED','LongInt').SetInt( CIP_DISK_FULL + 1);
16040:  const 'CIP_NEWER_VERSION_EXISTS','LongInt').SetInt( CIP_ACCESS_DENIED + 1);
16041:  const 'CIP_OLDER_VERSION_EXISTS','LongInt').SetInt( CIP_NEWER_VERSION_EXISTS + 1);
16042:  const 'CIP_NAME_CONFLICT','LongInt').SetInt( CIP_OLDER_VERSION_EXISTS + 1);
16043:  const 'CIP_TRUST_VERIFICATION_COMPONENT_MISSING','LongInt').SetInt( CIP_NAME_CONFLICT + 1);
16044:  const 'CIP_EXE_SELF_REGISTERATION_TIMEOUT',LongInt( CIP_TRUST_VERIFICATION_COMPONENT_MISSING + 1);
16045:  const 'CIP_UNSAFE_TO_ABORT','LongInt').SetInt( CIP_EXE_SELF_REGISTERATION_TIMEOUT + 1);
16046:  const 'CIP_NEED_REBOOT','LongInt').SetInt( CIP_UNSAFE_TO_ABORT + 1);
16047:  const 'CIP_NEED_REBOOT_UI_PERMISSION','LongInt').SetInt( CIP_NEED_REBOOT + 1);
16048:   SIRegister_ICodeInstall(CL);
16049:   SIRegister_IWinInetInfo(CL);
16050:  const 'WININETINFO_OPTION_LOCK_HANDLE','LongInt').SetInt( 65534);
16051:   SIRegister_IHttpSecurity(CL);
16052:   SIRegister_IWinInetHttpInfo(CL);
16053:   SIRegister_IBindHost(CL);
16054:  const 'URLOSTRM_USECACHEDCOPY_ONLY','LongWord').SetUInt( $00000001);
16055:  const 'URLOSTRM_USECACHEDCOPY','LongWord').SetUInt( $00000002);
16056:  const 'URLOSTRM_GETNEWESTVERSION','LongWord').SetUInt( $00000003);
16057:  Function URLOpenStream( p1 : IUnknown; p2 : PChar; p3 : DWORD; p4 : IBindStatusCallback) : HResult');
16058:  Function URLOpenPullStream( p1 : IUnknown; p2 : PChar; p3 : DWORD; BSC : IBindStatusCallback) : HResult');
16059:  Function URLDownloadToFile( Caller : IUnknown; URL : PChar; FileName : PChar; Reserved : DWORD; StatusCB
       : IBindStatusCallback) : HResult');
16060:  Function URLDownloadToCacheFile( p1 : IUnknown; p2 : PChar; p3 : PChar; p4 : DWORD; p5 : DWORD; p6 :
       IBindStatusCallback) : HResult');
16061:  Function URLOpenBlockingStream(p1:IUnknown;p2:PChar;out
       p3:IStream;p4:DWORD;p5:IBindStatusCallback):HResult');
16062:  Function HlinkGoBack( unk : IUnknown) : HResult');
16063:  Function HlinkGoForward( unk : IUnknown) : HResult');
16064:  Function HlinkNavigateString( unk : IUnknown; szTarget : LPCWSTR) : HResult');
16065: // Function HlinkNavigateMoniker( Unk : IUnknown; mkTarget : IMoniker) : HResult');
16066:   SIRegister_IInternet(CL);
16067:  const 'BINDSTRING_HEADERS','LongInt').SetInt( 1);
16068:  const 'BINDSTRING_ACCEPT_MIMES','LongInt').SetInt( BINDSTRING_HEADERS + 1);
16069:  const 'BINDSTRING_EXTRA_URL','LongInt').SetInt( BINDSTRING_ACCEPT_MIMES + 1);
16070:  const 'BINDSTRING_LANGUAGE','LongInt').SetInt( BINDSTRING_EXTRA_URL + 1);
16071:  const 'BINDSTRING_USERNAME','LongInt').SetInt( BINDSTRING_LANGUAGE + 1);
16072:  const 'BINDSTRING_PASSWORD','LongInt').SetInt( BINDSTRING_USERNAME + 1);
16073:  const 'BINDSTRING_UA_PIXELS','LongInt').SetInt( BINDSTRING_PASSWORD + 1);
16074:  const 'BINDSTRING_UA_COLOR','LongInt').SetInt( BINDSTRING_UA_PIXELS + 1);
16075:  const 'BINDSTRING_OS','LongInt').SetInt( BINDSTRING_UA_COLOR + 1);
16076:  const 'BINDSTRING_USER_AGENT','LongInt').SetInt( BINDSTRING_OS + 1);
16077:  const 'BINDSTRING_ACCEPT_ENCODINGS','LongInt').SetInt( BINDSTRING_USER_AGENT + 1);
16078:  const 'BINDSTRING_POST_COOKIE','LongInt').SetInt( BINDSTRING_ACCEPT_ENCODINGS + 1);
```

```
16079:  const 'BINDSTRING_POST_DATA_MIME','LongInt').SetInt( BINDSTRING_POST_COOKIE + 1);
16080:  const 'BINDSTRING_URL','LongInt').SetInt( BINDSTRING_POST_DATA_MIME + 1);
16081:   //POLEStrArray', '^TOLESTRArray // will not work');
16082:   SIRegister_IInternetBindInfo(CL);
16083:  const 'PI_PARSE_URL','LongWord').SetUInt( $00000001);
16084:  const 'PI_FILTER_MODE','LongWord').SetUInt( $00000002);
16085:  const 'PI_FORCE_ASYNC','LongWord').SetUInt( $00000004);
16086:  const 'PI_USE_WORKERTHREAD','LongWord').SetUInt( $00000008);
16087:  const 'PI_MIMEVERIFICATION','LongWord').SetUInt( $00000010);
16088:  const 'PI_CLSIDLOOKUP','LongWord').SetUInt( $00000020);
16089:  const 'PI_DATAPROGRESS','LongWord').SetUInt( $00000040);
16090:  const 'PI_SYNCHRONOUS','LongWord').SetUInt( $00000080);
16091:  const 'PI_APARTMENTTHREADED','LongWord').SetUInt( $00000100);
16092:  const 'PI_CLASSINSTALL','LongWord').SetUInt( $00000200);
16093:  const 'PD_FORCE_SWITCH','LongWord').SetUInt( $00010000);
16094:  //const 'PI_DOCFILECLSIDLOOKUP','').SetString( PI_CLSIDLOOKUP);
16095:   //PProtocolData', '^TProtocolData // will not work');
16096:   _tagPROTOCOLDATA','record grfFlags:DWORD; dwState:DWORD; pData : TObject; cbData : ULONG; end');
16097:   TProtocolData', '_tagPROTOCOLDATA');
16098:   PROTOCOLDATA', '_tagPROTOCOLDATA');
16099:   CL.AddInterface(CL.FindInterface('IUNKNOWN'),IInternetProtocolSink, 'IInternetProtocolSink');
16100:   SIRegister_IInternetProtocolRoot(CL);
16101:   SIRegister_IInternetProtocol(CL);
16102:   SIRegister_IInternetProtocolSink(CL);
16103:  const 'OIBDG_APARTMENTTHREADED','LongWord').SetUInt( $00000100);
16104:   SIRegister_IInternetSession(CL);
16105:   SIRegister_IInternetThreadSwitch(CL);
16106:   SIRegister_IInternetPriority(CL);
16107:  const 'PARSE_CANONICALIZE','LongInt').SetInt( 1);
16108:  const 'PARSE_FRIENDLY','LongInt').SetInt( PARSE_CANONICALIZE + 1);
16109:  const 'PARSE_SECURITY_URL','LongInt').SetInt( PARSE_FRIENDLY + 1);
16110:  const 'PARSE_ROOTDOCUMENT','LongInt').SetInt( PARSE_SECURITY_URL + 1);
16111:  const 'PARSE_DOCUMENT','LongInt').SetInt( PARSE_ROOTDOCUMENT + 1);
16112:  const 'PARSE_ANCHOR','LongInt').SetInt( PARSE_DOCUMENT + 1);
16113:  const 'PARSE_ENCODE','LongInt').SetInt( PARSE_ANCHOR + 1);
16114:  const 'PARSE_DECODE','LongInt').SetInt( PARSE_ENCODE + 1);
16115:  const 'PARSE_PATH_FROM_URL','LongInt').SetInt( PARSE_DECODE + 1);
16116:  const 'PARSE_URL_FROM_PATH','LongInt').SetInt( PARSE_PATH_FROM_URL + 1);
16117:  const 'PARSE_MIME','LongInt').SetInt( PARSE_URL_FROM_PATH + 1);
16118:  const 'PARSE_SERVER','LongInt').SetInt( PARSE_MIME + 1);
16119:  const 'PARSE_SCHEMA','LongInt').SetInt( PARSE_SERVER + 1);
16120:  const 'PARSE_SITE','LongInt').SetInt( PARSE_SCHEMA + 1);
16121:  const 'PARSE_DOMAIN','LongInt').SetInt( PARSE_SITE + 1);
16122:  const 'PARSE_LOCATION','LongInt').SetInt( PARSE_DOMAIN + 1);
16123:  const 'PARSE_SECURITY_DOMAIN','LongInt').SetInt( PARSE_LOCATION + 1);
16124:  const 'PSU_DEFAULT','LongInt').SetInt( 1);
16125:  const 'PSU_SECURITY_URL_ONLY','LongInt').SetInt( PSU_DEFAULT + 1);
16126:  const 'QUERY_EXPIRATION_DATE','LongInt').SetInt( 1);
16127:  const 'QUERY_TIME_OF_LAST_CHANGE','LongInt').SetInt( QUERY_EXPIRATION_DATE + 1);
16128:  const 'QUERY_CONTENT_ENCODING','LongInt').SetInt( QUERY_TIME_OF_LAST_CHANGE + 1);
16129:  const 'QUERY_CONTENT_TYPE','LongInt').SetInt( QUERY_CONTENT_ENCODING + 1);
16130:  const 'QUERY_REFRESH','LongInt').SetInt( QUERY_CONTENT_TYPE + 1);
16131:  const 'QUERY_RECOMBINE','LongInt').SetInt( QUERY_REFRESH + 1);
16132:  const 'QUERY_CAN_NAVIGATE','LongInt').SetInt( QUERY_RECOMBINE + 1);
16133:  const 'QUERY_USES_NETWORK','LongInt').SetInt( QUERY_CAN_NAVIGATE + 1);
16134:  const 'QUERY_IS_CACHED','LongInt').SetInt( QUERY_USES_NETWORK + 1);
16135:  const 'QUERY_IS_INSTALLEDENTRY','LongInt').SetInt( QUERY_IS_CACHED + 1);
16136:  const 'QUERY_IS_CACHED_OR_MAPPED','LongInt').SetInt( QUERY_IS_INSTALLEDENTRY + 1);
16137:  const 'QUERY_USES_CACHE','LongInt').SetInt( QUERY_IS_CACHED_OR_MAPPED + 1);
16138:  const 'QUERY_IS_SECURE','LongInt').SetInt( QUERY_USES_CACHE + 1);
16139:  const 'QUERY_IS_SAFE','LongInt').SetInt( QUERY_IS_SECURE + 1);
16140:   SIRegister_IInternetProtocolInfo(CL);
16141:   IOInet', 'IInternet');
16142:   IOInetBindInfo', 'IInternetBindInfo');
16143:   IOInetProtocolRoot', 'IInternetProtocolRoot');
16144:   IOInetProtocol', 'IInternetProtocol');
16145:   IOInetProtocolSink', 'IInternetProtocolSink');
16146:   IOInetProtocolInfo', 'IInternetProtocolInfo');
16147:   IOInetSession', 'IInternetSession');
16148:   IOInetPriority', 'IInternetPriority');
16149:   IOInetThreadSwitch', 'IInternetThreadSwitch');
16150:  Function CoInternetParseUrl( pwzUrl : LPCWSTR; ParseAction : TParseAction; dwFlags : DWORD; pszResult :
       LPWSTR; cchResult : DWORD; var pcchResult : DWORD; dwReserved : DWORD) : HResult');
16151:  Function CoInternetCombineUrl( pwzBaseUrl, pwzRelativeUrl : LPCWSTR; dwCombineFlags : DWORD; pszResult :
       LPWSTR; cchResult : DWORD; var pcchResult : DWORD; dwReserved : DWORD) : HResult');
16152:  Function CoInternetCompareUrl( pwzUrl1, pwzUrl2 : LPCWSTR; dwFlags : DWORD) : HResult');
16153:  Function CoInternetGetProtocolFlags(pwzUrl:LPCWSTR;var dwFlags DWORD; dwReserved:DWORD):HResult');
16154:  Function CoInternetQueryInfo( pwzUrl : LPCWSTR; QueryOptions : TQueryOption; dwQueryFlags : DWORD;
       pvBuffer : TObject; cbBuffer : DWORD; var pcbBuffer : DWORD; dwReserved : DWORD) : HResult');
16155:  Function CoInternetGetSession(dwSessionMode:DWORD; var pIInternetSession:
       IInternetSes;dwReserved:DWORD):HResult;
16156:  Function CoInternetGetSecurityUrl(pwzUrl:LPCWSTR;var
       pwzSecUrl:LPWSTR;psuAct:TPSUAction;dwReserv:DWORD):HResult;
16157:  Function OInetParseUrl( pwzUrl : LPCWSTR; ParseAction : TParseAction; dwFlags : DWORD; pszResult :
       LPWSTR; cchResult : DWORD; var pcchResult : DWORD; dwReserved : DWORD) : HResult');
16158:  Function OInetCombineUrl( pwzBaseUrl, pwzRelativeUrl : LPCWSTR; dwCombineFlags : DWORD; pszResult :
       LPWSTR; cchResult : DWORD; var pcchResult : DWORD; dwReserved : DWORD) : HResult');
16159:  Function OInetCompareUrl( pwzUrl1, pwzUrl2 : LPCWSTR; dwFlags : DWORD) : Hresult');
16160:  Function OInetGetProtocolFlags( pwzUrl : LPCWSTR; var dwFlags : DWORD; dwReserved : DWORD) : HResult');
```

```
16161:  Function OInetQueryInfo( pwzUrl : LPCWSTR; QueryOptions : TQueryOption; dwQueryFlags : DWORD; pvBuffer :
       TObject; cbBuffer : DWORD; var pcbBuffer : DWORD; dwReserved : DWORD) : HResult');
16162:  Function OInetGetSession(dwSessionMode:DWORD; var
       pIInternetSession:IInternetSession;dwReserved:DWORD):HResult;
16163:    //Function CopyBindInfo( const cbiSrc : TBindInfo; var biDest : TBindInfo) : HResult');
16164:  //Procedure ReleaseBindInfo( const bindinfo : TBindInfo)');
16165: // const 'INET_E_USE_DEFAULT_PROTOCOLHANDLER','LongWord').SetUInt( HResult ( $800C0011 ));
16166: // const 'INET_E_USE_DEFAULT_SETTING','LongWord').SetUInt( HResult ( $800C0012 ));
16167:  //const 'INET_E_DEFAULT_ACTION','LongWord').SetUInt( HResult ( $800C0011 ));
16168:  //const 'INET_E_QUERYOPTION_UNKNOWN','LongWord').SetUInt( HResult ( $800C0013 ));
16169:  //const 'INET_E_REDIRECTING','LongWord').SetUInt( HResult ( $800C0014 ));
16170:  const 'PROTOCOLFLAG_NO_PICS_CHECK','LongWord').SetUInt( $00000001);
16171:   SIRegister_IInternetSecurityMgrSite(CL);
16172:  const 'MUTZ_NOSAVEDFILECHECK','LongWord').SetUInt( $00000001);
16173:  const 'MUTZ_ISFILE','LongWord').SetUInt( $00000002);
16174:  const 'MUTZ_ACCEPT_WILDCARD_SCHEME','LongWord').SetUInt( $00000080);
16175:  const 'MUTZ_ENFORCERESTRICTED','LongWord').SetUInt( $00000100);
16176:  const 'MUTZ_REQUIRESAVEDFILECHECK','LongWord').SetUInt( $00000400);
16177:  const 'MAX_SIZE_SECURITY_ID','LongInt').SetInt( 512);
16178:  const 'PUAF_DEFAULT','LongWord').SetUInt( $00000000);
16179:  const 'PUAF_NOUI','LongWord').SetUInt( $00000001);
16180:  const 'PUAF_ISFILE','LongWord').SetUInt( $00000002);
16181:  const 'PUAF_WARN_IF_DENIED','LongWord').SetUInt( $00000004);
16182:  const 'PUAF_FORCEUI_FOREGROUND','LongWord').SetUInt( $00000008);
16183:  const 'PUAF_CHECK_TIFS','LongWord').SetUInt( $00000010);
16184:  const 'PUAF_DONTCHECKBOXINDIALOG','LongWord').SetUInt( $00000020);
16185:  const 'PUAF_TRUSTED','LongWord').SetUInt( $00000040);
16186:  const 'PUAF_ACCEPT_WILDCARD_SCHEME','LongWord').SetUInt( $00000080);
16187:  const 'PUAF_ENFORCERESTRICTED','LongWord').SetUInt( $00000100);
16188:  const 'PUAF_NOSAVEDFILECHECK','LongWord').SetUInt( $00000200);
16189:  const 'PUAF_REQUIRESAVEDFILECHECK','LongWord').SetUInt( $00000400);
16190:  const 'PUAF_LMZ_UNLOCKED','LongWord').SetUInt( $00010000);
16191:  const 'PUAF_LMZ_LOCKED','LongWord').SetUInt( $00020000);
16192:  const 'PUAF_DEFAULTZONEPOL','LongWord').SetUInt( $00040000);
16193:  const 'PUAF_NPL_USE_LOCKED_IF_RESTRICTED','LongWord').SetUInt( $00080000);
16194:  const 'PUAF_NOUIIFLOCKED','LongWord').SetUInt( $00100000);
16195:  const 'PUAFOUT_DEFAULT','LongWord').SetUInt( $0);
16196:  const 'PUAFOUT_ISLOCKZONEPOLICY','LongWord').SetUInt( $1);
16197:  const 'SZM_CREATE','LongWord').SetUInt( $00000000);
16198:  const 'SZM_DELETE','LongWord').SetUInt( $00000001);
16199:   SIRegister_IInternetSecurityManager(CL);
16200:   SIRegister_IInternetHostSecurityManager(CL);
16201:   SIRegister_IInternetSecurityManagerEx(CL);
16202:  const 'URLACTION_MIN','LongWord').SetUInt( $00001000);
16203:  const 'URLACTION_DOWNLOAD_MIN','LongWord').SetUInt( $00001000);
16204:  const 'URLACTION_DOWNLOAD_SIGNED_ACTIVEX','LongWord').SetUInt( $00001001);
16205:  const 'URLACTION_DOWNLOAD_UNSIGNED_ACTIVEX','LongWord').SetUInt( $00001004);
16206:  const 'URLACTION_DOWNLOAD_CURR_MAX','LongWord').SetUInt( $00001004);
16207:  const 'URLACTION_DOWNLOAD_MAX','LongWord').SetUInt( $000011FF);
16208:  const 'URLACTION_ACTIVEX_MIN','LongWord').SetUInt( $00001200);
16209:  const 'URLACTION_ACTIVEX_RUN','LongWord').SetUInt( $00001200);
16210:  const 'URLACTION_ACTIVEX_OVERRIDE_OBJECT_SAFETY','LongWord').SetUInt( $00001201);
16211:  const 'URLACTION_ACTIVEX_OVERRIDE_DATA_SAFETY','LongWord').SetUInt( $00001202);
16212:  const 'URLACTION_ACTIVEX_OVERRIDE_SCRIPT_SAFETY','LongWord').SetUInt( $00001203);
16213:  const 'URLACTION_SCRIPT_OVERRIDE_SAFETY','LongWord').SetUInt( $00001401);
16214:  const 'URLACTION_ACTIVEX_CONFIRM_NOOBJECTSAFETY','LongWord').SetUInt( $00001204);
16215:  const 'URLACTION_ACTIVEX_TREATASUNTRUSTED','LongWord').SetUInt( $00001205);
16216:  const 'URLACTION_ACTIVEX_NO_WEBOC_SCRIPT','LongWord').SetUInt( $00001206);
16217:  const 'URLACTION_ACTIVEX_CURR_MAX','LongWord').SetUInt( $00001206);
16218:  const 'URLACTION_ACTIVEX_MAX','LongWord').SetUInt( $000013FF);
16219:  const 'URLACTION_SCRIPT_MIN','LongWord').SetUInt( $00001400);
16220:  const 'URLACTION_SCRIPT_RUN','LongWord').SetUInt( $00001400);
16221:  const 'URLACTION_SCRIPT_JAVA_USE','LongWord').SetUInt( $00001402);
16222:  const 'URLACTION_SCRIPT_SAFE_ACTIVEX','LongWord').SetUInt( $00001405);
16223:  const 'URLACTION_SCRIPT_CURR_MAX','LongWord').SetUInt( $00001405);
16224:  const 'URLACTION_SCRIPT_MAX','LongWord').SetUInt( $000015FF);
16225:  const 'URLACTION_HTML_MIN','LongWord').SetUInt( $00001600);
16226:  const 'URLACTION_HTML_SUBMIT_FORMS','LongWord').SetUInt( $00001601);
16227:  const 'URLACTION_HTML_SUBMIT_FORMS_FROM','LongWord').SetUInt( $00001602);
16228:  const 'URLACTION_HTML_SUBMIT_FORMS_TO','LongWord').SetUInt( $00001603);
16229:  const 'URLACTION_HTML_FONT_DOWNLOAD','LongWord').SetUInt( $00001604);
16230:  const 'URLACTION_HTML_JAVA_RUN','LongWord').SetUInt( $00001605);
16231:  const 'URLACTION_HTML_CURR_MAX','LongWord').SetUInt( $00001605);
16232:  const 'URLACTION_HTML_MAX','LongWord').SetUInt( $000017FF);
16233:  const 'URLACTION_SHELL_MIN','LongWord').SetUInt( $00001800);
16234:  const 'URLACTION_SHELL_INSTALL_DTITEMS','LongWord').SetUInt( $00001800);
16235:  const 'URLACTION_SHELL_MOVE_OR_COPY','LongWord').SetUInt( $00001802);
16236:  const 'URLACTION_SHELL_FILE_DOWNLOAD','LongWord').SetUInt( $00001803);
16237:  const 'URLACTION_SHELL_VERB','LongWord').SetUInt( $00001804);
16238:  const 'URLACTION_SHELL_WEBVIEW_VERB','LongWord').SetUInt( $00001805);
16239:  const 'URLACTION_SHELL_SHELLEXECUTE','LongWord').SetUInt( $00001806);
16240:  const 'URLACTION_SHELL_EXECUTE_HIGHRISK','LongWord').SetUInt( $00001806);
16241:  const 'URLACTION_SHELL_EXECUTE_MODRISK','LongWord').SetUInt( $00001807);
16242:  const 'URLACTION_SHELL_EXECUTE_LOWRISK','LongWord').SetUInt( $00001808);
16243:  const 'URLACTION_SHELL_POPUPMGR','LongWord').SetUInt( $00001809);
16244:  const 'URLACTION_SHELL_CURR_MAX','LongWord').SetUInt( $00001809);
16245:  const 'URLACTION_SHELL_MAX','LongWord').SetUInt( $000019ff);
16246:  const 'URLACTION_NETWORK_MIN','LongWord').SetUInt( $00001A00);
16247:  const 'URLACTION_CREDENTIALS_USE','LongWord').SetUInt( $00001A00);
```

```
16248:  const 'URLPOLICY_CREDENTIALS_SILENT_LOGON_OK','LongWord').SetUInt( $00000000);
16249:  const 'URLPOLICY_CREDENTIALS_MUST_PROMPT_USER','LongWord').SetUInt( $00010000);
16250:  const 'URLPOLICY_CREDENTIALS_CONDITIONAL_PROMPT','LongWord').SetUInt( $00020000);
16251:  const 'URLPOLICY_CREDENTIALS_ANONYMOUS_ONLY','LongWord').SetUInt( $00030000);
16252:  const 'URLACTION_AUTHENTICATE_CLIENT','LongWord').SetUInt( $00001A01);
16253:  const 'URLPOLICY_AUTHENTICATE_CLEARTEXT_OK','LongWord').SetUInt( $00000000);
16254:  const 'URLPOLICY_AUTHENTICATE_CHALLENGE_RESPONSE','LongWord').SetUInt( $00010000);
16255:  const 'URLPOLICY_AUTHENTICATE_MUTUAL_ONLY','LongWord').SetUInt( $00030000);
16256:  const 'URLACTION_NETWORK_CURR_MAX','LongWord').SetUInt( $00001A01);
16257:  const 'URLACTION_NETWORK_MAX','LongWord').SetUInt( $00001BFF);
16258:  const 'URLACTION_JAVA_MIN','LongWord').SetUInt( $00001C00);
16259:  const 'URLACTION_JAVA_PERMISSIONS','LongWord').SetUInt( $00001C00);
16260:  const 'URLPOLICY_JAVA_PROHIBIT','LongWord').SetUInt( $00000000);
16261:  const 'URLPOLICY_JAVA_HIGH','LongWord').SetUInt( $00010000);
16262:  const 'URLPOLICY_JAVA_MEDIUM','LongWord').SetUInt( $00020000);
16263:  const 'URLPOLICY_JAVA_LOW','LongWord').SetUInt( $00030000);
16264:  const 'URLPOLICY_JAVA_CUSTOM','LongWord').SetUInt( $00800000);
16265:  const 'URLACTION_JAVA_CURR_MAX','LongWord').SetUInt( $00001C00);
16266:  const 'URLACTION_JAVA_MAX','LongWord').SetUInt( $00001CFF);
16267:  const 'URLACTION_INFODELIVERY_MIN','LongWord').SetUInt( $00001D00);
16268:  const 'URLACTION_INFODELIVERY_NO_ADDING_CHANNELS','LongWord').SetUInt( $00001D00);
16269:  const 'URLACTION_INFODELIVERY_NO_EDITING_CHANNELS','LongWord').SetUInt( $00001D01);
16270:  const 'URLACTION_INFODELIVERY_NO_REMOVING_CHANNELS','LongWord').SetUInt( $00001D02);
16271:  const 'URLACTION_INFODELIVERY_NO_ADDING_SUBSCRIPTIONS','LongWord').SetUInt( $00001D03);
16272:  const 'URLACTION_INFODELIVERY_NO_EDITING_SUBSCRIPTIONS','LongWord').SetUInt( $00001D04);
16273:  const 'URLACTION_INFODELIVERY_NO_REMOVING_SUBSCRIPTIONS','LongWord').SetUInt( $00001D05);
16274:  const 'URLACTION_INFODELIVERY_NO_CHANNEL_LOGGING','LongWord').SetUInt( $00001D06);
16275:  const 'URLACTION_INFODELIVERY_CURR_MAX','LongWord').SetUInt( $00001D06);
16276:  const 'URLACTION_INFODELIVERY_MAX','LongWord').SetUInt( $00001Dff);
16277:  const 'URLACTION_CHANNEL_SOFTDIST_MIN','LongWord').SetUInt( $00001E00);
16278:  const 'URLACTION_CHANNEL_SOFTDIST_PERMISSIONS','LongWord').SetUInt( $00001E05);
16279:  const 'URLPOLICY_CHANNEL_SOFTDIST_PROHIBIT','LongWord').SetUInt( $00010000);
16280:  const 'URLPOLICY_CHANNEL_SOFTDIST_PRECACHE','LongWord').SetUInt( $00020000);
16281:  const 'URLPOLICY_CHANNEL_SOFTDIST_AUTOINSTALL','LongWord').SetUInt( $00030000);
16282:  const 'URLACTION_CHANNEL_SOFTDIST_MAX','LongWord').SetUInt( $00001EFF);
16283:  const 'URLACTION_BEHAVIOR_MIN','LongWord').SetUInt( $00002000);
16284:  const 'URLACTION_BEHAVIOR_RUN','LongWord').SetUInt( $00002000);
16285:  const 'URLPOLICY_BEHAVIOR_CHECK_LIST','LongWord').SetUInt( $00010000);
16286:  const 'URLACTION_FEATURE_MIN','LongWord').SetUInt( $00002100);
16287:  const 'URLACTION_FEATURE_MIME_SNIFFING','LongWord').SetUInt( $00002100);
16288:  const 'URLACTION_FEATURE_ZONE_ELEVATION','LongWord').SetUInt( $00002101);
16289:  const 'URLACTION_FEATURE_WINDOW_RESTRICTIONS','LongWord').SetUInt( $00002102);
16290:  const 'URLACTION_AUTOMATIC_DOWNLOAD_UI_MIN','LongWord').SetUInt( $00002200);
16291:  const 'URLACTION_AUTOMATIC_DOWNLOAD_UI','LongWord').SetUInt( $00002200);
16292:  const 'URLACTION_AUTOMATIC_ACTIVEX_UI','LongWord').SetUInt( $00002201);
16293:  const 'URLACTION_ALLOW_RESTRICTEDPROTOCOLS','LongWord').SetUInt( $00002300);
16294:  const 'URLPOLICY_ALLOW','LongWord').SetUInt( $00);
16295:  const 'URLPOLICY_QUERY','LongWord').SetUInt( $01);
16296:  const 'URLPOLICY_DISALLOW','LongWord').SetUInt( $03);
16297:  const 'URLPOLICY_NOTIFY_ON_ALLOW','LongWord').SetUInt( $10);
16298:  const 'URLPOLICY_NOTIFY_ON_DISALLOW','LongWord').SetUInt( $20);
16299:  const 'URLPOLICY_LOG_ON_ALLOW','LongWord').SetUInt( $40);
16300:  const 'URLPOLICY_LOG_ON_DISALLOW','LongWord').SetUInt( $80);
16301:  const 'URLPOLICY_MASK_PERMISSIONS','LongWord').SetUInt( $0f);
16302:  Function GetUrlPolicyPermissions( dw : DWORD) : DWORD');
16303:  Function SetUrlPolicyPermissions( dw, dw2 : DWORD) : DWORD');
16304:  const 'URLZONE_PREDEFINED_MIN','LongInt').SetInt( 0);
16305:  const 'URLZONE_LOCAL_MACHINE','LongInt').SetInt( 0);
16306:  const 'URLZONE_INTRANET','LongInt').SetInt( URLZONE_LOCAL_MACHINE + 1);
16307:  const 'URLZONE_TRUSTED','LongInt').SetInt( URLZONE_INTRANET + 1);
16308:  const 'URLZONE_INTERNET','LongInt').SetInt( URLZONE_TRUSTED + 1);
16309:  const 'URLZONE_UNTRUSTED','LongInt').SetInt( URLZONE_INTERNET + 1);
16310:  const 'URLZONE_PREDEFINED_MAX','LongInt').SetInt( 999);
16311:  const 'URLZONE_USER_MIN','LongInt').SetInt( 1000);
16312:  const 'URLZONE_USER_MAX','LongInt').SetInt( 10000);
16313:  const 'URLTEMPLATE_CUSTOM','LongWord').SetUInt( $00000000);
16314:  const 'URLTEMPLATE_PREDEFINED_MIN','LongWord').SetUInt( $00010000);
16315:  const 'URLTEMPLATE_LOW','LongWord').SetUInt( $00010000);
16316:  const 'URLTEMPLATE_MEDIUM','LongWord').SetUInt( $00011000);
16317:  const 'URLTEMPLATE_HIGH','LongWord').SetUInt( $00012000);
16318:  const 'URLTEMPLATE_PREDEFINED_MAX','LongWord').SetUInt( $00020000);
16319:  const 'MAX_ZONE_PATH','LongInt').SetInt( 260);
16320:  const 'MAX_ZONE_DESCRIPTION','LongInt').SetInt( 200);
16321:  const 'ZAFLAGS_CUSTOM_EDIT','LongWord').SetUInt( $00000001);
16322:  const 'ZAFLAGS_ADD_SITES','LongWord').SetUInt( $00000002);
16323:  const 'ZAFLAGS_REQUIRE_VERIFICATION','LongWord').SetUInt( $00000004);
16324:  const 'ZAFLAGS_INCLUDE_PROXY_OVERRIDE','LongWord').SetUInt( $00000008);
16325:  const 'ZAFLAGS_INCLUDE_INTRANET_SITES','LongWord').SetUInt( $00000010);
16326:  const 'ZAFLAGS_NO_UI','LongWord').SetUInt( $00000020);
16327:  const 'ZAFLAGS_SUPPORTS_VERIFICATION','LongWord').SetUInt( $00000040);
16328:  const 'ZAFLAGS_UNC_AS_INTRANET','LongWord').SetUInt( $00000080);
16329:  const 'ZAFLAGS_USE_LOCKED_ZONES','LongWord').SetUInt( $00010000);
16330:   //PZoneAttributes', '^TZoneAttributes // will not work');
16331:  _ZONEATTRIBUTES','record cbSize:ULONG;szDisplayName:array [0..260-1] of Char;szDescription:array [0..200 -
        1] of Char;szIconPath: array [0..260 - 1] of char; dwTemplateMinLevel: DWORD;  dwTemplateRecommended:
       DWORD;  dwTemplateCurrentLevel: DWORD;  dwFlags: DWORD; end');
16332:   { _ZONEATTRIBUTES = packed record
16333:     cbSize: ULONG;
16334:     szDisplayName: array [0..260 - 1] of WideChar;
```

```
16335:     szDescription: array [0..200 - 1] of WideChar;
16336:     szIconPath: array [0..260 - 1] of WideChar;
16337:     dwTemplateMinLevel: DWORD;
16338:     dwTemplateRecommended: DWORD;
16339:     dwTemplateCurrentLevel: DWORD;
16340:     dwFlags: DWORD;
16341:   end; }
16342:   TZoneAttributes', '_ZONEATTRIBUTES');
16343:   ZONEATTRIBUTES', '_ZONEATTRIBUTES');
16344:  const 'URLZONEREG_DEFAULT','LongInt').SetInt( 0);
16345:  const 'URLZONEREG_HKLM','LongInt').SetInt( URLZONEREG_DEFAULT + 1);
16346:  const 'URLZONEREG_HKCU','LongInt').SetInt( URLZONEREG_HKLM + 1);
16347:   SIRegister_IInternetZoneManager(CL);
16348:   SIRegister_IInternetZoneManagerEx(CL);
16349:  const 'SOFTDIST_FLAG_USAGE_EMAIL','LongWord').SetUInt( $00000001);
16350:  const 'SOFTDIST_FLAG_USAGE_PRECACHE','LongWord').SetUInt( $00000002);
16351:  const 'SOFTDIST_FLAG_USAGE_AUTOINSTALL','LongWord').SetUInt( $00000004);
16352:  const 'SOFTDIST_FLAG_DELETE_SUBSCRIPTION','LongWord').SetUInt( $00000008);
16353:  const 'SOFTDIST_ADSTATE_NONE','LongWord').SetUInt( $00000000);
16354:  const 'SOFTDIST_ADSTATE_AVAILABLE','LongWord').SetUInt( $00000001);
16355:  const 'SOFTDIST_ADSTATE_DOWNLOADED','LongWord').SetUInt( $00000002);
16356:  const 'SOFTDIST_ADSTATE_INSTALLED','LongWord').SetUInt( $00000003);
16357:   //PCodeBaseHold', '^TCodeBaseHold // will not work');
16358:   _tagCODEBASEHOLD', 'record cbSize : ULONG; szDistUnit : LPWSTR; '
16359:    +'szCodeBase : LPWSTR; dwVersionMS : DWORD; dwVersionLS : DWORD; dwStyle : DWORD; end');
16360:   TCodeBaseHold', '_tagCODEBASEHOLD');
16361:   CODEBASEHOLD', '_tagCODEBASEHOLD');
16362:   //PSoftDistInfo', '^TSoftDistInfo // will not work');
16363:   _tagSOFTDISTINFO', 'record cbSize : ULONG; dwFlags : DWORD; dwAd'
16364:    +'State : DWORD; szTitle : LPWSTR; szAbstract : LPWSTR; szHREF : LPWSTR; dwI'
16365:    +'nstalledVersionMS : DWORD; dwInstalledVersionLS : DWORD; dwUpdateVersionMS'
16366:    +' : DWORD; dwUpdateVersionLS : DWORD; dwAdvertisedVersionMS : DWORD; dwAdve'
16367:    +'rtisedVersionLS : DWORD; dwReserved : DWORD; end');
16368:   TSoftDistInfo', '_tagSOFTDISTINFO');
16369:   SOFTDISTINFO', '_tagSOFTDISTINFO');
16370:   SIRegister_ISoftDistExt(CL);
16371:  Function GetSoftwareUpdateInfo( szDistUnit : LPCWSTR; var dsi : TSoftDistInfo) : HResult');
16372:  Function SetSoftwareUpdateAdvertisementState(szDistUnit: LPCWSTR; dwAdState, dwAdvertisedVersionMS,
      dwAdvertisedVersionLS : DWORD) : HResult');
16373:   SIRegister_IDataFilter(CL);
16374:  // PProtocolFilterData', '^TProtocolFilterData // will not work');
16375:   _tagPROTOCOLFILTERDATA', 'record cbSize : DWORD; ProtocolSink : '
16376:    +'IInternetProtocolSink; Protocol : IInternetProtocol; Unk : IUnknown; dwFil'
16377:    +'terFlags : DWORD; end');
16378:   TProtocolFilterData', '_tagPROTOCOLFILTERDATA');
16379:   PROTOCOLFILTERDATA', '_tagPROTOCOLFILTERDATA');
16380:   //PDataInfo', '^TDataInfo // will not work');
16381:   _tagDATAINFO', 'record ulTotalSize : ULONG; ulavrPacketSize : UL'
16382:    +'ONG; ulConnectSpeed : ULONG; ulProcessorSpeed : ULONG; end');
16383:   TDataInfo', '_tagDATAINFO');
16384:   DATAINFO', '_tagDATAINFO');
16385:   SIRegister_IEncodingFilterFactory(CL);
16386:  Function IsLoggingEnabled( pszUrl : PChar) : BOOL');
16387:  //Function IsLoggingEnabledA( pszUrl : PAnsiChar) : BOOL');
16388:  //Function IsLoggingEnabledW( pszUrl : PWideChar) : BOOL');
16389:   //PHitLoggingInfo', '^THitLoggingInfo // will not work');
16390:   _tagHIT_LOGGING_INFO', 'record dwStructSize : DWORD; lpszLoggedU'
16391:    +rlName : LPSTR; StartTime : TSystemTime;EndTime:TSystemTime; lpszExtendedInfo : LPSTR; end');
16392:   THitLoggingInfo', '_tagHIT_LOGGING_INFO');
16393:   HIT_LOGGING_INFO', '_tagHIT_LOGGING_INFO');
16394:  Function WriteHitLogging( const Logginginfo : THitLoggingInfo) : BOOL');
16395: end;
16396:
16397: procedure SIRegister_DFFUtils(CL: TPSPascalCompiler);
16398: begin
16399:  Procedure reformatMemo( const m : TCustomMemo)');
16400:  Procedure SetMemoMargins( m : TCustomMemo; const L, T, R, B : integer)');
16401:  Procedure MoveToTop( memo : TMemo)');
16402:  Procedure ScrollToTop( memo : TMemo)');
16403:  Function LineNumberClicked( memo : TMemo) : integer');
16404:  Function MemoClickedLine( memo : TMemo) : integer');
16405:  Function ClickedMemoLine( memo : TMemo) : integer');
16406:  Function MemoLineClicked( memo : TMemo) : integer');
16407:  Function LinePositionClicked( Memo : TMemo) : integer');
16408:  Function ClickedMemoPosition( memo : TMemo) : integer');
16409:  Function MemoPositionClicked( memo : TMemo) : integer');
16410:  Procedure AdjustGridSize( grid : TDrawGrid)');
16411:  Procedure DeleteGridRow( Grid : TStringGrid; const ARow : integer)');
16412:  Procedure InsertgridRow( Grid : TStringGrid; const ARow : integer)');
16413:  Procedure Sortgrid( Grid : TStringGrid; const SortCol : integer);');
16414:  Procedure Sortgrid1(Grid:TStringGrid; const SortCol : integer; sortascending : boolean);');
16415:  Procedure sortstrDown( var s : string)');
16416:  Procedure sortstrUp( var s : string)');
16417:  Procedure rotatestrleft( var s : string)');
16418:  Function dffstrtofloatdef( s : string; default : extended) : extended');
16419:  Function deblank( s : string) : string');
16420:  Function IntToBinaryString( const n : integer; MinLength : integer) : string');
16421:  Procedure FreeAndClearListBox( C : TListBox);');
16422:  Procedure FreeAndClearMemo( C : TMemo);');
```

```
16423:  Procedure FreeAndClearStringList( C : TStringList);');
16424:  Function dffgetfilesize( f : TSearchrec) : int64');
16425: end;
16426:
16427: procedure SIRegister_MathsLib(CL: TPSPascalCompiler);
16428: begin
16429:   CL.AddTypeS('intset', 'set of byte');
16430:   TPoint64', 'record x : int64; y : int64; end');
16431:  Function GetNextPandigital( size : integer; var Digits : array of integer) : boolean');
16432:  Function IsPolygonal( T : int64; var rank : array of integer) : boolean');
16433:  Function GeneratePentagon( n : integer) : integer');
16434:  Function IsPentagon( p : integer) : boolean');
16435:  Function isSquare( const N : int64) : boolean');
16436:  Function isCube( const N : int64) : boolean');
16437:  Function isPalindrome( const n : int64) : boolean;');
16438:  Function isPalindrome1( const n : int64; var len : integer) : boolean;');
16439:  Function GetEulerPhi( n : int64) : int64');
16440:  Function dffIntPower( a, b : int64) : int64;');
16441:  Function IntPower1( a : extended; b : int64) : extended;');
16442:  Function gcd2( a, b : int64) : int64');
16443:  Function GCDMany( A : array of integer) : integer');
16444:  Function LCMMany( A : array of integer) : integer');
16445:  Procedure ContinuedFraction(A: array of int64;const wholepart:integer;var numerator,denominator:int64);
16446:  Function dffFactorial( n : int64) : int64');
16447:  Function digitcount( n : int64) : integer');
16448:  Function nextpermute( var a : array of integer) : boolean');
16449:  Function convertfloattofractionstring(N:extended; maxdenom:integer; multipleof : boolean) : string');
16450:  Function convertStringToDecimal( s : string; var n : extended) : Boolean');
16451:  Function InttoBinaryStr( nn : integer) : string');
16452:  Function StrtoAngle( const s : string; var angle : extended) : boolean');
16453:  Function AngleToStr( angle : extended) : string');
16454:  Function deg2rad( deg : extended) : extended');
16455:  Function rad2deg( rad : extended) : extended');
16456:  Function GetLongToMercProjection( const long : extended) : extended');
16457:  Function GetLatToMercProjection( const Lat : Extended) : Extended');
16458:  Function GetMercProjectionToLong( const ProjLong : extended) : extended');
16459:  Function GetMercProjectionToLat( const ProjLat : extended) : extended');
16460:   SIRegister_TPrimes(CL);
16461:   //RIRegister_TPrimes(CL);
16462:  //CL.AddConstantN('deg','LongInt').SetInt( char( 176));
16463:  CL.AddConstantN('minmark','LongInt').SetInt(( 180));
16464:  Function Random64( const N : Int64) : Int64;');
16465:  Procedure Randomize64');
16466:  Function Random641 : extended;');
16467:  Procedure GetParens( Variables : string; OpChar : char; var list : TStringlist)//DFFUtils
16468: end;
16469:
16470: procedure SIRegister_UGeometry(CL: TPSPascalCompiler);
16471: begin
16472:   TrealPoint', 'record x : extended; y : extended; end');
16473:   Tline', 'record p1 : TPoint; p2 : TPoint; end');
16474:   TRealLine', 'record p1 : TRealPoint; p2 : TRealPoint; end');
16475:   TCircle', 'record cx : integer; cy : integer; r : integer; end');
16476:   TRealCircle', 'record cx : extended; cy : extended; r : extended; end');
16477:   PPResult', '( PPoutside, PPInside, PPVertex, PPEdge, PPError )');
16478:  Function realpoint( x, y : extended) : TRealPoint');
16479:  Function dist( const p1, p2 : TrealPoint) : extended');
16480:  Function intdist( const p1, p2 : TPoint) : integer');
16481:  Function dffLine( const p1, p2 : TPoint) : Tline;');
16482:  Function Line1( const p1, p2 : TRealPoint) : TRealline;');
16483:  Function dffCircle( const cx, cy, R : integer) : TCircle;');
16484:  Function Circle1( const cx, cy, R : extended) : TRealCircle;');
16485:  Function GetTheta( const L : TLine) : extended;');
16486:  Function GetTheta1( const p1, p2 : TPoint) : extended;');
16487:  Function GetTheta2( const p1, p2 : TRealPoint) : extended;');
16488:  Procedure Extendline( var L : TLine; dist : integer);');
16489:  Procedure Extendline1( var L : TRealLine; dist : extended);');
16490:  Function Linesintersect( line1, line2 : TLine) : boolean');
16491:  Function ExtendedLinesIntersect(Line1,Line2:TLine; const extendlines:bool;var IP:TPoint):bool;
16492:  Function ExtendedLinesIntersect1(const Line1,Line2:TLine;const extendlines:bool;var IP:TRealPoint):bool;
16493:  Function Intersect( L1, L2 : TLine; var pointonborder : boolean; var IP : TPoint) : boolean');
16494:  Function PointPerpendicularLine( L : TLine; P : TPoint) : TLine');
16495:  Function PerpDistance( L : TLine; P : TPoint) : Integer');
16496:  Function AngledLineFromLine( L : TLine; P : TPoint; Dist : extended; alpha : extended) : TLine;');
16497:  Function
       AngledLineFromLine1(L:TLine;P:TPoint;Dist:extended;alpha:extended;useScreenCoordinates:bool):TLine;
16498:  Function PointInPoly( const p : TPoint; Points : array of TPoint) : PPResult');
16499:  Function PolygonArea(const points:array of TPoint;const screencoordinates:boolean;var
       Clockwise:bool):integer;
16500:  Procedure InflatePolygon(const points:array of Tpoint; var points2:array of TPoint;var area:integer;
       const screenCoordinates : boolean; const inflateby : integer)');
16501:  Function PolyBuiltClockwise(const points:array of TPoint;const screencoordinates:boolean):bool;
16502:  Function DegtoRad( d : extended) : extended');
16503:  Function RadtoDeg( r : extended) : extended');
16504:  Procedure TranslateLeftTo( var L : TLine; newend : TPoint);');
16505:  Procedure TranslateLeftTo1( var L : TrealLine; newend : TrealPoint);');
16506:  Procedure RotateRightEndBy( var L : TLine; alpha : extended)');
16507:  Procedure RotateRightEndTo( var L : TLine; alpha : extended);');
16508:  Procedure RotateRightEndTo1( var p1, p2 : Trealpoint; alpha : extended);');
```

```
16509:  Function CircleCircleIntersect( c1, c2 : TCircle; var IP1, Ip2 : TPoint) : boolean;');
16510:  Function CircleCircleIntersect1( c1, c2 : TRealCircle; var IP1, Ip2 : TRealPoint) : boolean;');
16511:  Function PointCircleTangentLines( const C : TCircle; const P : TPoint; var L1, L2 : TLine) : boolean');
16512:  Function CircleCircleExtTangentLines(C1,C2:TCircle;var C3:TCircle;var L1,L2,PL1,PL2,TL1,Tl2:TLine):Bool;
16513: end;
16514:
16515:
16516: procedure SIRegister_UAstronomy(CL: TPSPascalCompiler);
16517: begin
16518:   TCoordType', '( ctUnknown, ctAzAlt, ctEclLonLat, ctRADecl, ctHADecl, ctGalLonLat )');
16519:   TDTType', '( ttLocal, ttUT, ttGST, ttLST )');
16520:   TRPoint', 'record x : extended; y : extended; CoordType : TCoordType; end');
16521:   TSunrec', 'record TrueEclLon:extended;
      AppEclLon:extended;AUDistance:extended;TrueHADecl:TRPoint;TrueRADecl : TRPoint;
      TrueAzAl:TRPoint;AppHADecl:TRPoint;AppRADecl:TRPoint;AppAzAlt:TRpoint;SunMeanAnomaly:extended;end;
16522:   TMoonRec', 'record ECLonLat : TRPoint; AZAlt : TRPoint; RADecl :'
16523:    +' TRPoint; HorizontalParallax : extended; AngularDiameter : extended; KMtoE'
16524:    +'arth : extended; Phase : extended; end');
16525:   TMoonEclipseAdd', 'record UmbralStartTime : TDatetime; UmbralEnd'
16526:    +'Time : TDatetime; TotalStartTime : TDatetime; TotalEndTime : TDateTime; end');
16527:   TEclipseRec', 'record Msg : string; Status : integer; FirstConta'
16528:    +'ct : TDatetime; LastContact : TDateTime; Magnitude:Extended;MaxeclipseUTime:TDateTime;end');
16529:   TPlanet', '( MERCURY, VENUS, MARS, JUPITER, SATURN, URANUS, NEPTUNE, PLUTO )');
16530:   TPlanetRec', 'record AsOf : TDateTime; Name : string; MeanLon : '
16531:    +'extended; MeanLonMotion : extended; LonOfPerihelion : extended; Eccentrici'
16532:    +'ty : extended; Inclination : extended; LonAscendingNode : extended; SemiMa'
16533:    +'jorAxis : extended; AngularDiameter : extended; Magnitude : extended; end');
16534:   TPlanetLocRec', 'record PlanetBaseData : TPlanetrec; HelioCentricLonLat : TRpoint; RadiusVector :
      extended; UncorrectedEarthDistance : extended; GeoEclLonLat :TRpoint; CorrectedEarthDistance:extended;
      ApparentRaDecl:TRPoint; end');
16535:   SIRegister_TAstronomy(CL);
16536:  Function AngleToStr( angle : extended) : string');
16537:  Function StrToAngle( s : string; var angle : extended) : boolean');
16538:  Function HoursToStr24( t : extended) : string');
16539:  Function RPoint( x, y : extended) : TRPoint');
16540:  Function getStimename( t : TDTType) : string');
16541: end;
16542:
16543: procedure SIRegister_UCardComponentV2(CL: TPSPascalCompiler);
16544: begin
16545:   TCardValue', 'Integer');
16546:   TCardSuit', '( Spades, Diamonds, Clubs, Hearts )');
16547:   TShortSuit', '( cardS, cardD, cardC, cardH )');
16548:   Type(TDecks,Standard1,Standard2,Fishes1,Fishes2,Beach,Leaves1,Leaves2,Robot,Roses,Shell,Castle,Hand);
16549:   SIRegister_TCard(CL);
16550:   SIRegister_TDeck(CL);
16551: end;
16552:
16553: procedure SIRegister_UTGraphSearch(CL: TPSPascalCompiler);
16554: begin
16555:   tMethodCall', 'Procedure');
16556:   tVerboseCall', 'Procedure ( s : string)');
16557:  // PTEdge', '^TEdge // will not work');
16558:   TEdge', 'record FromNodeIndex : Integer; ToNodeIndex : Integer; '
16559:    +'Weight : integer; work : integer; Len : integer; Highlight : boolean; end');
16560:   SIRegister_TNode(CL);
16561:   SIRegister_TGraphList(CL);
16562: end;
16563:
16564: procedure SIRegister_UParser10(CL: TPSPascalCompiler);
16565: begin
16566:   ParserFloat', 'extended');
16567:   //PParserFloat', '^ParserFloat // will not work');
16568:   TDFFToken', '( variab, constant, minus, sum, diff, prod, divis, mod'
16569:    +'ulo, IntDiv, IntDIVZ, integerpower, realpower,square,third,fourth,FuncOneVar,FuncTwoVar )');
16570:   //POperation', '^TOperation // will not work');
16571:   TDFFOperation', 'record Arg1 : PParserFloat; Arg2 : PParserFloat; D'
16572:    +'est : PParserFloat; NextOperation : POperation; Operation : TMathProcedure'
16573:    +'; Token : TDFFToken; end');
16574:   TMathProcedure','procedure(AnOperation: TDFFOperation)');
16575:   (CL.FindClass('TOBJECT'),'EMathParserError');
16576:   CL.FindClass('TOBJECT'),'ESyntaxError');
16577:   (CL.FindClass('TOBJECT'),'EExpressionHasBlanks');
16578:   (CL.FindClass('TOBJECT'),'EExpressionTooComplex');
16579:   (CL.FindClass('TOBJECT'),'ETooManyNestings');
16580:   (CL.FindClass('TOBJECT'),'EMissMatchingBracket');
16581:   (CL.FindClass('TOBJECT'),'EBadName');
16582:   (CL.FindClass('TOBJECT'),'EParserInternalError');
16583:   ('TExParserExceptionEvent', 'Procedure ( Sender : TObject; E : Exception)');
16584:   SIRegister_TCustomParser(CL);
16585:   SIRegister_TExParser(CL);
16586: end;
16587:
16588:   function isService: boolean;
16589:   begin
16590:     result:= NOT(Application is TApplication);
16591:     {result:= Application is TServiceApplication;}
16592:   end;
16593:   function isApplication: boolean;
```

```
16594:   begin
16595:     result:= Application is TApplication;
16596:   end;
16597:   //SM_REMOTESESSION = $1000
16598:   function isTerminalSession: boolean;
16599:   begin
16600:     result:= GetSystemMetrics(SM_REMOTESESSION) > 0;
16601:   end;
16602:
16603: procedure SIRegister_cyIEUtils(CL: TPSPascalCompiler);
16604: begin
16605:   CL.AddTypeS('TwbPageSetup', 'record font : String; footer : String; header : '
16606:    +'String; margin_bottom : String; margin_left : String; margin_right : Strin'
16607:    +'g; margin_top : String; Print_Background : String; Shrink_To_Fit : String; end');
16608:  Function cyURLEncode( const S : string) : string');
16609:  Function MakeResourceURL(const ModuleName:string;const ResName:PChar;const ResType:PChar):string;
16610:  Function MakeResourceURL1(const Module:HMODULE;const ResName:PChar;const ResType:PChar):string;;
16611:  Function cyColorToHtml( aColor : TColor) : String');
16612:  Function HtmlToColor( aHtmlColor : String) : TColor');
16613:  //Function GetStreamEncoding( aStream : TStream) : TEncoding');
16614:  // Function IsStreamEncodedWith( aStream : TStream; Encoding : TEncoding) : Boolean');
16615:  Function AddHtmlUnicodePrefix( aHtml : String) : String');
16616:  Function RemoveHtmlUnicodePrefix( aHtml : String) : String');
16617:  Procedure GetPageSetupFromRegistry( var awbPageSetup : TwbPageSetup)');
16618:  Procedure SetPageSetupToRegistry( awbPageSetup : TwbPageSetup)');
16619:  CL.AddConstantN('IEBodyBorderless','String').SetString( 'none');
16620:  CL.AddConstantN('IEBodySingleBorder','String').SetString( '');
16621:  CL.AddConstantN('IEDesignModeOn','String').SetString( 'On');
16622:  CL.AddConstantN('IEDesignModeOff','String').SetString( 'Off');
16623:  CL.AddConstantN('cHtmlUnicodePrefixChar','Char').SetString( #$FEFF);
16624:  CL.AddConstantN('cHtmlUnicodePrefixChar','Char').SetString( #$FE);
16625: end;
16626:
16627:
16628: procedure SIRegister_UcomboV2(CL: TPSPascalCompiler);
16629: begin
16630:  CL.AddConstantN('UMaxEntries','LongInt').SetInt( 600);
16631:   CL.AddTypeS('TCombotype', '( Combinations, Permutations, CombinationsDown, Pe'
16632:    +'rmutationsDown, CombinationsCoLex, CombinationsCoLexDown, PermutationsRepe'
16633:    +'at, PermutationsWithRep, PermutationsRepeatDown, CombinationsWithrep, Comb'
16634:    +'inationsRepeat, CombinationsRepeatDown )');
16635:   CL.AddTypeS('TByteArray64', 'array[0..600 + 1] of int64;');
16636:   SIRegister_TComboSet(CL);
16637: end;
16638:
16639:  procedure SIRegister_cyBaseComm(CL: TPSPascalCompiler);
16640: begin
16641:   TcyCommandType', '( ctDevelopperDefined, ctUserDefined )');
16642:   TStreamContentType', '( scDevelopperDefined, scUserDefined, scString )');
16643:   TProcOnReceiveCommand', 'Procedure (Sender: TObject; aCommand: Word; userParam : Integer)');
16644:   TProcOnReceiveString', 'Procedure ( Sender : TObject; fromBaseCo'
16645:    +'mmHandle : THandle; aString : String; userParam : Integer)');
16646:   TProcOnReceiveMemoryStream', 'Procedure ( Sender : TObject; from'
16647:    +'BaseCommHandle : THandle; aStream : TMemoryStream; userParam : Integer)');
16648:   SIRegister_TcyBaseComm(CL);
16649:  CL.AddConstantN('MsgCommand','LongInt').SetInt( WM_USER + 1);
16650:  CL.AddConstantN('MsgResultOk','LongInt').SetInt( 99);
16651:  Function ValidateFileMappingName( aName : String) : String');
16652:  procedure makeCaption(leftSide, Rightside:string; form:TForm);
16653: end;
16654:
16655: procedure SIRegister_cyDERUtils(CL: TPSPascalCompiler);
16656: begin
16657:   CL.AddTypeS('DERString', 'String');
16658:   CL.AddTypeS('DERChar', 'Char');
16659:   CL.AddTypeS('TElementsType', '( etText, etExpressionKeyWord, etNumbers, etInt'
16660:    +'eger, etFloat, etPercentage, etwebSite, etWebMail, etMoney, etDate, etTextLine, etParagraph )');
16661:   CL.AddTypeS('TElementsTypes', 'set of TElementsType');
16662:   CL.AddTypeS('DERNString', 'String');
16663:  const DERDecimalSeparator','String').SetString( '.');
16664:  const DERDefaultChars','String')('+°@/%-
      _.:0123456789abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ');
16665:  const DERNDefaultChars','String').SetString( '/%-.0123456789abcdefghjkmnopqrstuvwxyz');
16666:  CL.AddDelphiFunction('Function isValidWebSiteChar( aChar : Char) : Boolean');
16667:  Function isValidWebMailChar( aChar : Char) : Boolean');
16668:  Function isValidwebSite( aStr : String) : Boolean');
16669:  Function isValidWebMail( aStr : String) : Boolean');
16670:  Function ValidateDate( aDERStr : DERString; var RsltFormat : String) : Boolean');
16671:  Function DERStrToDate( aDERStr, aFormat : String) : TDate');
16672:  Function IsDERChar( aChar : Char) : Boolean');
16673:  Function IsDERDefaultChar( aChar : Char) : Boolean');
16674:  Function IsDERMoneyChar( aChar : Char) : Boolean');
16675:  Function IsDERExceptionCar( aChar : Char) : Boolean');
16676:  Function IsDERSymbols( aDERString : String) : Boolean');
16677:  Function StringToDERCharSet( aStr : String) : DERString');
16678:  Function IsDERNDefaultChar( aChar : Char) : Boolean');
16679:  Function IsDERNChar( aChar : Char) : Boolean');
16680:  Function DERToDERNCharset( aDERStr : DERString) : DERNString');
16681:  Function DERExtractwebSite( aDERStr : DERString; SmartRecognition : Boolean) : String');
```

```
16682:  Function DERExtractWebMail( aDERStr : DERString) : String');
16683:  Function DERExtractPhoneNr( aDERStr : DERString) : String');
16684:  Function DERExecute(aDERStr:DERString;SmartNumbersRecognition,
       SmartWebsiteRecognition:Boolean):TElementsType;
16685:  Function DERExecute1(aDERStr : DERString; var RsltNumbers, RsltInteger, RsltFloat, RsltPercentage,
       RsltwebSite, RsltWebMail,RsltMoney,RsltDate:String;SmartNumbersRecognition,
       SmartWebsiteRecognition:Boolean):TElementsType;
16686:  Function RetrieveElementValue( aStr : String; SmartNumbersRecognition, SmartWebsiteRecognition: Boolean;
       aElementsType : TElementsType) : String;');
16687:  Procedure RetrieveElementValue1( aStr : String; SmartNumbersRecognition, SmartWebsiteRecognition :
       Boolean; var RsltDERStr : DERString; var RsltElementType : TElementsType);');
16688: end;
16689:
16690: procedure SIRegister_cyImage(CL: TPSPascalCompiler);
16691: begin
16692:   pRGBQuadArray', '^TRGBQuadArray // will not work');
16693:  Function BitmapsCompare(Bmp1:TBitmap;Bmp2:TBitmap;FirstCol,LastCol,FirstRow,LastRow:Int):Integer');
16694:  Procedure BitmapSetPercentBrightness( Bmp : TBitmap; IncPercent : Integer; RefreshBmp : Boolean)');
16695:  Procedure BitmapSetPixelsBrightness( Bmp : TBitmap; IncPixels : Integer; RefreshBmp : Boolean)');
16696:  Procedure BitmapSetPercentContrast( Bmp : TBitmap; IncPercent : Integer; RefreshBmp : Boolean)');
16697:  Procedure BitmapSetPixelsContrast( Bmp : TBitmap; IncPixels : Integer; RefreshBmp : Boolean)');
16698:  Procedure BitmapNegative( Bmp : TBitmap; RefreshBmp : Boolean)');
16699:  Procedure BitmapModifyRGB(Bmp:TBitmap;IncRed:Integer;IncGreen:Int;IncBlue:Int;RefreshBmp:Bool;
16700:  Procedure BitmapReplaceColor(Bmp : TBitmap; OldColor : TColor; NewColor : TColor; RangeRed, RangeGreen,
       RangeBlue : Word; SingleDestinationColor : Boolean; RefreshBmp : Boolean);');
16701:  Procedure BitmapReplaceColor1(Bmp:TBitmap; OldColor:TColor;NewColor:TColor;PercentRange1Red,
       PercentRange1Green, PercentRange1Blue:Extended;PercentRange2Red,PercentRange2Green,
       PercentRange2Blue:Double;SingleDestinationColor: Boolean;RefreshBmp:Bool;');
16702:  Procedure BitmapReplaceColors(Bmp: TBitmap; Array_OldPalette, Array_NewPalette : array of TColor;
       SingleDestinationColor, RefreshBmp : Boolean)');
16703:  Procedure BitmapResize(SourceBmp TBitmap;DestinationBmp:TBitmap;Percent:Extended;RefreshBmp : Boolean)');
16704:  Procedure BitmapRotate( Bmp : TBitmap; AngleDegree : Word; AdjustSize : Boolean; BkColor : TColor)');
16705:  Procedure BitmapBlur(SourceBmp:TBitmap;DestinationBmp:TBitmap;Pixels:Word;Percent:Integer;RefreshBmp:Bool;
16706:  Procedure GraphicMirror(Source:TGraphic;Destination:TCanvas;Left,Top:Integer;Horizontal,Vertical:Bool;
16707:  Procedure GraphicMirror1(Source:TGraphic;Destination:TBitmap;Horizontal:Boolean;Vertical:Boolean);');
16708:  Function BitmapCreate(BmpWidth:Integer;BmpHeight:Integer;BgColor:TColor;PixelFormat:TPixelFormat):TBitmap;
16709:  Procedure BitmapSaveToJpegFile( Bmp : TBitmap; FileName : String; QualityPercent : Word)');
16710:  Procedure JpegSaveToBitmapFile( JPEG : TJPEGImage; FileName : String)');
16711: end;
16712:
16713: procedure SIRegister_WaveUtils(CL: TPSPascalCompiler);
16714: begin
16715:   TMS2StrFormat', '( msHMSh, msHMS, msMSh, msMS, msSh, msS, msAh,msA )');
16716:   TPCMChannel', '( cMono, cStereo )');
16717:   TPCMSamplesPerSec', '( ss8000Hz, ss11025Hz, ss22050Hz, ss44100Hz, ss48000Hz )');
16718:   TPCMBitsPerSample', '( bs8Bit, bs16Bit )');
16719:   TPCMFormat', '( nonePCM, Mono8Bit8000Hz, Stereo8bit8000Hz, Mono1'
16720:    +'6bit8000Hz, Stereo16bit8000Hz, Mono8bit11025Hz, Stereo8bit11025Hz, Mono16b'
16721:    +'it11025Hz, Stereo16bit11025Hz, Mono8bit22050Hz, Stereo8bit22050Hz, Mono16b'
16722:    +'it22050Hz, Stereo16bit22050Hz, Mono8bit44100Hz, Stereo8bit44100Hz, Mono16b'
16723:    +'it44100Hz, Stereo16bit44100Hz, Mono8bit48000Hz, Stereo8bit48000Hz, Mono16b'
16724:    +'it48000Hz, Stereo16bit48000Hz )');
16725:   PWaveFormatEx', 'record wFormatTag : word; nChannels: word; nSamplesPerSec: DWORD; '
16726:    +'nAvgBytesPerSec: DWORD; nBlockAlign: Word; wBitsPerSample: Word;  ecbSiz: Word; end');
16727:    tWaveFormatEx', 'PWaveFormatEx');
16728:    HMMIO', 'Integer');
16729:   TWaveDeviceFormats', 'set of TPCMFormat');
16730:   TWaveOutDeviceSupport', '( dsVolume, dsStereoVolume, dsPitch, ds'
16731:    +'PlaybackRate, dsPosition, dsAsynchronize, dsDirectSound )');
16732:   CL.AddTypeS('TWaveOutDeviceSupports', 'set of TWaveOutDeviceSupport');
16733:   TWaveOutOption', '( woSetVolume, woSetPitch, woSetPlaybackRate )');
16734:   TWaveOutOptions', 'set of TWaveOutOption');
16735:   TStreamOwnership2', '( soReference, soOwned )');
16736:   TWaveStreamState', '( wssReady, wssReading, wssWriting, wssWritingEx )');
16737:  // PRawWave', '^TRawWave // will not work');
16738:   TRawWave', 'record pData : TObject; dwSize : DWORD; end');
16739:   CL.AddClassN(CL.FindClass('TOBJECT'),'EWaveAudioError');
16740:   CL.AddClassN(CL.FindClass('TOBJECT'),'EWaveAudioSysError');
16741:   CL.AddClassN(CL.FindClass('TOBJECT'),'EWaveAudioInvalidOperation');
16742:   TWaveAudioEvent', 'Procedure ( Sender : TObject)');
16743:   TWaveAudioGetFormatEvent', 'Procedure ( Sender : TObject; var pW'
16744:    +'aveFormat : PWaveFormatEx; var FreeIt : Boolean)');
16745:   TWaveAudioGetDataEvent', 'Function ( Sender : TObject; const Buf'
16746:    +'fer : TObject; BufferSize : DWORD; var NumLoops : DWORD) : DWORD');
16747:   TWaveAudioGetDataPtrEvent', 'Function ( Sender : TObject; var Bu'
16748:    +'ffer : TObject; var NumLoops : DWORD; var FreeIt : Boolean) : DWORD');
16749:   TWaveAudioDataReadyEvent', 'Procedure ( Sender : TObject; const '
16750:    +'Buffer : TObject; BufferSize : DWORD; var FreeIt : Boolean)');
16751:   TWaveAudioLevelEvent', 'Procedure ( Sender : TObject; Level : Integer)');
16752:   TWaveAudioFilterEvent', 'Procedure (Sender : TObject; const Buffer:TObject; BufferSize:DWORD);
16753:  GetWaveAudioInfo(mmIO:HMMIO;var pWaveFormat:PWaveFormatEx;var DataSize,DataOffset:DWORD):Bool;
16754:  CreateWaveAudio(mmIO: HMMIO; const pWaveFormat:PWaveFormatEx;var ckRIFF,ckData:TMMCKInfo):Bool;
16755:  CloseWaveAudio( mmIO : HMMIO; var ckRIFF, ckData : TMMCKInfo)');
16756:  GetStreamWaveAudioInfo(Stream:TStream; var pWaveFormat:PWaveFormatEx;var DataSize,DataOffset:DWORD):Bool;
16757:  CreateStreamWaveAudio(Stream: TStream;const pWaveFormat:PWaveFormatEx; var ckRIFF,ckData:TMMCKInfo):HMMIO;
16758:  OpenStreamWaveAudio( Stream : TStream) : HMMIO');
16759:  CalcWaveBufferSize( const pWaveFormat : PWaveFormatEx; Duration : DWORD) : DWORD');
16760:  GetAudioFormat( FormatTag : Word) : String');
16761:  GetWaveAudioFormat( const pWaveFormat : PWaveFormatEx) : String');
```

```
16762:  GetWaveAudioLength( const pWaveFormat : PWaveFormatEx; DataSize : DWORD) : DWORD');
16763:  GetWaveAudioBitRate( const pWaveFormat : PWaveFormatEx) : DWORD');
16764:  GetWaveAudioPeakLevel(const Data: TObject;DataSize:DWORD; const pWaveFormat:PWaveFormatEx): Integer');
16765:  InvertWaveAudio( const Data : TObject; DataSize : DWORD;const pWaveFormat : PWaveFormatEx): Boolean');
16766:  SilenceWaveAudio( const Data : TObject; DataSize : DWORD;const pWaveFormat : PWaveFormatEx): Boolean');
16767:  ChangeWaveAudioVolume(const Data:TObject;DataSize:DWORD;const pWaveFormat:PWaveFormatEx;Percent:Int):Bool;
16768:  MixWaveAudio( const RawWaves : TRawWave; Count : Integer; const pWaveFormat : PWaveFormatEx; Buffer :
       TObject; BufferSize : DWORD) : Boolean');
16769:  ConvertWaveFormat( const srcFormat : PWaveFormatEx; srcData : TObject; srcDataSize : DWORD; const
       dstFormat : PWaveFormatEx; var dstData : TObject; var dstDataSize : DWORD) : Boolean');
16770:  SetPCMAudioFormat(const pWaveFormat: PWaveFormatEx; Channels : TPCMChannel; SamplesPerSec :
       TPCMSamplesPerSec; BitsPerSample : TPCMBitsPerSample)');
16771:  Procedure SetPCMAudioFormatS( const pWaveFormat : PWaveFormatEx; PCMFormat : TPCMFormat)');
16772:  GetPCMAudioFormat( const pWaveFormat : PWaveFormatEx) : TPCMFormat');
16773:  GetWaveDataPositionOffset( const pWaveFormat : PWaveFormatEx; Position : DWORD) : DWORD');
16774:  MS2Str( Milliseconds : DWORD; Fmt : TMS2StrFormat) : String');
16775:  WaitForSyncObject( SyncObject : THandle; Timeout : DWORD) : DWORD');
16776:  //mmioStreamProc( lpmmIOInfo : PMMIOInfo; uMsg, lParam1, lParam2 : DWORD) : LRESULT');
16777: end;
16778:
16779: procedure SIRegister_NamedPipes(CL: TPSPascalCompiler);
16780: begin
16781:  'DEFAULT_PIPE_BUFFER_SIZE','LongInt').SetInt( 4096);
16782:  CL.AddConstantN('DEFAULT_PIPE_TIMEOUT','LongInt').SetInt( 5000);
16783:  'PIPE_NAMING_SCHEME','String').SetString( '\\%s\pipe\%s');
16784:  'WAIT_ERROR','LongWord').SetUInt( DWORD ( $FFFFFFFF ));
16785:  'WAIT_OBJECT_1','LongInt').SetInt( WAIT_OBJECT_0 + 1);
16786:  'STATUS_SUCCESS','LongWord').SetUInt( $00000000);
16787:  'STATUS_BUFFER_OVERFLOW','LongWord').SetUInt( $80000005);
16788:   CL.AddTypeS('TPipeDirection', '( pdir_Duplex, pdir_ClientToServer, pdir_ServerToClient )');
16789:   CL.AddTypeS('TPipeType', '( ptyp_ByteByte, ptyp_MsgByte, ptyp_MsgMsg )');
16790:   CL.AddTypeS('TOverlappedResult', '( ov_Failed, ov_Pending, ov_MoreData, ov_Complete )');
16791:   SIRegister_TNamedPipe(CL);
16792:   SIRegister_TServerPipe(CL);
16793:   SIRegister_TClientPipe(CL);
16794:  CL.AddDelphiFunction('Function CalculateTimeout( aBasis : DWORD) : DWORD');
16795:  Function HasOverlappedIoCompleted( const ov : OVERLAPPED) : Boolean');
16796:  Function GetOverlappedPipeResult(aHandle:THandle;const ov:OVERLAPPED;var dwBytes:DWORD;bWait:Boolean):
       TOverlappedResult;
16797:  Function GetStreamAsText( stm : TStream) : string');
16798:  Procedure SetStreamAsText( const aTxt : string; stm : TStream)');
16799: end;
16800:
16801: procedure SIRegister_DPUtils(CL: TPSPascalCompiler);
16802: begin
16803:  // CL.AddTypeS('pRGBTripleArray', '^TRGBTripleArray // will not work');
16804:   SIRegister_TThumbData(CL);
16805:  'PIC_BMP','LongInt').SetInt( 0);
16806:  'PIC_JPG','LongInt').SetInt( 1);
16807:  'THUMB_WIDTH','LongInt').SetInt( 60);
16808:  'THUMB_HEIGHT','LongInt').SetInt( 60);
16809:  Function IsEqualFile(Filename:string; Size:Integer; LastWriteTime : TDateTime): Boolean');
16810:  Procedure GetFileInfo(Filename : string; var Size : Integer; var LastWriteTime : TDateTime)');
16811:  Function ReadBitmap( Filehandle : Integer; Width, Height : Integer) : TBitmap');
16812:  Procedure WriteBitmap( Filehandle : Integer; bmp : TBitmap)');
16813:  Function OpenPicture( fn : string; var tp : Integer) : Integer');
16814:  Function ConvertPicture( pi : Integer; tp : Integer) : TBitmap');
16815:  Function LoadPicture( fn : string; var w, h : Integer) : TBitmap');
16816:  Function TurnBitmap( bmp : TBitmap; ang : Integer) : TBitmap');
16817:  Function RotateBitmap( Bitmap : TBitmap; Direction : Integer) : TBitmap');
16818:  Function StretchBitmap( Canvas : TCanvas; re : TRect; bmp : TBitmap) : TRect');
16819:  Function ThumbBitmap( Bitmap : TBitmap; Width, Height : Integer) : TBitmap');
16820:  Procedure ClearFrame( Canvas : TCanvas; Rect : TRect; Width, Height : Integer)');
16821:  Procedure FindFiles( path, mask : string; items : TStringList)');
16822:  Function LetFileName( s : string) : string');
16823:  Function LetParentPath( path : string) : string');
16824:  Function AddBackSlash( path : string) : string');
16825:  Function CutBackSlash( path : string) : string');
16826: end;
16827:
16828: procedure SIRegister_CommonTools(CL: TPSPascalCompiler);
16829: begin
16830:  //'BYTES','LongInt').SetInt( 1);
16831:  'KBYTES','LongInt').SetInt( 1024);
16832:  'DBG_ALIVE','LongWord').SetUInt( Integer ( $11BABE11 ));
16833:  'DBG_DESTROYING','LongWord').SetUInt( Integer ( $44FADE44 ));
16834:  'DBG_GONE','LongWord').SetUInt( $99AC1D99);
16835:  'SHELL_NS_MYCOMPUTER','String').SetString( '::{20D04FE0-3AEA-1069-A2D8-08002B30309D}');
16836:   SIRegister_MakeComServerMethodsPublic(CL);
16837:   CL.AddTypeS('TSomeFileInfo', '( fi_DisplayType, fi_Application )');
16838:  Function IsFlagSet( dwTestForFlag, dwFlagSet : DWORD) : Boolean');
16839:  Procedure TBSetFlag( const dwThisFlag : DWORD; var dwFlagSet : DWORD; aSet : Boolean)');
16840:  Function TBGetTempFolder : string');
16841:  Function TBGetTempFile : string');
16842:  Function TBGetModuleFilename : string');
16843:  Function FormatModuleVersionInfo( const aFilename : string) : string');
16844:  Function GetVersionInfoString( const aFile, aEntry : string; aLang : WORD) : string');
16845:  Function TBGetFileSize( aFile : string; aMultipleOf : Integer) : Integer');
16846:  Function FormatAttribString( aAttr : Integer) : string');
```

```
16847:  Function GetSomeFileInfo( aFile : string; aWhatInfo : TSomeFileInfo) : string');
16848:  Function ShellRecycle( aWnd : HWND; aFileOrFolder : string) : Boolean');
16849:  Function IsDebuggerPresent : BOOL');
16850:  Function TBNotImplemented : HRESULT');
16851: end;
16852:
16853: procedure SIRegister_D2_VistaHelperU(CL: TPSPascalCompiler);
16854: begin
16855:   //CL.AddTypeS('OSVERSIONINFOEXA', '_OSVERSIONINFOEXA');
16856:   //CL.AddTypeS('TOSVersionInfoExA', '_OSVERSIONINFOEXA');
16857:   CL.AddTypeS('TOSVersionInfoEx', 'TOSVersionInfo');
16858:   CL.AddTypeS('TDrivesProperty', 'array[1..26] of boolean;');
16859:   //TDrivesProperty = array['A'..'Z'] of boolean;
16860:  Function TBSetSystemTime( DateTime : TDateTime; DOW : word) : boolean');
16861:  Function IsElevated : Boolean');
16862:  Procedure CoCreateInstanceAsAdmin(aHWnd:HWND;const aClassID:TGUID;const aIID:TGUID;out aObj:TObject);
16863:   CL.AddTypeS('TPasswordUsage', '( pu_None, pu_Default, pu_Defined )');
16864:  Function TrimNetResource( UNC : string) : string');
16865:  Procedure GetFreeDrives( var FreeDrives : TDrivesProperty)');
16866:  Procedure GetMappedDrives( var MappedDrives : TDrivesProperty)');
16867:  Function MapDrive( UNCPath : string; Drive : char; PasswordUsage : TPasswordUsage; Password : string;
       UserUsage : TPasswordUsage; User : string; Comment : string) : boolean');
16868:  Function UnmapDrive( Drive : char; Force : boolean) : boolean');
16869:  Function TBIsWindowsVista : Boolean');
16870:  Procedure SetVistaFonts( const AForm : TForm)');
16871:  Procedure SetVistaContentFonts( const AFont : TFont)');
16872:  Function GetProductType( var sType : String) : Boolean');
16873:  Function lstrcmp( lpString1, lpString2 : PChar) : Integer');
16874:  Function lstrcmpi( lpString1, lpString2 : PChar) : Integer');
16875:  Function lstrcpyn( lpString1, lpString2 : PChar; iMaxLength : Integer) : PChar');
16876:  Function lstrcpy( lpString1, lpString2 : PChar) : PChar');
16877:  Function lstrcat( lpString1, lpString2 : PChar) : PChar');
16878:  Function lstrlen( lpString : PChar) : Integer');
16879:  Function GetTokenInformation( TokenHandle : THandle; TokenInformationClass : TTokenInformationClass;
       TokenInformation : ___Pointer; TokenInformationLength : DWORD; var ReturnLength : DWORD) : BOOL');
16880:  Function SetTokenInformation( TokenHandle : THandle; TokenInformationClass : TTokenInformationClass;
       TokenInformation : ___Pointer; TokenInformationLength : DWORD) : BOOL');
16881: end;
16882:
16883: procedure SIRegister_dwsXPlatform(CL: TPSPascalCompiler);
16884: begin
16885:  'cLineTerminator','Char').SetString( #10);
16886:  'cLineTerminators','String').SetString( #13#10);
16887:  'INVALID_HANDLE_VALUE','LongInt').SetInt( DWORD ( - 1 ));
16888:   SIRegister_TFixedCriticalSection(CL);
16889:   SIRegister_TMultiReadSingleWrite(CL);
16890:  CL.AddDelphiFunction('Procedure SetDecimalSeparator( c : Char)');
16891:  Function GetDecimalSeparator : Char');
16892:  TCollectFileProgressEvent', 'Procedure ( const directory : String; var skipScan : Boolean)');
16893:  Procedure CollectFiles(const directory,fileMask:UnicodeString; list:TStrings;
       recurseSubdirectories:Boolean; onProgress : TCollectFileProgressEvent)');
16894:   CL.AddTypeS('NativeInt', 'Integer');
16895:   //CL.AddTypeS('PNativeInt', '^NativeInt // will not work');
16896:   CL.AddTypeS('NativeUInt', 'Cardinal');
16897:   //CL.AddTypeS('PNativeUInt', '^NativeUInt // will not work');
16898:   //CL.AddTypeS('TBytes', 'array of Byte');
16899:   CL.AddTypeS('RawByteString', 'UnicodeString');
16900:   //CL.AddTypeS('PNativeInt', '^NativeInt // will not work');
16901:   //CL.AddTypeS('PUInt64', '^UInt64 // will not work');
16902:   SIRegister_TPath(CL);
16903:   SIRegister_TFile(CL);
16904:   SIRegister_TdwsThread(CL);
16905:  Function GetSystemMilliseconds : Int64');
16906:  Function UTCDateTime : TDateTime');
16907:  Function UnicodeFormat(const fmt:UnicodeString; const args : array of const): UnicodeString');
16908:  Function UnicodeCompareStr( const S1, S2 : UnicodeString) : Integer');
16909:  Function dwsAnsiCompareText( const S1, S2 : UnicodeString) : Integer');
16910:  Function dwsAnsiCompareStr( const S1, S2 : UnicodeString) : Integer');
16911:  Function UnicodeComparePChars( p1 : PChar; n1 : Integer; p2 : PChar; n2 : Integer) : Integer;');
16912:  Function UnicodeComparePChars1( p1, p2 : PChar; n : Integer) : Integer;');
16913:  Function UnicodeLowerCase( const s : UnicodeString) : UnicodeString');
16914:  Function UnicodeUpperCase( const s : UnicodeString) : UnicodeString');
16915:  Function ASCIICompareText( const s1, s2 : UnicodeString) : Integer');
16916:  Function ASCIISameText( const s1, s2 : UnicodeString) : Boolean');
16917:  Function InterlockedIncrement( var val : Integer) : Integer');
16918:  Function InterlockedDecrement( var val : Integer) : Integer');
16919:  Procedure FastInterlockedIncrement( var val : Integer)');
16920:  Procedure FastInterlockedDecrement( var val : Integer)');
16921:  Function InterlockedExchangePointer( var target : ___Pointer; val : ___Pointer) : ___Pointer');
16922:  Procedure SetThreadName( const threadName : Char; threadID : Cardinal)');
16923:  Procedure dwsOutputDebugString( const msg : UnicodeString)');
16924:  Procedure WriteToOSEventLog(const logName,logCaption,logDetails:UnicodeString;const logRawData:Str);
16925:  Function TryTextToFloat(const s:PChar;var value:Extended;const formatSettings:TFormatSettings):Bool;
16926:  Procedure VarCopy( out dest : Variant; const src : Variant)');
16927:  Function VarToUnicodeStr( const v : Variant) : UnicodeString');
16928:  Function LoadTextFromBuffer( const buf : TBytes) : UnicodeString');
16929:  Function LoadTextFromStream( aStream : TStream) : UnicodeString');
16930:  Function LoadTextFromFile( const fileName : UnicodeString) : UnicodeString');
16931:  Procedure SaveTextToUTF8File( const fileName, text : UnicodeString)');
```

```
16932:  Function OpenFileForSequentialReadOnly( const fileName : UnicodeString) : THandle');
16933:  Function OpenFileForSequentialWriteOnly( const fileName : UnicodeString) : THandle');
16934:  Procedure CloseFileHandle( hFile : THandle)');
16935:  Function FileCopy(const existing, new : UnicodeString; failIfExists : Boolean):Boolean');
16936:  Function FileMove( const existing, new : UnicodeString) : Boolean');
16937:  Function dwsFileDelete( const fileName : String) : Boolean');
16938:  Function FileRename( const oldName, newName : String) : Boolean');
16939:  Function dwsFileSize( const name : String) : Int64');
16940:  Function dwsFileDateTime( const name : String) : TDateTime');
16941:  Function DirectSet8087CW( newValue : Word) : Word');
16942:  Function DirectSetMXCSR( newValue : Word) : Word');
16943:  Function TtoObject( const T: byte) : TObject');
16944:  Function TtoPointer( const T: byte) : ___Pointer');
16945:  Procedure GetMemForT(var T: byte; Size : integer)');
16946:  Function FindDelimiter( const Delimiters, S : string; StartIdx : Integer) : Integer');
16947: end;
16948:
16949: procedure SIRegister_AdSocket(CL: TPSPascalCompiler);
16950: begin
16951:  'IPStrSize','LongInt').SetInt( 15);
16952:  'CM_APDSOCKETMESSAGE','LongWord').SetUInt( WM_USER + $0711);
16953:  'CM_APDSOCKETQUIT','LongWord').SetUInt( WM_USER + $0712);
16954:  'ADWSBASE','LongInt').SetInt( 9000);
16955:   CL.AddTypeS('TCMAPDSocketMessage', 'record Msg : Cardinal; Socket : TSocket; '
16956:    +'SelectEvent : Word; SelectError : Word; Result : Longint; end');
16957:   SIRegister_EApdSocketException(CL);
16958:   TWsMode', '( wsClient, wsServer )');
16959:   TWsNotifyEvent', 'Procedure ( Sender : TObject; Socket : TSocket');
16960:   TWsSocketErrorEvent', 'Procedure ( Sender : TObject; Socket : TSocket; ErrCode : Integer)');
16961:   SIRegister_TApdSocket(CL);
16962: end;
16963:
16964: procedure SIRegister_AdPort(CL: TPSPascalCompiler);
16965: begin
16966:   SIRegister_TApdCustomComPort(CL);
16967:   SIRegister_TApdComPort(CL);
16968:  Function ComName( const ComNumber : Word) : ShortString');
16969:  Function SearchComPort( const C : TComponent) : TApdCustomComPort');
16970: end;
16971:
16972: procedure SIRegister_PathFunc(CL: TPSPascalCompiler);
16973: begin
16974:  Function inAddBackslash( const S : String) : String');
16975:  Function PathChangeExt( const Filename, Extension : String) : String');
16976:  Function PathCharCompare( const S1, S2 : PChar) : Boolean');
16977:  Function PathCharIsSlash( const C : Char) : Boolean');
16978:  Function PathCharIsTrailByte( const S : String; const Index : Integer) : Boolean');
16979:  Function PathCharLength( const S : String; const Index : Integer) : Integer');
16980:  Function inPathCombine( const Dir, Filename : String) : String');
16981:  Function PathCompare( const S1, S2 : String) : Integer');
16982:  Function PathDrivePartLength( const Filename : String) : Integer');
16983:  Function PathDrivePartLengthEx(const Filename:String;const IncludeSignificantSlash:Bool):Int;
16984:  Function inPathExpand( const Filename : String) : String');
16985:  Function PathExtensionPos( const Filename : String) : Integer');
16986:  Function PathExtractDir( const Filename : String) : String');
16987:  Function PathExtractDrive( const Filename : String) : String');
16988:  Function PathExtractExt( const Filename : String) : String');
16989:  Function PathExtractName( const Filename : String) : String');
16990:  Function PathExtractPath( const Filename : String) : String');
16991:  Function PathIsRooted( const Filename : String) : Boolean');
16992:  Function PathLastChar( const S : String) : PChar');
16993:  Function PathLastDelimiter( const Delimiters, S : string) : Integer');
16994:  Function PathLowercase( const S : String) : String');
16995:  Function PathNormalizeSlashes( const S : String) : String');
16996:  Function PathPathPartLength(const Filename:String;const IncludeSlashesAfterPath:Bool):Int;
16997:  Function PathPos( Ch : Char; const S : String) : Integer');
16998:  Function PathStartsWith( const S, AStartsWith : String) : Boolean');
16999:  Function PathStrNextChar( const S : PChar) : PChar');
17000:  Function PathStrPrevChar( const Start, Current : PChar) : PChar');
17001:  Function PathStrScan( const S : PChar; const C : Char) : PChar');
17002:  Function inRemoveBackslash( const S : String) : String');
17003:  Function RemoveBackslashUnlessRoot( const S : String) : String');
17004:  Procedure PathFuncRunTests( const AlsoTestJapaneseDBCS : Boolean)');
17005: end;
17006:
17007:
17008: procedure SIRegister_CmnFunc2(CL: TPSPascalCompiler);
17009: begin
17010:  NEWREGSTR_PATH_SETUP','String').SetString( 'Software\Microsoft\Windows\CurrentVersion');
17011:  NEWREGSTR_PATH_EXPLORER','String').SetString( NEWREGSTR_PATH_SETUP + '\Explorer');
17012:  NEWREGSTR_PATH_SPECIAL_FOLDERS','String').SetString(NEWREGSTR_PATH_EXPLORER + '\Shell Folders');
17013:  NEWREGSTR_PATH_UNINSTALL','String').SetString( NEWREGSTR_PATH_SETUP + '\Uninstall');
17014:  NEWREGSTR_VAL_UNINSTALLER_DISPLAYNAME','String').SetString( 'DisplayName');
17015:  NEWREGSTR_VAL_UNINSTALLER_COMMANDLINE','String').SetString( 'UninstallString');
17016:  KEY_WOW64_64KEY','LongWord').SetUInt( $0100);
17017:   //CL.AddTypeS('PLeadByteSet', '^TLeadByteSet // will not work');
17018:   CL.AddTypeS('TLeadByteSet', 'set of Char');
17019:   SIRegister_TOneShotTimer(CL);
17020:   CL.AddTypeS('TRegView', '( rvDefault, rv32Bit, rv64Bit )');
```

```
17021:  'RegViews64Bit','LongInt').Value.ts32 := ord(rv64Bit);
17022:  Function NewFileExists( const Name : String) : Boolean');
17023:  Function inDirExists( const Name : String) : Boolean');
17024:  Function FileOrDirExists( const Name : String) : Boolean');
17025:  Function IsDirectoryAndNotReparsePoint( const Name : String) : Boolean');
17026:  Function GetIniString( const Section, Key : String; Default:String; const Filename:String): String');
17027:  Function GetIniInt(const Section,Key:String;const Default,Min,Max:Longint;const Filenam:String):Longint;
17028:  Function GetIniBool( const Section,Key:String; const Default:Boolean;const Filename:String): Boolean');
17029:  Function IniKeyExists( const Section, Key, Filename : String) : Boolean');
17030:  Function IsIniSectionEmpty( const Section, Filename : String) : Boolean');
17031:  Function SetIniString( const Section, Key, Value, Filename : String) : Boolean');
17032:  Function SetIniInt(const Section,Key:String;const Value: Longint;const Filename: String):Boolean');
17033:  Function SetIniBool(const Section,Key:String;const Value: Boolean;const Filename: String):Boolean');
17034:  Procedure DeleteIniEntry( const Section, Key, Filename : String)');
17035:  Procedure DeleteIniSection( const Section, Filename : String)');
17036:  Function GetEnv( const EnvVar : String) : String');
17037:  Function GetCmdTail : String');
17038:  Function GetCmdTailEx( StartIndex : Integer) : String');
17039:  Function NewParamCount : Integer');
17040:  Function NewParamStr( Index : Integer) : string');
17041:  Function AddQuotes( const S : String) : String');
17042:  Function RemoveQuotes( const S : String) : String');
17043:  Function inGetShortName( const LongName : String) : String');
17044:  Function inGetWinDir : String');
17045:  Function inGetSystemDir : String');
17046:  Function GetSysWow64Dir : String');
17047:  Function GetSysNativeDir( const IsWin64 : Boolean) : String');
17048:  Function inGetTempDir : String');
17049:  Function StringChange( var S : String; const FromStr, ToStr : String) : Integer');
17050:  Function StringChangeEx(var S:String;const FromStr,ToStr:String;const SupportDBCS:Bool):Int;
17051:  Function AdjustLength( var S : String; const Res : Cardinal) : Boolean');
17052:  Function UsingWinNT : Boolean');
17053:  Function ConvertConstPercentStr( var S : String) : Boolean');
17054:  Function ConvertPercentStr( var S : String) : Boolean');
17055:  Function ConstPos( const Ch : Char; const S : String) : Integer');
17056:  Function SkipPastConst( const S : String; const Start : Integer) : Integer');
17057:  Function RegQueryStringValue( H : HKEY; Name : PChar; var ResultStr : String) : Boolean');
17058:  Function RegQueryMultiStringValue( H : HKEY; Name : PChar; var ResultStr : String):Boolean;
17059:  Function RegValueExists( H : HKEY; Name : PChar) : Boolean');
17060:  Function RegCreateKeyExView(const RegView:TRegView;hKey:HKEY;lpSubKey:PChar;Reserved:DWORD;lpClass:PChar;
        dwOptions:DWORD;samDesired:REGSAM;lpSecurityAttributes:TObject;var
        phkResult:HKEY;lpdwDisposition:DWORD):Longint;
17061:  Function RegOpenKeyExView(const
        RegView:TRegView;hKey:HKEY;lpSubKey:PChar;ulOptions:DWORD;samDesired:REGSAM;var phkResult:HKEY):Longint;
17062:  Function RegDeleteKeyView( const RegView : TRegView; const Key : HKEY; const Name : PChar) : Longint;
17063:  Function RegDeleteKeyIncludingSubkeys(const RegView:TRegView;const Key:HKEY;const Name:PChar):Longint;
17064:  Function RegDeleteKeyIfEmpty(const RegView:TRegView;const RootKey:HKEY;const SubkeyName:PChar):Longint;
17065:  Function GetShellFolderPath( const FolderID : Integer) : String');
17066:  Function IsAdminLoggedOn : Boolean');
17067:  Function IsPowerUserLoggedOn : Boolean');
17068:  Function IsMultiByteString( const S : AnsiString) : Boolean');
17069:  Function FontExists( const FaceName : String) : Boolean');
17070:  //Procedure FreeAndNil( var Obj)');
17071:  Function SafeLoadLibrary( const Filename : String; ErrorMode : UINT) : HMODULE');
17072:  Function GetUILanguage : LANGID');
17073:  Function RemoveAccelChar( const S : String) : String');
17074:  Function GetTextWidth(const DC : HDC; S : String; const Prefix:Boolean):Integer');
17075:  Function AddPeriod( const S : String) : String');
17076:  Function GetExceptMessage : String');
17077:  Function GetPreferredUIFont : String');
17078:  Function IsWildcard( const Pattern : String) : Boolean');
17079:  Function WildcardMatch( const Text, Pattern : PChar) : Boolean');
17080:  Function IntMax( const A, B : Integer) : Integer');
17081:  Function Win32ErrorString( ErrorCode : Integer) : String');
17082:  Procedure GetLeadBytes( var ALeadBytes : TLeadByteSet)');
17083:  Function inCompareMem( P1, P2 : TObject; Length : Integer) : Boolean');
17084:  Function DeleteDirTree( const Dir : String) : Boolean');
17085:  Function SetNTFSCompression(const FileOrDir: String; Compress : Boolean) : Boolean');
17086:  Procedure AddToWindowMessageFilterEx( const Wnd : HWND; const Msg : UINT)');
17087:  // CL.AddTypeS('TSysCharSet', 'set of AnsiChar');
17088:  Function inCharInSet( C : Char; const CharSet : TSysCharSet) : Boolean');
17089:  Function ShutdownBlockReasonCreate( Wnd : HWND; const Reason : String) : Boolean');
17090:  Function ShutdownBlockReasonDestroy( Wnd : HWND) : Boolean');
17091:  Function TryStrToBoolean( const S : String; var BoolResult : Boolean) : Boolean');
17092:  Procedure WaitMessageWithTimeout( const Milliseconds : DWORD)');
17093:  Function MoveFileReplace(const ExistingFileName, NewFileName : String) : Boolean');
17094:  Procedure TryEnableAutoCompleteFileSystem( Wnd : HWND)');
17095: end;
17096:
17097: procedure SIRegister_CmnFunc(CL: TPSPascalCompiler);
17098: begin
17099:   SIRegister_TWindowDisabler(CL);
17100:   TMsgBoxType', '( mbInformation, mbConfirmation, mbError, mbCriticalError )');
17101:   TMsgBoxCallbackFunc','procedure(const Flags:LongInt;const After:Bool;const Param:LongInt);
17102:  Procedure UpdateHorizontalExtent( const ListBox : TCustomListBox)');
17103:  Function MinimizePathName(const Filename:String; const Font:TFont;MaxLen:Integer):String;
17104:  Function AppMessageBox( const Text, Caption : PChar; Flags : Longint) : Integer');
17105:  Function MsgBoxP( const Text,Caption: PChar; const Typ: TMsgBoxType;const Buttons:Cardinal):Int;
17106:  Function inMsgBox(const Text,Caption:String; const Typ: TMsgBoxType;const Buttons:Cardinal):Int;
```

```
17107:  Function MsgBoxFmt(const Text:String;const Args:array of const;const Caption:String;const
       Typ:TMsgBoxType;const Buttons:Cardinal):Integer');
17108:  Procedure ReactivateTopWindow');
17109:  Procedure SetMessageBoxCaption( const Typ : TMsgBoxType; const NewCaption : PChar)');
17110:  Procedure SetMessageBoxRightToLeft( const ARightToLeft : Boolean)');
17111:  Procedure SetMessageBoxCallbackFunc(const AFunc : TMsgBoxCallbackFunc; const AParam : LongInt)');
17112: end;
17113:
17114: procedure SIRegister_ImageGrabber(CL: TPSPascalCompiler);
17115: begin
17116:   SIRegister_TImageGrabber(CL);
17117:   SIRegister_TCaptureDrivers(CL);
17118:   SIRegister_TCaptureDriver(CL);
17119: end;
17120:
17121: procedure SIRegister_SecurityFunc(CL: TPSPascalCompiler);
17122: begin
17123:  Function GrantPermissionOnFile(const DisableFsRedir:Boolean; Filename:String;const
       Entries:TGrantPermissionEntry; const EntryCount:Integer):Boolean');
17124:  Function GrantPermissionOnKey(const RegView:TRegView;const RootKey:HKEY;const Subkey:String;const
       Entries: TGrantPermissionEntry; const EntryCount:Integer): Boolean');
17125: end;
17126:
17127: procedure SIRegister_RedirFunc(CL: TPSPascalCompiler);
17128: begin
17129:   CL.AddTypeS('TPreviousFsRedirectionState', 'record DidDisable : Boolean; OldValue : ___Pointer; end');
17130:  CL.AddDelphiFunction('Function AreFsRedirectionFunctionsAvailable : Boolean');
17131:  Function DisableFsRedirectionIf(const Disable:Boolean;var PreviousState:TPreviousFsRedirectionState):Boo;
17132:  Procedure RestoreFsRedirection( const PreviousState : TPreviousFsRedirectionState)');
17133:  Function CreateDirectoryRedir( const DisableFsRedir : Boolean; const Filename : String) : BOOL');
17134:  Function CreateProcessRedir(const DisableFsRedir:Boolean; const lpApplicationName : PChar; const
       lpCommandLine : PChar; const lpProcessAttributes, lpThreadAttributes : PSecurityAttributes; const
       bInheritHandles : BOOL;'
17135:   +' const dwCreationFlags : DWORD; const lpEnvironment : Pointer; const lpCurrentDirectory : PChar; const
       lpStartupInfo : TStartupInfo; var lpProcessInformation : TProcessInformation) : BOOL');
17136:  Function CopyFileRedir(const DisableFsRedir:Boolean; const ExistingFilename, NewFilename : String; const
       FailIfExists : BOOL) : BOOL');
17137:  Function DeleteFileRedir( const DisableFsRedir : Boolean; const Filename : String) : BOOL');
17138:  Function DirExistsRedir( const DisableFsRedir : Boolean; const Filename : String) : Boolean');
17139:  Function FileOrDirExistsRedir( const DisableFsRedir : Boolean; const Filename : String) : Boolean');
17140:  Function FindFirstFileRedir( const DisableFsRedir : Boolean; const Filename : String; var FindData :
       TWin32FindData) : THandle');
17141:  Function GetFileAttributesRedir( const DisableFsRedir : Boolean; const Filename : String) : DWORD');
17142:  Function GetShortNameRedir( const DisableFsRedir : Boolean; const Filename : String) : String');
17143:  Function GetVersionNumbersRedir(const DisableFsRedir:Boolean; const Filename:String; var VersionNumbers :
       TFileVersionNumbers) : Boolean');
17144:  Function IsDirectoryAndNotReparsePointRedir(const DisableFsRedir:Boolean;const Name:String):Bool;
17145:  Function MoveFileRedir(const DisableFsRedir:Bool;const ExistingFilename,NewFilename:String):BOOL;
17146:  Function MoveFileExRedir(const DisableFsRedir:Boolean;const ExistingFilename,NewFilename:String;const
       Flags:DWORD):BOOL;
17147:  Function NewFileExistsRedir( const DisableFsRedir : Boolean; const Filename : String) : Boolean');
17148:  Function RemoveDirectoryRedir( const DisableFsRedir : Boolean; const Filename : String) : BOOL');
17149:  Function SetFileAttributesRedir(const DisableFsRedir:Bool;const Filename:String;const Attrib:DWORD):BOOL;
17150:  Function SetNTFSCompressionRedir(const DisableFsRedir:Boolean;const FileOrDir:String;Compress:Bool:Bool;
17151:   SIRegister_TFileRedir(CL);
17152:   SIRegister_TTextFileReaderRedir(CL);
17153:   SIRegister_TTextFileWriterRedir(CL);
17154: end;
17155:
17156: procedure SIRegister_Int64Em(CL: TPSPascalCompiler);
17157: begin
17158:   //CL.AddTypeS('LongWord', 'Cardinal');
17159:   CL.AddTypeS('Integer64', 'record Lo : LongWord; Hi : LongWord; end');
17160:  Function Compare64( const N1, N2 : Integer64) : Integer');
17161:  Procedure Dec64( var X : Integer64; N : LongWord)');
17162:  Procedure Dec6464( var X : Integer64; const N : Integer64)');
17163:  Function Div64( var X : Integer64; const Divisor : LongWord) : LongWord');
17164:  Function Inc64( var X : Integer64; N : LongWord) : Boolean');
17165:  Function Inc6464( var X : Integer64; const N : Integer64) : Boolean');
17166:  Function Integer64ToStr( X : Integer64) : String');
17167:  Function Mod64( const X : Integer64; const Divisor : LongWord) : LongWord');
17168:  Function Mul64( var X : Integer64; N : LongWord) : Boolean');
17169:  Procedure Multiply32x32to64( N1, N2 : LongWord; var X : Integer64)');
17170:  Procedure Shr64( var X : Integer64; Count : LongWord)');
17171:  Function StrToInteger64( const S : String; var X : Integer64) : Boolean');
17172: end;
17173:
17174: procedure SIRegister_InstFunc(CL: TPSPascalCompiler);
17175: begin
17176:   //CL.AddTypeS('PSimpleStringListArray', '^TSimpleStringListArray // will not work');
17177:   SIRegister_TSimpleStringList(CL);
17178:   CL.AddTypeS('TExecWait', '( ewNoWait, ewWaitUntilTerminated, ewWaitUntilIdle)');
17179:   CL.AddTypeS('TDetermineDefaultLanguageResult', '( ddNoMatch, ddMatch, ddMatchLangParameter )');
17180:   CL.AddTypeS('TMD5Digest', 'array[0..15] of Byte;');
17181:   CL.AddTypeS('TSHA1Digest', 'array[0..19] of Byte;');
17182:  // TMD5Digest = array[0..15] of Byte;
17183:   //     TSHA1Digest = array[0..19] of Byte;
17184:  Function CheckForMutexes( Mutexes : String) : Boolean');
17185:  Function CreateTempDir : String');
```

```
17186:  Function DecrementSharedCount( const RegView : TRegView; const Filename : String) : Boolean');
17187:  Procedure DelayDeleteFile( const DisableFsRedir : Boolean; const Filename : String; const MaxTries,
        FirstRetryDelayMS, SubsequentRetryDelayMS : Integer)');
17188:  //Function DelTree( const DisableFsRedir : Boolean; const Path : String; const IsDir, DeleteFiles,
        DeleteSubdirsAlso, BreakOnError : Boolean; const DeleteDirProc : TDeleteDirProc; const DeleteFileProc :
        TDeleteFileProc; const Param : Pointer) : Boolean');
17189:  //Function DetermineDefaultLanguage( const GetLanguageEntryProc : TGetLanguageEntryProc; const Method :
        TSetupLanguageDetectionMethod; const LangParameter : String; var ResultIndex : Integer) :
        TDetermineDefaultLanguageResult');
17190:  //Procedure EnumFileReplaceOperationsFilenames(const EnumFunc:TEnumFROFilenamesProc;Param:Pointer);
17191:  Function GenerateNonRandomUniqueFilename( Path : String; var Filename : String) : Boolean');
17192:  Function GenerateUniqueName(const DisableFsRedir:Bool;Path:String;const Extension:String):String;
17193:  Function GetComputerNameString : String');
17194:  Function GetFileDateTime(const DisableFsRedir:Boolean;const Filename:String;var DateTime:TFileTime):Bool;
17195:  Function GetMD5OfFile( const DisableFsRedir : Boolean; const Filename : String) : TMD5Digest');
17196:  Function GetMD5OfAnsiString( const S : AnsiString) : TMD5Digest');
17197: // Function GetMD5OfUnicodeString( const S : UnicodeString) : TMD5Digest');
17198:  Function GetSHA1OfFile(const DisableFsRedir:Boolean;const Filename:String):TSHA1Digest');
17199:  Function GetSHA1OfAnsiString( const S : AnsiString) : TSHA1Digest');
17200: // Function GetSHA1OfUnicodeString( const S : UnicodeString) : TSHA1Digest');
17201:  Function GetRegRootKeyName( const RootKey : HKEY) : String');
17202:  Function GetSpaceOnDisk(const DisableFsRedir:Bool;const DriveRoot:String;var FreeBytes,
        TotBytes:Int64):Bool;
17203:  Function GetSpaceOnNearestMountPoint(const DisableFsRedir:Bool;const StartDir:String;var FreeBytes,
        TotalBytes: Integer64):Bool;
17204:  Function GetUserNameString : String');
17205:  Procedure IncrementSharedCount(const RegView:TRegView;const Filename:String;const AlreadyExisted:Boolean);
17206:  //Function InstExec( const DisableFsRedir : Boolean; const Filename, Params : String; WorkingDir :
        String; const Wait:TExecWait;const ShowCmd:Integer;const ProcessMessagesProc:TProcedure;var
        ResultCode:Integer) : Boolean');
17207: // Function InstShellExec( const Verb, Filename, Params : String; WorkingDir : String; const Wait :
        TExecWait; const ShowCmd:Integer;const ProcessMessagesProc:TProcedure;var ResultCode:Integer):Boolean;
17208:  Procedure InternalError( const Id : String)');
17209:  Procedure InternalErrorFmt( const S : String; const Args : array of const)');
17210:  Function IsDirEmpty( const DisableFsRedir : Boolean; const Dir : String) : Boolean');
17211:  Function IsProtectedSystemFile(const DisableFsRedir:Boolean; const Filename:String) : Boolean');
17212:  Function MakePendingFileRenameOperationsChecksum : TMD5Digest');
17213:  Function ModifyPifFile( const Filename : String; const CloseOnExit : Boolean) : Boolean');
17214:  Procedure RaiseFunctionFailedError( const FunctionName : String)');
17215:  Procedure RaiseOleError( const FunctionName : String; const ResultCode : HRESULT)');
17216:  Procedure RefreshEnvironment');
17217:  Function ReplaceSystemDirWithSysWow64( const Path : String) : String');
17218:  Function ReplaceSystemDirWithSysNative( Path : String; const IsWin64 : Boolean) : String');
17219:  Procedure UnregisterFont( const FontName, FontFilename : String)');
17220:  Function RestartComputer : Boolean');
17221:  Procedure RestartReplace( const DisableFsRedir : Boolean; TempFile, DestFile : String)');
17222:  Procedure SplitNewParamStr( const Index : Integer; var AName, AValue : String)');
17223:  Procedure Win32ErrorMsg( const FunctionName : String)');
17224:  Procedure Win32ErrorMsgEx( const FunctionName : String; const ErrorCode : DWORD)');
17225:  Function inForceDirectories(const DisableFsRedir:Boolean; Dir : String) : Boolean');
17226:  //from Func2
17227:  //Function inCreateShellLink( const Filename, Description, ShortcutTo, Parameters, WorkingDir : String;
        IconFilename : String; const IconIndex, ShowCmd : Integer; const HotKey : Word; FolderShortcut : Boolean; '
17228:   //+'const AppUserModelID:String;const ExcludeFromShowInNewInstall,PreventPinning:Bool):String');
17229:  Procedure RegisterTypeLibrary( const Filename : String)');
17230:  //Procedure UnregisterTypeLibrary( const Filename : String)');
17231:  //Function UnpinShellLink( const Filename : String) : Boolean');}
17232:  function getVersionInfoEx3: TOSVersionInfoEx;');
17233:  Function GetVersionEx3(out verinfo: TOSVersionInfoEx): boolean;');
17234:  procedure InitOle;');
17235:  Function ExpandConst( const S : String) : String');
17236:  Function ExpandConstEx( const S : String; const CustomConsts : array of String) : String');
17237:  Function ExpandConstEx2(const S:Str;const CustConsts:array of Str;const DoExpandIndividualConst:Bool):Str;
17238:  Function ExpandConstIfPrefixed( const S : String) : String');
17239:  Procedure LogWindowsVersion');
17240:  Function EvalCheck( const Expression : String) : Boolean');
17241: end;
17242:
17243: procedure SIRegister_unitResourceDetails(CL: TPSPascalCompiler);
17244: begin
17245:   CL.AddClassN(CL.FindClass('TOBJECT'),'TResourceDetails');
17246:   //CL.AddTypeS('TResourceDetailsClass', 'class of TResourceDetails');
17247:   SIRegister_TResourceModule(CL);
17248:   SIRegister_TResourceDetails(CL);
17249:   SIRegister_TAnsiResourceDetails(CL);
17250:   SIRegister_TUnicodeResourceDetails(CL);
17251:  Procedure RegisterResourceDetails( resourceClass : TResourceDetailsClass)');
17252:  Procedure UnRegisterResourceDetails( resourceClass : TResourceDetailsClass)');
17253:  Function ResourceWideCharToStr( var wstr : PWideChar; codePage : Integer) : string');
17254:  Procedure ResourceStrToWideChar( const s : string; var p : PWideChar; codePage : Integer)');
17255:  Function ResourceNameToInt( const s : string) : Integer');
17256:  Function CompareDetails( p1, p2 : TObject(Pointer)) : Integer');
17257: end;
17258:
17259:
17260: procedure SIRegister_TSimpleComPort(CL: TPSPascalCompiler);
17261: begin
17262:   //with RegClassS(CL,'TObject', 'TSimpleComPort') do
17263:   with CL.AddClassN(CL.FindClass('TObject'),'TSimpleComPort') do begin
```

```
17264:     RegisterMethod('Constructor Create');
17265:     RegisterMethod('Procedure Free');
17266:     RegisterMethod('Procedure Open( PortNumber : Integer; const Parameters : String)');
17267:     RegisterMethod('Procedure WriteString( const S : String)');
17268:     RegisterMethod('Procedure ReadString( var S : String)');
17269:   end;
17270:  Ex.: SimpleComPort:= TSimpleComPort.Create;
17271:       SimpleComPort.Open(1, 'baud=115200 parity=N data=8 stop=1');
17272:       SimpleComPort.WriteString(AsciiChar);
17273: end;
17274:
17275:
17276: procedure SIRegister_Console(CL: TPSPascalCompiler);
17277: begin
17278:  CL.AddConstantN('White','LongInt').SetInt( 15); }
17279: // CL.AddConstantN('Blink','LongInt').SetInt( 128);
17280:  CL.AddConstantN('conBW40','LongInt').SetInt( 0);
17281:  CL.AddConstantN('conCO40','LongInt').SetInt( 1);
17282:  CL.AddConstantN('conBW80','LongInt').SetInt( 2);
17283:  CL.AddConstantN('conCO80','LongInt').SetInt( 3);
17284:  CL.AddConstantN('conMono','LongInt').SetInt( 7);
17285:  CL.AddConstantN('conFont8x8','LongInt').SetInt( 256);
17286:  //CL.AddConstantN('C40','').SetString( CO40);
17287:  //CL.AddConstantN('C80','').SetString( CO80);
17288:  Function conReadKey : Char');
17289:  Function conKeyPressed : Boolean');
17290:  Procedure conGotoXY( X, Y : Smallint)');
17291:  Function conWhereX : Integer');
17292:  Function conWhereY : Integer');
17293:  Procedure conTextColor( Color : Byte);');
17294:  Function conTextColor1 : Byte;');
17295:  Procedure conTextBackground( Color : Byte);');
17296:  Function conTextBackground1 : Byte;');
17297:  Procedure conTextMode( Mode : Word)');
17298:  Procedure conLowVideo');
17299:  Procedure conHighVideo');
17300:  Procedure conNormVideo');
17301:  Procedure conClrScr');
17302:  Procedure conClrEol');
17303:  Procedure conInsLine');
17304:  Procedure conDelLine');
17305:  Procedure conWindow( Left, Top, Right, Bottom : Integer)');
17306:  Function conScreenWidth : Smallint');
17307:  Function conScreenHeight : Smallint');
17308:  Function conBufferWidth : Smallint');
17309:  Function conBufferHeight : Smallint');
17310:  procedure InitScreenMode;');
17311: end;
17312:
17313: (*----------------------------------------------------------------------------*)
17314: procedure SIRegister_testutils(CL: TPSPascalCompiler);
17315: begin
17316:   SIRegister_TNoRefCountObject(CL);
17317:  Procedure FreeObjects( List : TFPList)');
17318:  Procedure GetMethodList( AObject : TObject; AList : TStrings);');
17319:  Procedure GetMethodList1( AClass : TClass; AList : TStrings);');
17320: end;
17321:
17322: procedure SIRegister_ToolsUnit(CL: TPSPascalCompiler);
17323: begin
17324:  'MaxDataSet','LongInt').SetInt( 35);
17325:   //CL.AddTypeS('TDBConnectorClass', 'class of TDBConnector');
17326:   SIRegister_TDBConnector(CL);
17327:   SIRegister_TDBBasicsTestSetup(CL);
17328:   SIRegister_TTestDataLink(CL);
17329:  'testValuesCount','LongInt').SetInt( 25);
17330:  Procedure InitialiseDBConnector');
17331:  Procedure FreeDBConnector');
17332:  Function DateTimeToTimeString( d : tdatetime) : string');
17333:  Function TimeStringToDateTime( d : String) : TDateTime');
17334: end;
17335:
17336: procedure SIRegister_fpcunit(CL: TPSPascalCompiler);
17337: begin
17338:   SIRegister_EAssertionFailedError(CL);
17339:   CL.AddTypeS('TTestStep', '( stSetUp, stRunTest, stTearDown, stNothing )');
17340:   CL.AddTypeS('TRunMethod', 'Procedure');
17341:   CL.AddClassN(CL.FindClass('TOBJECT'),'TTestResult');
17342:   SIRegister_TTest(CL);
17343:   SIRegister_TAssert(CL);
17344:   SIRegister_TTestFailure(CL);
17345:   SIRegister_ITestListener(CL);
17346:   SIRegister_TTestCase(CL);
17347:   //CL.AddTypeS('TTestCaseClass', 'class of TTestCase');
17348:   SIRegister_TTestSuite(CL);
17349:   SIRegister_TTestResult(CL);
17350:  Function ComparisonMsg( const aExpected : string; const aActual : string) : string');
17351: end;
17352:
```

```
17353: procedure SIRegister_cTCPBuffer(CL: TPSPascalCompiler);
17354: begin
17355:   TOBJECT'),'ETCPBuffer');
17356:   TTCPBuffer', 'record Ptr : TObject; Size : Integer; Max : Intege'
17357:    +r; Head : Integer; Used : Integer; end');
17358:  'ETHERNET_MTU_100MBIT','LongInt').SetInt( 1500);
17359:  'ETHERNET_MTU_1GBIT','LongInt').SetInt( 9000);
17360:  'TCP_BUFFER_DEFAULTMAXSIZE','LongInt').SetInt( ETHERNET_MTU_1GBIT * 4);
17361:  'TCP_BUFFER_DEFAULTBUFSIZE','LongInt').SetInt( ETHERNET_MTU_100MBIT * 4);
17362:  Procedure TCPBufferInitialise(var TCPBuf:TTCPBuffer;const TCPBufMaxSize:Int;const TCPBufSize:Int;
17363:  Procedure TCPBufferFinalise( var TCPBuf : TTCPBuffer)');
17364:  Procedure TCPBufferPack( var TCPBuf : TTCPBuffer)');
17365:  Procedure TCPBufferResize( var TCPBuf : TTCPBuffer; const TCPBufSize : Integer)');
17366:  Procedure TCPBufferExpand( var TCPBuf : TTCPBuffer; const Size : Integer)');
17367:  Procedure TCPBufferShrink( var TCPBuf : TTCPBuffer)');
17368:  Function TCPBufferAddPtr( var TCPBuf : TTCPBuffer; const Size : Integer) : Pointer');
17369:  Procedure TCPBufferAddBuf( var TCPBuf : TTCPBuffer; const Buf : string; const Size : Integer)');
17370:  Function TCPBufferPeekPtr( const TCPBuf : TTCPBuffer; var BufPtr : Pointer) : Integer');
17371:  Function TCPBufferPeek( var TCPBuf : TTCPBuffer; var Buf: string; const Size:Integer): Integer');
17372:  Function TCPBufferRemove(var TCPBuf : TTCPBuffer;var Buf: string; const Size:Integer): Integer');
17373:  Procedure TCPBufferClear( var TCPBuf : TTCPBuffer)');
17374:  Function TCPBufferDiscard( var TCPBuf : TTCPBuffer; const Size : Integer) : Integer');
17375:  Function TCPBufferUsed( const TCPBuf : TTCPBuffer) : Integer');
17376:  Function TCPBufferEmpty( const TCPBuf : TTCPBuffer) : Boolean');
17377:  Function TCPBufferAvailable( const TCPBuf : TTCPBuffer) : Integer');
17378:  Function TCPBufferPtr( const TCPBuf : TTCPBuffer) : Pointer');
17379:  Procedure TCPBufferSetMaxSize( var TCPBuf : TTCPBuffer; const MaxSize : Integer)');
17380: end;
17381:
17382:
17383: {A simple Oscilloscope using  TWaveIn class.
17384:  More info at http://www.delphiforfun.org/programs/oscilloscope.htm }
17385: uses
17386:   Forms,
17387:   U_Oscilloscope4 in 'U_Oscilloscope4.pas' {frmMain},
17388:   ufrmOscilloscope4 in 'ufrmOscilloscope4.pas' {frmOscilloscope: TFrame},
17389:   uColorFunctions in 'uColorFunctions.pas',
17390:   AMixer in 'AMixer.pas',
17391:   uSettings in 'uSettings.pas',
17392:   UWavein4 in 'UWavein4.pas',
17393:   U_Spectrum4 in 'U_Spectrum4.pas' {Form2},
17394:   ufrmInputControl4 in 'ufrmInputControl4.pas' {frmInputControl: TFrame};
17395:
17396:
17397: Functions_max hex in the box maXbox
17398: functionslist.txt
17399: FunctionsList1 3.9.9.86/88/91/92/94/95/96/98
17400:
17401: ********************************************************************************
17402: Procedure
17403: PROCEDURE SIZE 8185 7507 7401 6792 6310 5971 4438 3797 3600 7881 7938
17404: Procedure ***************************Now the Procedure list*******************
17405: Procedure ( ACol, ARow : Integer; Items : TStrings)
17406: Procedure ( Agg : TAggregate)
17407: Procedure ( ASender : TComponent; const AReplyStatus : TReplyStatus)
17408: Procedure ( ASender : TComponent; const AString : String; var AMsg : TIdMessage)
17409: Procedure ( ASender : TComponent; var AMsg : TIdMessage)
17410: Procedure ( ASender : TObject; const ABytes : Integer)
17411: Procedure ( ASender : TObject; VStream : TStream)
17412: Procedure ( AThread : TIdThread)
17413: Procedure ( AWebModule : TComponent)
17414: Procedure ( Column : TColumn)
17415: Procedure ( const AUsername : String; const APassword : String; AAuthenticationResult : Boolean)
17416: Procedure ( const iStart : integer; const sText : string)
17417: Procedure ( Control : TCustomTabControl; TabIndex : Integer; const Rect : TRect; Active : Boolean)
17418: Procedure ( Database : TDatabase; LoginParams : TStrings)
17419: Procedure (DataSet:TCustomClientDataSet;E:EReconcileError;UpdateKind:TUpdateKind;var
       Action:TReconcileAction)
17420: Procedure ( DATASET : TDATASET)
17421: Procedure ( DataSet:TDataSet; E:EDatabaseError;UpdateKind:TUpdateKind;var UpdateAction: TUpdateAction)
17422: Procedure ( DATASET : TDATASET; E : TObject; var ACTION : TDATAACTION)
17423: Procedure ( DataSet : TDataSet; UpdateKind : TUpdateKind; var UpdateAction : TUpdateAction)
17424: Procedure ( DATASET : TDATASET; var ACCEPT : BOOLEAN)
17425: Procedure ( DBCtrlGrid : TDBCtrlGrid; Index : Integer)
17426: Procedure ( Done : Integer)
17427: Procedure ( HeaderControl : TCustomHeaderControl; Section : THeaderSection)
17428: Procedure (HeaderControl:TCustomHeaderControl;Section:THeaderSection; const Rect:TRect;Pressed:Boolean)
17429: Procedure ( HeaderControl:TCustomHeaderControl;Sect:THeaderSection;Width:Int;State:TSectionTrackState)
17430: Procedure ( HeaderControl : THeaderControl; Section : THeaderSection)
17431: Procedure (HeaderControl:THeaderControl;Section: THeaderSection; const Rect:TRect; Pressed : Boolean)
17432: Procedure (HeaderControl:THeaderControl;Section:THeaderSection;Width:Integer;State : TSectionTrackState)
17433: Procedure (Sender: TCustomListView;const ARect: TRect;Stage:TCustomDrawStage;var DefaultDraw: Boolean)
17434: Procedure ( Sender : TCustomListView; const ARect : TRect; var DefaultDraw : Boolean)
17435: Procedure ( Sender : TCustomListView; Item : TListItem; Rect : TRect; State : TOwnerDrawState)
17436: Procedure ( Sender : TCustomTreeView; const ARect : TRect; var DefaultDraw : Boolean)
17437: Procedure ( SENDER : TFIELD; const TEXT : String)
17438: Procedure ( SENDER : TFIELD; var TEXT : STRING; DISPLAYTEXT : BOOLEAN)
17439: Procedure ( Sender : TIdTelnet; const Buffer : String)
17440: Procedure ( Sender : TIdTelnet; Status : TIdTelnetCommand)
```

```
17441: Procedure ( SENDER : TOBJECT; ACANVAS : TCANVAS; ARECT : TRECT; SELECTED : BOOLEAN)
17442: Procedure ( SENDER : TOBJECT; ACANVAS : TCANVAS; ARECT : TRECT; STATE : TOWNERDRAWSTATE)
17443: Procedure ( SENDER : TOBJECT; ACANVAS : TCANVAS; var WIDTH, HEIGHT : INTEGER)
17444: Procedure ( Sender : TObject; ACol, ARow : Longint; const Value : string)
17445: Procedure ( Sender : TObject; ACol, ARow : Longint; Rect : TRect; State : TGridDrawState)
17446: Procedure ( Sender : TObject; ACol, ARow : Longint; var CanSelect : Boolean)
17447: Procedure ( Sender : TObject; ACol, ARow : Longint; var Value : string)
17448: Procedure ( Sender : TObject; Button : TMPBtnType)
17449: Procedure ( Sender : TObject; Button : TMPBtnType; var DoDefault : Boolean)
17450: Procedure ( Sender : TObject; Button : TUDBtnType)
17451: Procedure ( Sender : TObject; Canvas : TCanvas; PageRect : TRect; var DoneDrawing : Boolean)
17452: Procedure ( Sender: TObject; ClientSocket: TServerClientWinSocket; var SocketThread : TServerClientThread)
17453: Procedure ( Sender : TObject; Column : TListColumn)
17454: Procedure ( Sender : TObject; Column : TListColumn; Point : TPoint)
17455: Procedure ( Sender : TObject; Connecting : Boolean)
17456: Procedure (Sender:TObject;const PapSize:SmallInt;const Orient:TPrtOrient;const PageTy:TPageTy;var
       DoneDraw:Bool
17457: Procedure (Sender:TObject; const Rect : TRect; DataCol : Integer; Column: TColumn; State : TGridDrawState)
17458: Procedure ( Sender : TObject; const Rect : TRect; Field : TField; State : TGridDrawState)
17459: Procedure (Sender: TObject; const UserString:string;var DateAndTime:TDateTime;var AllowChange:Boolean)
17460: Procedure ( Sender : TObject; E : Exception; var Handled : Boolean)
17461: Procedure ( Sender : TObject; FromIndex, ToIndex : Longint)
17462: Procedure ( Sender : TObject; FromSection, ToSection : THeaderSection; var AllowDrag : Boolean)
17463: Procedure ( Sender : TObject; Index : LongInt)
17464: Procedure ( Sender : TObject; Item : TListItem)
17465: Procedure ( Sender : TObject; Item : TListItem; Change : TItemChange)
17466: Procedure ( Sender : TObject; Item : TListItem; Change : TItemChange; var AllowChange : Boolean)
17467: Procedure ( Sender : TObject; Item : TListItem; Selected : Boolean)
17468: Procedure ( Sender : TObject; Item : TListItem; var AllowEdit : Boolean)
17469: Procedure ( Sender : TObject; Item : TListItem; var S : string)
17470: Procedure ( Sender : TObject; Item1, Item2 : TListItem; Data : Integer; var Compare : Integer)
17471: Procedure ( Sender : TObject; ModalResult : TModalResult; var CanClose : Boolean)
17472: Procedure ( Sender : TObject; Month : LongWord; var MonthBoldInfo : LongWord)
17473: Procedure ( Sender : TObject; NewTab : Integer; var AllowChange : Boolean)
17474: Procedure ( Sender : TObject; Node : TTreeNode)
17475: Procedure ( Sender : TObject; Node : TTreeNode; var AllowChange : Boolean)
17476: Procedure ( Sender : TObject; Node : TTreeNode; var AllowCollapse : Boolean)
17477: Procedure ( Sender : TObject; Node : TTreeNode; var AllowEdit : Boolean)
17478: Procedure ( Sender : TObject; Node : TTreeNode; var AllowExpansion : Boolean)
17479: Procedure ( Sender : TObject; Node : TTreeNode; var S : string)
17480: Procedure ( Sender : TObject; Node1, Node2 : TTreeNode; Data : Integer; var Compare : Integer)
17481: Procedure ( Sender : TObject; NumObjects, NumChars : Integer; var SaveClipboard : Boolean)
17482: Procedure ( Sender : TObject; Rect : TRect)
17483: Procedure ( Sender : TObject; Request : TWebRequest; Response : TWebResponse; var Handled : Boolean)
17484: Procedure (Sender:TObject;Shift:TShiftState;X,Y:Integer;Orient:TPageScrollerOrientation;var Delta:Int
17485: Procedure ( Sender : TObject; Socket : TCustomWinSocket)
17486: Procedure (Sender:TObject; Socket:TCustomWinSocket;ErrorEvent: TErrorEvent; var ErrorCode : Integer)
17487: Procedure ( Sender : TObject; Socket : TCustomWinSocket; SocketEvent : TSocketEvent)
17488: Procedure ( Sender : TObject; Socket : TSocket; var ClientSocket : TServerClientWinSocket)
17489: Procedure ( SENDER : TOBJECT; SOURCE : TMENUITEM; REBUILD : BOOLEAN)
17490: Procedure ( Sender : TObject; StartPos, EndPos : Integer; var AllowChange : Boolean)
17491: Procedure ( Sender : TObject; TabCanvas : TCanvas; R : TRect; Index : Integer; Selected : Boolean)
17492: Procedure ( Sender : TObject; TabIndex : Integer; var ImageIndex : Integer)
17493: Procedure ( Sender : TObject; Thread : TServerClientThread)
17494: Procedure ( Sender : TObject; TickCount : Cardinal; var Reset : Boolean)
17495: Procedure ( Sender : TObject; Username, Password : string)
17496: Procedure ( Sender : TObject; var AllowChange : Boolean)
17497: Procedure ( Sender : TObject; var AllowChange : Boolean; NewValue : SmallInt; Direction:TUpDownDirection)
17498: Procedure ( Sender : TObject; var Caption : string; var Alignment : THTMLCaptionAlignment)
17499: Procedure ( Sender : TObject; var Continue : Boolean)
17500: Procedure (Sender:TObject;var dest:string;var NumRedirect:Int;var Handled:bool; var VMethod:TIdHTTPMethod)
17501: Procedure ( Sender : TObject; var Username : string)
17502: Procedure ( Sender : TObject; Wnd : HWND)
17503: Procedure ( Sender : TToolbar; Button : TToolButton)
17504: Procedure ( Sender : TToolBar; const ARect : TRect; Stage : TCustomDrawStage; var DefaultDraw : Boolean)
17505: Procedure ( Sender : TToolBar; const ARect : TRect; var DefaultDraw : Boolean)
17506: Procedure ( Sender : TToolbar; Index : Integer; var Allow : Boolean)
17507: Procedure ( Sender : TToolbar; Index : Integer; var Button : TToolButton)
17508: Procedure ( StatusBar : TCustomStatusBar; Panel : TStatusPanel; const Rect : TRect)
17509: Procedure ( StatusBar : TStatusBar; Panel : TStatusPanel; const Rect : TRect)
17510: Procedure (var FieldNames:TWideStrings;SQL:WideString; var BindAllFields:Boolean;var TableName: WideString)
17511: Procedure ( var FieldNames : TWideStrings; SQL : WideString; var TableName : WideString)
17512: procedure (Sender: TObject)
17513: procedure (Sender: TObject; var Done: Boolean)
17514: procedure (Sender: TObject; var Key: Word; Shift: TShiftState);
17515: procedure _T(Name: tbtString; v: Variant);
17516: Procedure AbandonSignalHandler( RtlSigNum : Integer)
17517: Procedure Abort
17518: Procedure About1Click( Sender : TObject)
17519: Procedure Accept( Socket : TSocket)
17520: Procedure AESSymetricExecute(const plaintext, ciphertext, password: string)
17521: Procedure AESEncryptFile(const plaintext, ciphertext, password: string)
17522: Procedure AESDecryptFile(const replaintext, ciphertext, password: string)
17523: Procedure AESEncryptString(const plaintext: string; var ciphertext: string; password: string)
17524: Procedure AESDecryptString(var plaintext: string; const ciphertext: string; password: string)
17525: Procedure Add( Addend1, Addend2 : TMyBigInt)
17526: Procedure ADD( const AKEY, AVALUE : VARIANT)
17527: Procedure Add( const Key : string; Value : Integer)
17528: Procedure ADD( const NAME, FIELDS : String; OPTIONS : TINDEXOPTIONS)
```

```
17529: Procedure ADD( FIELD : TFIELD)
17530: Procedure ADD( ITEM : TMENUITEM)
17531: Procedure ADD( POPUP : TPOPUPMENU)
17532: Procedure AddCharacters( xCharacters : TCharSet)
17533: Procedure AddDriver( const Name : string; List : TStrings)
17534: Procedure AddImages( Value : TCustomImageList)
17535: Procedure AddIndex( const Name, Fields : string; Options : TIndexOptions; const DescFields : string)
17536: Procedure AddLambdaTransitionTo( oState : TniRegularExpressionState)
17537: Procedure AddLoader( Loader : TBitmapLoader)
17538: Procedure ADDPARAM( VALUE : TPARAM)
17539: Procedure AddPassword( const Password : string)
17540: Procedure AddStandardAlias( const Name, Path, DefaultDriver : string)
17541: Procedure AddState( oState : TniRegularExpressionState)
17542: Procedure AddStrings( Strings : TStrings);
17543: procedure AddStrings(Strings: TStrings);
17544: Procedure AddStrings1( Strings : TWideStrings);
17545: Procedure AddStringTerm( var sString : string; const sTerm : string; const sSeparator : string)
17546: Procedure AddToRecentDocs( const Filename : string)
17547: Procedure AddTransitionTo( oState : TniRegularExpressionState; xCharacters : TCharset)
17548: Procedure AllFunctionsList1Click( Sender : TObject)
17549: procedure AllObjectsList1Click(Sender: TObject);
17550: Procedure Allocate( AAllocateBytes : Integer)
17551: procedure AllResourceList1Click(Sender: TObject);
17552: Procedure AnsiAppend( var dst : AnsiString; const src : AnsiString)
17553: Procedure AnsiAssign( var dst : AnsiString; var src : AnsiString)
17554: Procedure AnsiDelete( var dst : AnsiString; index, count : Integer)
17555: Procedure AnsiFree( var s : AnsiString)
17556: Procedure AnsiFromWide( var dst : AnsiString; const src : WideString)
17557: Procedure AnsiInsert( var dst : AnsiString; const src : AnsiString; index : Integer)
17558: Procedure AnsiSetLength( var dst : AnsiString; len : Integer)
17559: Procedure AnsiString_to_stream( const Value : ansistring; Destin : TStream)
17560: Procedure AntiFreeze;
17561: Procedure APPEND
17562: Procedure Append( const S : WideString)
17563: procedure Append(S: string);
17564: Procedure AppendByte( var VBytes : TIdBytes; AByte : byte)
17565: Procedure AppendBytes( var VBytes : TIdBytes; AAdd : TIdBytes)
17566: Procedure AppendChunk( Val : OleVariant)
17567: Procedure AppendData( const Data : OleVariant; HitEOF : Boolean)
17568: Procedure AppendStr( var Dest : string; S : string)
17569: Procedure AppendString( var VBytes : TIdBytes; const AStr : String; ALength : Integer)
17570: Procedure ApplyRange
17571: procedure Arc(X1, Y1, X2, Y2, X3, Y3, X4, Y4: Integer);
17572: Procedure Arrange( Code : TListArrangement)
17573: procedure Assert(expr : Boolean; const msg: string);
17574: procedure Assert2(expr : Boolean; const msg: string);
17575: Procedure Assign( AList : TCustomBucketList)
17576: Procedure Assign( Other : TObject)
17577: Procedure Assign( Source : TDragObject)
17578: Procedure Assign( Source : TPersistent)
17579: Procedure Assign(Source: TPersistent)
17580: procedure Assign2(mystring, mypath: string);
17581: Procedure AssignCurValues( Source : TDataSet);
17582: Procedure AssignCurValues1( const CurValues : Variant);
17583: Procedure ASSIGNFIELD( FIELD : TFIELD)
17584: Procedure ASSIGNFIELDVALUE( FIELD : TFIELD; const VALUE : VARIANT)
17585: Procedure AssignFile(var F: Text; FileName: string)
17586: procedure AssignFile(var F: TextFile; FileName: string)
17587: procedure AssignFileRead(var mystring, myfilename: string);
17588: procedure AssignFileWrite(mystring, myfilename: string);
17589: Procedure AssignTo( Other : TObject)
17590: Procedure AssignValues( Value : TParameters)
17591: Procedure ASSIGNVALUES( VALUE : TPARAMS)
17592: Procedure AssociateExtension( IconPath, ProgramName, Path, Extension : string)
17593: Procedure Base64_to_stream( const Base64 : ansistring; Destin : TStream)
17594: Procedure Base64ToVar( NatData : Pointer; const SoapData : WideString);
17595: Procedure Base64ToVar1( var V : Variant; const SoapData : WideString);
17596: Procedure BcdAdd( const bcdIn1, bcdIn2 : TBcd; var bcdOut : TBcd)
17597: Procedure BcdDivide( Dividend, Divisor : string; var bcdOut : TBcd);
17598: Procedure BcdDivide1( const Dividend, Divisor : TBcd; var bcdOut : TBcd);
17599: Procedure BcdDivide2( const Dividend : TBcd; const Divisor : Double; var bcdOut : TBcd);
17600: Procedure BcdDivide3( const Dividend : TBcd; const Divisor : string; var bcdOut : TBcd);
17601: Procedure BcdMultiply( const bcdIn1, bcdIn2 : TBcd; var bcdOut : TBcd);
17602: Procedure BcdMultiply1( const bcdIn : TBcd; const DoubleIn : Double; var bcdOut : TBcd);
17603: Procedure BcdMultiply2( const bcdIn : TBcd; const StringIn : string; var bcdOut : TBcd);
17604: Procedure BcdMultiply3( StringIn1, StringIn2 : string; var bcdOut : TBcd);
17605: Procedure BcdSubtract( const bcdIn1, bcdIn2 : TBcd; var bcdOut : TBcd)
17606: Procedure BcdToBytes( Value : TBcd; Bytes : array of byte)
17607: procedure Beep
17608: Procedure BeepOk
17609: Procedure BeepQuestion
17610: Procedure BeepHand
17611: Procedure BeepExclamation
17612: Procedure BeepAsterisk
17613: Procedure BeepInformation
17614: procedure BEGINDRAG(IMMEDIATE:BOOLEAN)
17615: Procedure BeginLayout
17616: Procedure BeginTimer( const Delay, Resolution : Cardinal)
17617: Procedure BeginUpdate
```

```
17618: procedure BeginUpdate;
17619: procedure BigScreen1Click(Sender: TObject);
17620: procedure BinToHex(Buffer: PChar; Text: PChar; BufSize: Integer);
17621: Procedure BitsToBooleans( const Bits : Byte; var B : TBooleanArray; AllBits : Boolean);
17622: Procedure BitsToBooleans1( const Bits : Word; var B : TBooleanArray; AllBits : Boolean);
17623: Procedure BitsToBooleans2( const Bits : Integer; var B : TBooleanArray; AllBits : Boolean);
17624: Procedure BitsToBooleans3( const Bits : Int64; var B : TBooleanArray; AllBits : Boolean);
17625: Procedure BoldDays(Days : array of LongWord; var MonthBoldInfo : LongWord)
17626: Procedure BooleansToBits( var Dest : Byte; const B : TBooleanArray);
17627: Procedure BooleansToBits1( var Dest : Word; const B : TBooleanArray);
17628: Procedure BooleansToBits2( var Dest : Integer; const B : TBooleanArray);
17629: Procedure BooleansToBits3( var Dest : Int64; const B : TBooleanArray);
17630: Procedure BreakPointMenuClick( Sender : TObject)
17631: procedure BRINGTOFRONT
17632: procedure BringToFront;
17633: Procedure btnBackClick( Sender : TObject)
17634: Procedure btnBrowseClick( Sender : TObject)
17635: Procedure BtnClick( Index : TNavigateBtn)
17636: Procedure btnLargeIconsClick( Sender : TObject)
17637: Procedure BuildAndSendRequest( AURI : TIdURI)
17638: Procedure BuildCache
17639: Procedure BurnMemory( var Buff, BuffLen : integer)
17640: Procedure BurnMemoryStream( Destructo : TMemoryStream)
17641: Procedure CalculateFirstSet
17642: Procedure Cancel
17643: procedure CancelDrag;
17644: Procedure CancelEdit
17645: procedure CANCELHINT
17646: Procedure CancelRange
17647: Procedure CancelUpdates
17648: Procedure CancelWriteBuffer
17649: Procedure Capture1(ADest:TStream;out VLineCount:Integer;const ADelim:string;const AIsRFCMessage:Bool;
17650: Procedure Capture2( ADest : TStrings; const ADelim : string; const AIsRFCMessage : Boolean);
17651: Procedure Capture3(ADest:TStrings;out VLineCount:Integer;const ADelim:string;const AIsRFCMessage:Bool
17652: procedure CaptureScreenFormat(vname: string; vextension: string);
17653: procedure CaptureScreenPNG(vname: string);
17654: procedure CardinalsToI64(var I: Int64; const LowPart, HighPart: Cardinal);
17655: procedure CASCADE
17656: Procedure CastNativeToSoap(Info:PTypeInfo;var SoapData:WideString;NatData:Pointer;var IsNull: Boolean)
17657: Procedure CastSoapToVariant( SoapInfo : PTypeInfo; const SoapData : WideString; NatData : Pointer);
17658: Procedure cbPathClick( Sender : TObject)
17659: Procedure cbPathKeyDown( Sender : TObject; var Key : Word; Shift : TShiftState)
17660: Procedure cedebugAfterExecute( Sender : TPSScript)
17661: Procedure cedebugBreakpoint( Sender : TObject; const FileName : String; Position, Row, Col : Cardinal)
17662: Procedure cedebugCompile( Sender : TPSScript)
17663: Procedure cedebugExecute( Sender : TPSScript)
17664: Procedure cedebugIdle( Sender : TObject)
17665: Procedure cedebugLineInfo( Sender : TObject; const FileName : String; Position, Row, Col : Cardinal)
17666: Procedure CenterHeight( const pc, pcParent : TControl)
17667: Procedure CenterDlg(AForm: TForm; MForm: TForm);   { Zentriert Forms }
17668: Procedure CenterForm(AForm: TForm; MForm: TForm);   { Zentriert Forms }
17669: Procedure Change
17670: procedure ChangeBiDiModeAlignment(var Alignment: TAlignment);
17671: Procedure Changed
17672: Procedure ChangeDir( const ADirName : string)
17673: Procedure ChangeDirUp
17674: Procedure ChangeEntryTransitions( oNewState : TniRegularExpressionState)
17675: Procedure ChangeLevelBy( Value : TChangeRange)
17676: Procedure ChDir(const s: string)
17677: Procedure Check(Status: Integer)
17678: Procedure CheckCommonControl( CC : Integer)
17679: Procedure CHECKFIELDNAME( const FIELDNAME : String)
17680: Procedure CHECKFIELDNAMES( const FIELDNAMES : String)
17681: Procedure CheckForDisconnect(const ARaiseExceptionIfDisconnected: boolean;const AIgnoreBuffer:bool)
17682: Procedure CheckForGracefulDisconnect( const ARaiseExceptionIfDisconnected : Boolean)
17683: Procedure CheckToken( T : Char)
17684: procedure CheckToken(t:char)
17685: Procedure CheckTokenSymbol( const S : string)
17686: procedure CheckTokenSymbol(s:string)
17687: Procedure CheckToolMenuDropdown( ToolButton : TToolButton)
17688: procedure Chord(X1, Y1, X2, Y2, X3, Y3, X4, Y4: Integer);
17689: Procedure CIED65ToCIED50( var X, Y, Z : Extended)
17690: Procedure CIELABToBGR( const Source, Target : Pointer; const Count : Cardinal);
17691: procedure CipherFile1Click(Sender: TObject);
17692: Procedure Clear;
17693: Procedure Clear1Click( Sender : TObject)
17694: Procedure ClearColor( Color : TColor)
17695: Procedure CLEARITEM( AITEM : TMENUITEM)
17696: Procedure ClearMapping
17697: Procedure ClearSelection( KeepPrimary : Boolean)
17698: Procedure ClearWriteBuffer
17699: Procedure Click
17700: Procedure Close
17701: Procedure Close1Click( Sender : TObject)
17702: Procedure CloseDatabase( Database : TDatabase)
17703: Procedure CloseDataSets
17704: Procedure CloseDialog
17705: Procedure CloseFile(var F: Text);
17706: Procedure Closure
```

```
17707: Procedure CMYKToBGR( const Source, Target : Pointer; const BitsPerSample : Byte; Count : Cardinal);
17708: Procedure CMYKToBGR1( const C, M, Y, K, Target : Pointer; const BitsPerSample : Byte; Count : Cardinal);
17709: Procedure CodeCompletionList1Click( Sender : TObject)
17710: Procedure ColEnter
17711: Procedure Collapse
17712: Procedure Collapse( Recurse : Boolean)
17713: Procedure ColorRGBToHLS( clrRGB : TColorRef; var Hue, Luminance, Saturation : Word)
17714: Procedure CommaSeparatedToStringList( AList : TStrings; const Value : string)
17715: Procedure CommitFreeAndNil( var Transaction : TDBXTransaction)
17716: Procedure Compile1Click( Sender : TObject)
17717: procedure ComponentCount1Click(Sender: TObject);
17718: Procedure Compress(azipfolder, azipfile: string)
17719: Procedure DeCompress(azipfolder, azipfile: string)
17720: Procedure XZip(azipfolder, azipfile: string)
17721: Procedure XUnZip(azipfolder, azipfile: string)
17722: Procedure Connect( const ATimeout : Integer)
17723: Procedure Connect( Socket : TSocket)
17724: procedure Console1Click(Sender: TObject);
17725: Procedure Continue
17726: Procedure ContinueCount( var Counter : TJclCounter)
17727: procedure CONTROLDESTROYED(CONTROL:TCONTROL)
17728: Procedure ConvertStreamFromAnsiToUTF8( Src, Dst : TStream; cp : integer)
17729: Procedure ConvertStreamFromUTF8ToAnsi( Src, Dst : TStream; cp : integer)
17730: Procedure ConvertImage(vsource, vdestination: string);
17731: // Ex. ConvertImage(Exepath+'my233_bmp.bmp',Exepath+'mypng111.png')
17732: Procedure ConvertBitmap(vsource, vdestination: string);
17733: Procedure ConvertToGray(Cnv: TCanvas);
17734: Procedure Copy( Buffer : TRecordBuffer; Dest : TBytes; Offset : Integer; Length : Integer)
17735: Procedure Copy( Buffer : TValueBuffer; Dest : TBytes; Offset : Integer; Count : Integer);
17736: Procedure Copy1( Source : TBytes; Offset : Integer; Buffer : TValueBuffer; Count : Integer);
17737: Procedure CopyBytesToHostLongWord(const ASource:TIdBytes;const ASourceIndex:Integer;var VDest:LongWord)
17738: Procedure CopyBytesToHostWord( const ASource : TIdBytes; const ASourceIndex : Integer; var VDest : Word)
17739: Procedure CopyFrom( mbCopy : TMyBigInt)
17740: Procedure CopyMemoryStream( Source, Destination : TMemoryStream)
17741: procedure CopyRect(const Dest: TRect; Canvas: TCanvas;const Source: TRect);
17742: Procedure CopyTIdByteArray( const ASource : array of Byte; const ASourceIndex : Integer; var VDest : array
       of Byte; const ADestIndex : Integer; const ALength : Integer)
17743: Procedure CopyTIdBytes(const ASrc:TIdBytes;const ASrcIdx:Int;var VDest:TIdBytes;const ADestIdx:Int;const
       ALen:Int)
17744: Procedure CopyTIdCardinal( const ASource : Cardinal; var VDest : TIdBytes; const ADestIndex : Integer)
17745: Procedure CopyTIdInt64( const ASource : Int64; var VDest : TIdBytes; const ADestIndex : Integer)
17746: Procedure CopyTIdIPV6Address(const ASource:TIdIPv6Address; var VDest: TIdBytes; const ADestIndex : Integer)
17747: Procedure CopyTIdLongWord( const ASource : LongWord; var VDest : TIdBytes; const ADestIndex : Integer)
17748: Procedure CopyTIdNetworkLongWord( const ASource : LongWord; var VDest : TIdBytes; const ADestIndex:Integer)
17749: Procedure CopyTIdNetworkWord( const ASource : Word; var VDest : TIdBytes; const ADestIndex : Integer)
17750: Procedure CopyTIdString(const ASource:String;var VDest:TIdBytes;const ADestIndex:Integer;ALength: Integer)
17751: Procedure CopyTIdWord( const ASource : Word; var VDest : TIdBytes; const ADestIndex : Integer)
17752: Procedure CopyToClipboard
17753: Procedure CountParts
17754: Procedure CreateDataSet
17755: Procedure CreateEmptyFile( const FileName : string)
17756: Procedure CreateFileFromString( const FileName, Data : string)
17757: Procedure CreateFromDelta( Source : TPacketDataSet)
17758: procedure CREATEHANDLE
17759: Procedure CreatePipeStreams(var InPipe:TInputPipeStream;var
       OutPipe:TOutputPipeStream;SecAttr:PSecurityAttributes; BufSize:Longint);
17760: Procedure CreateProcAsUser( const UserDomain, UserName, PassWord, CommandLine : string)
17761: Procedure CreateProcAsUserEx(const UserDomain,UserName,Password,CommandLine:string;const Environment:PChar)
17762: Procedure CreateTable
17763: Procedure CreateUDLFile( const FileName, ProviderName, DataSourceName : WideString)
17764: procedure CSyntax1Click(Sender: TObject);
17765: Procedure CurrencyToComp( Value : Currency; var Result : Comp)
17766: Procedure CURSORPOSCHANGED
17767: procedure CutFirstDirectory(var S: String)
17768: Procedure DataBaseError(const Message: string)
17769: Procedure DateTimeToString( var Result : string; Format : string; DateTime : TDateTime);
17770: procedure DateTimeToString(var Result: string; const Format: string; DateTime: TDateTime)
17771: Procedure DateTimeToSystemTime( DateTime : TDateTime; var SystemTime : TSystemTime)
17772: procedure DateTimeToSystemTime(const DateTime: TDateTime; var SystemTime: TSystemTime);
17773: Procedure DBIError(errorCode: Integer)
17774: Procedure DebugOutput( const AText : string)
17775: Procedure DebugRun1Click( Sender : TObject)
17776: procedure Dec;
17777: Procedure DecodeDate( DateTime : TDateTime; var Year, Month, Day : Word)
17778: procedure DecodeDate(const DateTime: TDateTime; var Year, Month, Day: Word);
17779: Procedure DecodeDateDay( const AValue : TDateTime; out AYear, ADayOfYear : Word)
17780: Procedure DecodeDateMonthWeek(const AValue:TDateTime;out AYear, AMonth,AWeekOfMonth,ADayOfWeek : Word)
17781: Procedure DecodeDateTime(const AValue:TDateTime;out AYear,AMonth,ADay,AHour,AMin,ASec,AMillSec:Word)
17782: Procedure DecodeDateWeek( const AValue : TDateTime; out AYear, AWeekOfYear, ADayOfWeek : Word)
17783: Procedure DecodeDayOfWeekInMonth(const AValue:TDateTime;out AYear,AMonth,ANthDayOfWeek,ADayOfWeek:Word)
17784: Procedure DecodeTime( DateTime : TDateTime; var Hour, Min, Sec, MSec : Word)
17785: procedure DecodeTime(const DateTime: TDateTime; var Hour, Min, Sec, MSec: Word);
17786: Procedure Decompile1Click( Sender : TObject)
17787: Procedure DefaultDrawColumnCell(const Rect : TRect; DataCol:Integer;Column:TColumn;State:TGridDrawState)
17788: Procedure DefaultDrawDataCell( const Rect : TRect; Field : TField; State : TGridDrawState)
17789: Procedure DeferLayout
17790: Procedure defFileread
17791: procedure DEFOCUSCONTROL(CONTROL:TWINCONTROL;REMOVING:BOOLEAN)
17792: Procedure DelayMicroseconds( const MicroSeconds : Integer)
```

```
17793: Procedure Delete
17794: Procedure Delete( const AFilename : string)
17795: Procedure Delete( const Index : Integer)
17796: Procedure DELETE( INDEX : INTEGER)
17797: Procedure Delete( Index : LongInt)
17798: Procedure Delete( Node : TTreeNode)
17799: procedure Delete(var s: AnyString; ifrom, icount: Longint);
17800: Procedure DeleteAlias( const Name : string)
17801: Procedure DeleteDriver( const Name : string)
17802: Procedure DeleteIndex( const Name : string)
17803: Procedure DeleteKey( const Section, Ident : String)
17804: Procedure DeleteRecords
17805: Procedure DeleteRecords( AffectRecords : TAffectRecords)
17806: Procedure DeleteString( var pStr : String; const pDelStr : string)
17807: Procedure DeleteTable
17808: procedure DelphiSite1Click(Sender: TObject);
17809: Procedure Deselect
17810: Procedure Deselect( Node : TTreeNode)
17811: procedure DestroyComponents
17812: Procedure DestroyHandle
17813: Procedure Diff( var X : array of Double)
17814: procedure Diff(var X: array of Double);
17815: Procedure DirCreate( const DirectoryName : String)');
17816: procedure DISABLEALIGN
17817: Procedure DisableConstraints
17818: Procedure Disconnect
17819: Procedure Disconnect( Socket : TSocket)
17820: Procedure Dispose
17821: procedure Dispose(P: PChar)
17822: Procedure DivMod( Dividend : Integer; Divisor : Word; var Result, Remainder : Word)
17823: Procedure DoKey( Key : TDBCtrlGridKey)
17824: Procedure DomToTree(anXmlNode: IXMLNode; aTreeNode: TTreeNode; aTreeView: TTreeView);
17825: Procedure DomToTreeJ(anXmlNode: TJvXMLNode; aTreeNode: TTreeNode; aTreeView: TTreeView);
17826: Procedure Dormant
17827: Procedure DoubleToBcd1( const AValue : Double; var bcd : TBcd);
17828: Procedure DoubleToBytes( Value : Double; Bytes : array of byte)
17829: Procedure DoubleToComp( Value : Double; var Result : Comp)
17830: Procedure doWebCamPic(picname: string); //eg: c:\mypic.png
17831: Procedure Draw( Canvas : TCanvas; X, Y, Index : Integer; Enabled : Boolean);
17832: procedure Draw(X, Y: Integer; Graphic: TGraphic);
17833: Procedure Draw1(Canvas:TCanvas; X,Y,
     Index:Int;ADrawingStyle:TDrawingStyle;AImageType:TImageType;Enabled:Bool);
17834: Procedure DrawArrow( ACanvas : TCanvas; Direction : TScrollDirection; Location : TPoint; Size : Integer)
17835: Procedure DrawCheck( ACanvas : TCanvas; Location : TPoint; Size : Integer; Shadow : Boolean)
17836: Procedure DrawChevron( ACanvas : TCanvas; Direction : TScrollDirection; Location : TPoint; Size : Integer)
17837: Procedure DrawColumnCell( const Rect : TRect; DataCol : Integer; Column : TColumn; State : TGridDrawState)
17838: procedure DrawFocusRect(const Rect: TRect);
17839: Procedure DrawHDIBToTBitmap( HDIB : THandle; Bitmap : TBitmap)
17840: Procedure DRAWMENUITEM( MENUITEM : TMENUITEM; ACANVAS : TCANVAS; ARECT : TRECT; STATE : TOWNERDRAWSTATE)
17841: Procedure DrawOverlay(Canvas:TCanvas;X,Y:Integer;ImageIndex:Integer;Overlay:TOverlay;Enabled: Boolean);
17842: Procedure DrawOverlay1(Canvas:TCanvas; X,Y:Int; ImageIndex:Int; Overlay : TOverlay; ADrawingStyle :
     TDrawingStyle; AImageType : TImageType; Enabled : Boolean);
17843: procedure drawPlot(vPoints: TPointArray; cFrm: TForm; vcolor: integer);
17844: Procedure DrawPolyLine( const Canvas : TCanvas; var Points : TPointArray; const ClipRect : TRect)
17845: Procedure DropConnections
17846: Procedure DropDown
17847: Procedure DumpDescription( oStrings : TStrings)
17848: Procedure DumpStateTable( oStrings : TStrings)
17849: Procedure EDIT
17850: Procedure EditButtonClick
17851: Procedure EditFont1Click( Sender : TObject)
17852: procedure Ellipse(X1, Y1, X2, Y2: Integer);
17853: Procedure Ellipse1( const Rect : TRect);
17854: Procedure EMMS
17855: Procedure Encode( ADest : TStream)
17856: procedure ENDDRAG(DROP:BOOLEAN)
17857: Procedure EndEdit( Cancel : Boolean)
17858: Procedure EndTimer
17859: Procedure EndUpdate
17860: Procedure EraseSection( const Section : string)
17861: Procedure Error( const Ident : string)
17862: procedure Error(Ident:Integer)
17863: Procedure ErrorFmt( const Ident : string; const Args : array of const)
17864: Procedure ErrorStr( const Message : string)
17865: procedure ErrorStr(Message:String)
17866: Procedure Exchange( Index1, Index2 : Integer)
17867: procedure Exchange(Index1, Index2: Integer);
17868: Procedure Exec( FileName, Parameters, Directory : string)
17869: Procedure ExecProc
17870: Procedure ExecSQL( UpdateKind : TUpdateKind)
17871: Procedure Execute
17872: Procedure Execute( const CommandText : WideString; var Params, OwnerData : OleVariant)
17873: Procedure ExecuteAndWait( FileName : string; Visibility : Integer)
17874: Procedure ExecuteCommand(executeFile, paramstring: string)
17875: Procedure ExecuteShell(executeFile, paramstring: string)
17876: Procedure ShellExecuteAndWait(executeFile, paramstring: string);
17877: Procedure ExitThread(ExitCode: Integer); stdcall;
17878: Procedure ExitProcess(ExitCode: Integer); stdcall;
17879: Procedure Expand( AUserName : String; AResults : TStrings)
```

```
17880: Procedure Expand( Recurse : Boolean)
17881: Procedure ExportClipboard1Click( Sender : TObject)
17882: Procedure ExportDataSetToExcel( DataSet : TDataSet; OnExportProgress : TOnExportProgress)
17883: Procedure ExtractContentFields( Strings : TStrings)
17884: Procedure ExtractCookieFields( Strings : TStrings)
17885: Procedure ExtractFields( Separators, WhiteSpace : TSysCharSet; Content : PChar; Strings : TStrings)
17886: Procedure ExtractHeaderFields(Separ,
       WhiteSpace:TSysChSet;Cont:PChar;Strings:TStrings;Decode:Bool;StripQuots:Bool)
17887: Procedure ExtractHTTPFields(Separators,WhiteSpace:
       TSysCharSet;Content:PChar;Strings:TStrings;StripQuotes:Bool)
17888: Procedure ExtractQueryFields( Strings : TStrings)
17889: Procedure FastDegToGrad
17890: Procedure FastDegToRad
17891: Procedure FastGradToDeg
17892: Procedure FastGradToRad
17893: Procedure FastRadToDeg
17894: Procedure FastRadToGrad
17895: Procedure FileClose( Handle : Integer)
17896: Procedure FileClose(handle: integer)
17897: procedure FilesFromWildcard(Dir,Mask:string;var Files:TStringList;Subdirs,ShowDirs,Multitasking:Bool)
17898: Procedure FileStructure( AStructure : TIdFTPDataStructure)
17899: Procedure FillByte2(var X: Byte ; count: integer; value: byte)
17900: Procedure FillBytes( var VBytes : TIdBytes; const ACount : Integer; const AValue : Byte)
17901: Procedure FillChar( Buffer : TRecordBuffer; Length : Integer; value : Byte)
17902: Procedure FillChar2(var X: PChar ; count: integer; value: char)
17903: Procedure FillCharS(var p: string; count: integer; value: char); //fix3.8
17904: Procedure FillIPList
17905: procedure FillRect(const Rect: TRect);
17906: Procedure FillTStrings( AStrings : TStrings)
17907: Procedure FilterOnBookmarks( Bookmarks : array of const)
17908: procedure FinalizePackage(Module: HMODULE)
17909: procedure FindClose;
17910: procedure FindClose2(var F: TSearchRec)
17911: Procedure FindMatches( const sString : string; xNotify : TniRegularExpressionMatchFoundEvent);
17912: Procedure FindMatches1(const sString:string;iStart:integer;xNotify:TniRegularExpressionMatchFoundEvent);
17913: Procedure FindNearest( const KeyValues : array of const)
17914: Procedure FinishContext
17915: Procedure FIRST
17916: Procedure FloatToDegMinSec( const X : Float; var Degs, Mins, Secs : Float)
17917: Procedure FloatToDecimal(var Result:TFloatRec;const Value:extend;ValueType:TFloatValue;Precis,Decs:Int);
17918: Procedure FloodFill( X, Y : Integer; Color : TColor; FillStyle : TFillStyle)
17919: Procedure FlushSchemaCache( const TableName : string)
17920: procedure FmtStr(var Result: string; const Format: string; const Args: array of const)
17921: procedure FOCUSCONTROL(CONTROL:TWINCONTROL)
17922: Procedure Form1Close( Sender : TObject; var Action : TCloseAction)
17923: Procedure FormActivate( Sender : TObject)
17924: procedure FormatLn(const format: String; const args: array of const);  //alias
17925: Procedure FormClose( Sender : TObject; var Action : TCloseAction)
17926: Procedure FormCreate( Sender : TObject)
17927: Procedure FormDestroy( Sender : TObject)
17928: Procedure FormKeyPress( Sender : TObject; var Key : Char)
17929: procedure FormOutput1Click(Sender: TObject);
17930: Procedure FormToHtml( Form : TForm; Path : string)
17931: procedure FrameRect(const Rect: TRect);
17932: Procedure Frame3D(Canvas:TCanvas; var Rect:TRect; TopColor,BottomColor:TColor; Width : Integer)
17933: Procedure NotebookHandlesNeeded( Notebook : TNotebook)
17934: Procedure Free( Buffer : TRecordBuffer)
17935: Procedure Free( Buffer : TValueBuffer)
17936: Procedure Free;
17937: Procedure FreeAndNil(var Obj:TObject)
17938: Procedure FreeImage
17939: procedure FreeMem(P: PChar; Size: Integer)
17940: Procedure FreeTreeData( Tree : TUpdateTree)
17941: Procedure Frexp( const X : Extended; var Mantissa : Extended; var Exponent : Integer)
17942: Procedure FullCollapse
17943: Procedure FullExpand
17944: Procedure GenerateDPB(sl: TStrings; var DPB: string; var DPBLength: Short);  //InterBase
17945: Procedure GenerateTPB(sl: TStrings; var TPB: string; var TPBLength: Short);
17946: Procedure OUTPUTXML( SQLOBJECT : TIBSQL; OUTPUTOBJECT : TIBOUTPUTXML)
17947: Procedure Get1( AURL : string; const AResponseContent : TStream);
17948: Procedure Get1( const ASourceFile : string; ADest : TStream; AResume : Boolean);
17949: Procedure Get2(const ASourceFile,ADestFile: string;const ACanOverwrite: boolean; AResume: Boolean);
17950: Procedure GetAliasNames( List : TStrings)
17951: Procedure GetAliasParams( const AliasName : string; List : TStrings)
17952: Procedure GetApplicationsRunning( Strings : TStrings)
17953: Procedure getBox(aURL, extension: string);
17954: Procedure GetCommandTypes( List : TWideStrings)
17955: Procedure GetConfigParams( const Path, Section : string; List : TStrings)
17956: Procedure GetConnectionNames( List : TStrings; Driver : string; DesignMode : Boolean)
17957: Procedure GetConvFamilies( out AFamilies : TConvFamilyArray)
17958: Procedure GetConvTypes( const AFamily : TConvFamily; out ATypes : TConvTypeArray)
17959: Procedure GetDatabaseNames( List : TStrings)
17960: Procedure GetDataPacket( DataSet : TDataSet; var RecsOut : Integer; out Data : OleVariant)
17961: Procedure GetDIBSizes(Bitmap: HBITMAP; var InfoHeaderSize: longWORD; var ImageSize : longWORD)
17962: Procedure GetDir(d: byte; var s: string)
17963: Procedure GetDirList( const Search : string; List : TStrings; Recursive : Boolean)
17964: Procedure GetDriverNames( List : TStrings)
17965: Procedure GetDriverNames( List : TStrings; DesignMode : Boolean)
17966: Procedure GetDriverParams( const DriverName : string; List : TStrings)
```

```
17967: Procedure GetEMails1Click( Sender : TObject)
17968: Procedure getEnvironmentInfo;
17969: Function getEnvironmentString: string;
17970: Procedure GetFieldNames( const DatabaseName, TableName : string; List : TStrings)
17971: Procedure GetFieldNames( const TableName : string; List : TStrings)
17972: Procedure GetFieldNames( const TableName : string; List : TStrings);
17973: Procedure GetFieldNames( const TableName : WideString; List : TWideStrings);
17974: Procedure GETFIELDNAMES( LIST : TSTRINGS)
17975: Procedure GetFieldNames1( const TableName : string; List : TStrings);
17976: Procedure GetFieldNames1( const TableName : string; SchemaName : string; List : TStrings);
17977: Procedure GetFieldNames2( const TableName : WideString;SchemaName : WideString; List : TWideStrings);
17978: Procedure GetFieldNames3( const TableName : WideString; List : TWideStrings);
17979: Procedure GetFileAttributeList( const Items : TStrings; const Attr : Integer)
17980: Procedure GetFileAttributeListEx( const Items : TStrings; const Attr : Integer)
17981: Procedure GetFMTBcd( Buffer : TRecordBuffer; var value : TBcd)
17982: Procedure GetFormatSettings
17983: Procedure GetFromDIB( var DIB : TBitmapInfo)
17984: Procedure GetFromHDIB( HDIB : HBitmap)
17985: Procedure GetIcon( Index : Integer; Image : TIcon);
17986: Procedure GetIcon1(Index : Integer; Image:TIcon; ADrawingStyle:TDrawingStyle; AImageType:TImageType);
17987: Procedure GetIndexInfo( IndexName : string)
17988: Procedure GetIndexNames( const TableName, SchemaName : string; List : TStrings);
17989: Procedure GetIndexNames( List : TStrings)
17990: Procedure GetIndexNames1( const TableName : WideString; List : TWideStrings);
17991: Procedure GetIndexNames2( const TableName, SchemaName : WideString; List : TWideStrings);
17992: Procedure GetIndexNames4( const TableName : string; List : TStrings);
17993: Procedure GetInternalResponse
17994: Procedure GETITEMNAMES( LIST : TSTRINGS)
17995: procedure GetMem(P: PChar; Size: Integer)
17996: Procedure GETOLE2ACCELERATORTABLE(var ACCELTABLE:HACCEL;var ACCELCOUNT:INTEGER;GROUPS:array of INTEGER)
17997: procedure GetPackageDescription(ModuleName: PChar): string)
17998: Procedure GetPackageNames( List : TStrings);
17999: Procedure GetPackageNames1( List : TWideStrings);
18000: Procedure GetParamList( List : TList; const ParamNames : WideString)
18001: Procedure GetProcedureNames( List : TStrings);
18002: Procedure GetProcedureNames( List : TWideStrings);
18003: Procedure GetProcedureNames1( const PackageName : string; List : TStrings);
18004: Procedure GetProcedureNames1( List : TStrings);
18005: Procedure GetProcedureNames2( const PackageName, SchemaName : string; List : TStrings);
18006: Procedure GetProcedureNames3( List : TWideStrings);
18007: Procedure GetProcedureNames4( const PackageName : Widestring; List : TWideStrings);
18008: Procedure GetProcedureNames5( const PackageName, SchemaName : WideString; List : TWideStrings);
18009: Procedure GetProcedureParams( ProcedureName : WideString; List : TList);
18010: Procedure GetProcedureParams1( ProcedureName, PackageName : WideString; List : TList);
18011: Procedure GetProcedureParams2( ProcedureName, PackageName, SchemaName : Widestring; List : TList);
18012: Procedure GetProviderNames( Names : TWideStrings);
18013: Procedure GetProviderNames( Proc : TGetStrProc)
18014: Procedure GetProviderNames1( Names : TStrings);
18015: procedure GetQrCode2(Width,Height:Word; Correct_Level: string; const Data:string; apath: string);
18016: procedure GetQrCode3(Width,Height:Word;Correct_Level:string;const Data:string;apath:string);//no open image
18017: Function GetQrCode4(Width,Height:Word;Correct_Level:string; const
       Data:string;aformat:string):TLinearBitmap;
18018: Procedure GetRGBValue( const Color : TColor; out Red, Green, Blue : Byte)
18019: Procedure GetSchemaNames( List : TStrings);
18020: Procedure GetSchemaNames1( List : TWideStrings);
18021: Procedure getScriptandRunAsk;
18022: Procedure getScriptandRun(ascript: string);
18023: Procedure getScript(ascript: string);   //alias
18024: Procedure getWebScript(ascript: string);   //alias
18025: Procedure GetSessionNames( List : TStrings)
18026: Procedure GetStoredProcNames( const DatabaseName : string; List : TStrings)
18027: Procedure GetStrings( List : TStrings)
18028: Procedure GetSystemTime; stdcall;
18029: Procedure GetTableNames(const DatabaseName,Pattern:string;Extensions,SystemTables:Boolean;List:TStrings)
18030: Procedure GetTableNames( List : TStrings; SystemTables : Boolean)
18031: Procedure GetTableNames( List : TStrings; SystemTables : Boolean);
18032: Procedure GetTableNames( List : TWideStrings; SystemTables : Boolean);
18033: Procedure GetTableNames1( List : TStrings; SchemaName : WideString; SystemTables : Boolean);
18034: Procedure GetTableNames1( List : TStrings; SystemTables : Boolean);
18035: Procedure GetTableNames2( List : TWideStrings; SchemaName : WideString; SystemTables : Boolean);
18036: Procedure GetTransitionsOn( cChar : char; oStateList : TList)
18037: Procedure GetVisibleWindows( List : Tstrings)
18038: Procedure GoBegin
18039: Procedure GotoCurrent( DataSet : TCustomClientDataSet)
18040: Procedure GotoCurrent( Table : TTable)
18041: procedure GotoEnd1Click(Sender: TObject);
18042: Procedure GotoNearest
18043: Procedure GradientFillCanvas(const ACanvas:TCanvas;const AStartCol,AEndCol:TColor;const ARect:TRect;const
       Direction: TGradientDirection)
18044: Procedure HandleException( E : Exception; var Handled : Boolean)
18045: procedure HANDLEMESSAGE
18046: procedure HandleNeeded;
18047: Procedure Head( AURL : string)
18048: Procedure Help( var AHelpContents : TStringList; ACommand : String)
18049: Procedure HexToBinary( Stream : TStream)
18050: procedure HexToBinary(Stream:TStream)
18051: Procedure HideDragImage
18052: Procedure HideFormCaption( FormHandle : THandle; Hide : Boolean)
18053: Procedure HideTraybar
```

```
18054: Procedure HideWindowForSeconds(secs: integer);   {//3 seconds}
18055: Procedure HideWindowForSeconds2(secs: integer; apphandle, aself: TForm);   {//3 seconds}
18056: Procedure HookOSExceptions
18057: Procedure HookSignal( RtlSigNum : Integer)
18058: Procedure HSLToRGB( const H, S, L : Single; out R, G, B : Single);
18059: Procedure HTMLSyntax1Click( Sender : TObject)
18060: Procedure IFPS3ClassesPlugin1CompImport( Sender : TObject; x : TPSPascalCompiler)
18061: Procedure IFPS3ClassesPlugin1ExecImport( Sender : TObject; Exec : TPSExec; x : TPSRuntimeClassImporter)
18062: Procedure ImportfromClipboard1Click( Sender : TObject)
18063: Procedure ImportfromClipboard2Click( Sender : TObject)
18064: Procedure IncAMonth( var Year, Month, Day : Word; NumberOfMonths : Integer)
18065: procedure Incb(var x: byte);
18066: Procedure Include1Click( Sender : TObject)
18067: Procedure IncludeOFF;  //preprocessing
18068: Procedure IncludeON;
18069: procedure Info1Click(Sender: TObject);
18070: Procedure InitAltRecBuffers( CheckModified : Boolean)
18071: Procedure InitContext( Request : TWebRequest; Response : TWebResponse)
18072: Procedure InitContext(WebModuleList:TAbstractWebModuleList;Request:TWebRequest;Response:TWebResponse)
18073: Procedure InitData( ASource : TDataSet)
18074: Procedure InitDelta( ADelta : TPacketDataSet);
18075: Procedure InitDelta1( const ADelta : OleVariant);
18076: Procedure InitErrorPacket( E : EUpdateError; Response : TResolverResponse)
18077: Procedure Initialize
18078: procedure InitializePackage(Module: HMODULE)
18079: Procedure INITIATEACTION
18080: Procedure initHexArray(var hexn: THexArray);  //THexArray', 'array[0..15] of char;'
18081: Procedure InitKeyFields( Tree : TUpdateTree; ADelta : TPacketDataSet)
18082: Procedure InitModule( AModule : TComponent)
18083: Procedure InitStdConvs
18084: Procedure InitTreeData( Tree : TUpdateTree)
18085: Procedure INSERT
18086: Procedure Insert( Index : Integer; AClass : TClass)
18087: Procedure Insert( Index : Integer; AComponent : TComponent)
18088: Procedure Insert( Index : Integer; AObject : TObject)
18089: Procedure Insert( Index : Integer; const S : WideString)
18090: Procedure Insert( Index : Integer; Image, Mask : TBitmap)
18091: Procedure Insert(Index: Integer; const S: string);
18092: procedure Insert(Index: Integer; S: string);
18093: procedure Insert(s: AnyString; var s2: AnyString; iPos: Longint);
18094: procedure InsertComponent(AComponent:TComponent)
18095: procedure InsertControl(AControl: TControl);
18096: Procedure InsertIcon( Index : Integer; Image : TIcon)
18097: Procedure InsertMasked( Index : Integer; Image : TBitmap; MaskColor : TColor)
18098: Procedure InsertObject( Index : Integer; const S : WideString; AObject : TObject)
18099: procedure InsertObject(Index:Integer;S:String;AObject:TObject)
18100: Procedure Int16ToBytes( Value : SmallInt; Bytes : array of byte)
18101: Procedure Int32ToBytes( Value : Integer; Bytes : array of byte)
18102: Procedure Int64ToBytes( Value : Int64; Bytes : array of byte)
18103: procedure I64ToCardinals(I: Int64; var LowPart, HighPart: Cardinal);
18104: Procedure InternalBeforeResolve( Tree : TUpdateTree)
18105: Procedure InvalidateModuleCache
18106: Procedure InvalidateTitles
18107: Procedure InvalidDateDayError( const AYear, ADayOfYear : Word)
18108: Procedure InvalidDateMonthWeekError( const AYear, AMonth, AWeekOfMonth, ADayOfWeek : Word)
18109: Procedure InvalidDateTimeError(const AYear,AMth,ADay,AHour,AMin,ASec,AMilSec:Word;const
       ABaseDate:TDateTime)
18110: Procedure InvalidDateWeekError(const AYear, AWeekOfYear, ADayOfWeek : Word)
18111: Procedure InvalidDayOfWeekInMonthError( const AYear, AMonth, ANthDayOfWeek, ADayOfWeek : Word)
18112: procedure JavaSyntax1Click(Sender: TObject);
18113: Procedure JclLocalesInfoList( const Strings : TStrings; InfoType : Integer)
18114: Procedure KillDataChannel
18115: Procedure Largefont1Click( Sender : TObject)
18116: Procedure LAST
18117: Procedure LaunchCpl( FileName : string)
18118: Procedure Launch( const AFile : string)
18119: Procedure LaunchFile( const AFile : string)
18120: Procedure LetFileList(FileList: TStringlist; apath: string);
18121: Procedure lineToNumber( xmemo : String; met : boolean)
18122: Procedure ListViewCustomDrawItem(Sender:TCustListView;Item:TListItem;State:TCustDrawState;var
       DefaultDraw:Bool)
18123: Procedure ListViewCustomDrawSubItem( Sender : TCustomListView; Item : TListItem; SubItem : Integer; State
       : TCustomDrawState; var DefaultDraw : Boolean)
18124: Procedure ListViewData( Sender : TObject; Item : TListItem)
18125: Procedure ListViewDataFind(Sender:TObject; Find : TItemFind; const FindString : String; const FindPosition
       : TPoint; FindData:Pointer; StartIndex:Integer;Direction:TSearchDirection;Wrap:Boolean;var Index: Integer)
18126: Procedure ListViewDataHint( Sender : TObject; StartIndex, EndIndex : Integer)
18127: Procedure ListViewDblClick( Sender : TObject)
18128: Procedure ListViewKeyDown( Sender : TObject; var Key : Word; Shift : TShiftState)
18129: Procedure ListDLLExports(const FileName: string; List: TStrings);
18130: Procedure Load( const WSDLFileName : WideString; Stream : TMemoryStream)
18131: procedure LoadBytecode1Click(Sender: TObject);
18132: procedure LoadFilefromResource(const FileName: string; ms: TMemoryStream);
18133: Procedure LoadFromClipboardFormat( AFormat : Word; AData : THandle; APalette : HP)
18134: Procedure LoadFromClipboardFormat( AFormat : Word; AData : THandle; APalette : HPALETTE)
18135: Procedure LoadFromFile( AFileName : string)
18136: Procedure LoadFromFile( const AFileName : string; const AHeadersOnly : Boolean)
18137: Procedure LoadFromFile( const FileName : string)
18138: Procedure LOADFROMFILE( const FILENAME : String; BLOBTYPE : TBLOBTYPE)
```

```
18139: Procedure LoadFromFile( const FileName : string; DataType : TDataType)
18140: Procedure LoadFromFile( const FileName : WideString)
18141: Procedure LoadFromFile( const FileName, FileType : string; Bitmap : TLinearBitmap)
18142: Procedure LoadFromFile(const AFileName: string)
18143: procedure LoadFromFile(FileName: string);
18144: procedure LoadFromFile(FileName:String)
18145: Procedure LoadFromResourceID( Instance : THandle; ResID : Integer)
18146: Procedure LoadFromResourceName( Instance : THandle; const ResName : String)
18147: Procedure LoadFromStream( AStream : TStream; const AHeadersOnly : Boolean)
18148: Procedure LoadFromStream( const Stream : TStream)
18149: Procedure LoadFromStream( S : TStream)
18150: Procedure LoadFromStream( Stream : TSeekableStream; const Ext : string; Bitmap : TLinarBitmap)
18151: Procedure LoadFromStream( Stream : TSeekableStream; const Ext : string; Bitmap : TLinearBitmap)
18152: Procedure LoadFromStream( Stream : TStream)
18153: Procedure LOADFROMSTREAM( STREAM : TSTREAM; BLOBTYPE : TBLOBTYPE)
18154: Procedure LoadFromStream( Stream : TStream; DataType : TDataType)
18155: procedure LoadFromStream(Stream: TStream);
18156: Procedure LoadFromStream1( Stream : TSeekableStream; const FormatExt : string);
18157: Procedure LoadFromStream2( Stream : TStream; const FormatExt : string);
18158: Procedure LoadFromStrings( AStrings : TStrings; const MimeSeparator : Char)
18159: Procedure LoadLastFile1Click( Sender : TObject)
18160: { LoadIcoToImage loads two icons from resource named NameRes,
18161:   into two image lists ALarge and ASmall}
18162: Procedure LoadIcoToImage(ALarge, ASmall: ImgList.TCustomImageList; const NameRes: string);
18163: Procedure LoadMemo
18164: Procedure LoadParamsFromIniFile( FFileName : WideString)
18165: Procedure Lock
18166: Procedure Login
18167: Procedure MakeAlphaChannelFromAlphaPalette( Source : TLinearBitmap)
18168: Procedure MakeAlphaChannelFromColorKey( Source : TLinearBitmap; ColorKey : TColor)
18169: Procedure MakeCaseInsensitive
18170: Procedure MakeDeterministic( var bChanged : boolean)
18171: Procedure MakeGrayPal( var Palette, ColorCount : Integer)
18172: // type TVolumeLevel = 0..127;  , savaFilePath as C:\MyFile.wav
18173: Procedure MakeSound(Frequency{Hz}, Duration{mSec}: Int; Volume: TVolumeLevel; savefilePath: string);
18174: Procedure MakeComplexSound(N:integer;freqlist:TStrings;Duration{mSec}:Int;pinknoise:bool;Volume:Byte);
18175: Procedure SetComplexSoundElements(freqedt,Phaseedt,AmpEdt,WaveGrp:integer);
18176: Procedure SetRectComplexFormatStr( const S : string)
18177: Procedure SetPolarComplexFormatStr( const S : string)
18178: Procedure AddComplexSoundObjectToList(newf,newp,newa,news:integer; freqlist: TStrings);
18179: Procedure MakeVisible
18180: Procedure MakeVisible( PartialOK : Boolean)
18181: Procedure Manual1Click( Sender : TObject)
18182: Procedure MarkReachable
18183: Procedure maXbox;  //shows the exe version data in a win box
18184: Procedure MeanAndStdDev( const Data : array of Double; var Mean, StdDev : Extended)
18185: Procedure Memo1Change( Sender : TObject)
18186: Procedure Memo1ReplaceText(Sender:TObject;const ASearch,AReplace:String;Line,Column:Int;var
       Action:TSynReplaceAction)
18187: Procedure Memo1SpecialLineColors(Sender:TObject;Line:Integer; var Special:Boolean;var FG,BG: TColor)
18188: Procedure Memo1StatusChange( Sender : TObject; Changes : TSynStatusChanges)
18189: procedure Memory1Click(Sender: TObject);
18190: Procedure MERGE( MENU : TMAINMENU)
18191: Procedure MergeChangeLog
18192: procedure MINIMIZE
18193: Procedure MinimizeMaxbox;
18194: Procedure MkDir(const s: string)
18195: Procedure MakeDir(const s: string)');
18196: Procedure ChangeDir(const s: string)');
18197: Function makeFile(const FileName: string): integer)');
18198: Procedure mnuPrintFont1Click( Sender : TObject)
18199: procedure ModalStarted
18200: Procedure Modified
18201: Procedure ModifyAlias( Name : string; List : TStrings)
18202: Procedure ModifyDriver( Name : string; List : TStrings)
18203: Procedure MomentSkewKurtosis(const Data:array of Double;var M1,M2,M3,M4, Skew,Kurtosis:Extended)
18204: Procedure MouseToCell( X, Y : Integer; var ACol, ARow : Longint)
18205: Procedure Move( CurIndex, NewIndex : Integer)
18206: procedure Move(CurIndex, NewIndex: Integer);
18207: procedure Move2(const Source: TByteArray; var Dest: TByteArray; Count: Integer)
18208: Procedure MoveChars(const ASource: String; ASourceStart:int;var ADest: String; ADestStart,ALen:integer)
18209: Procedure moveCube( o : TMyLabel)
18210: Procedure MoveTo( Destination : LongInt; AttachMode : TAttachMode)
18211: procedure MoveTo(X, Y: Integer);
18212: procedure MoveWindowOrg(DC: HDC; DX, DY: Integer);
18213: Procedure MovePoint(var x,y:Extended; const angle:Extended);
18214: Procedure Multiply( Multiplier1, Multiplier2 : TMyBigInt);
18215: Procedure Multiply1( Multiplier1 : TMyBigInt; Multiplier2 : Integer);
18216: Procedure MsgAbout(Handle:Int;const Msg,Caption:string;const IcoName:string ='MAINICON';Flags:DWORD=MB_OK);
18217: Procedure mxButton(x,y,width,height,top,left,ahandle: integer);
18218: Procedure New( Width, Height : Integer; PixFormat : TPixelFormat)
18219: procedure New(P: PChar)
18220: procedure New1Click(Sender: TObject);
18221: procedure NewInstance1Click(Sender: TObject);
18222: Procedure NEXT
18223: Procedure NextMonth
18224: Procedure Noop
18225: Procedure NormalizePath( var APath : string)
18226: procedure ObjectBinaryToText(Input, Output: TStream)
```

```
18227: procedure ObjectBinaryToText1(Input, Output: TStream;var OriginalFormat: TStreamOriginalFormat)
18228: procedure ObjectResourceToText(Input, Output: TStream)
18229: procedure ObjectResourceToText1(Input, Output: TStream;var OriginalFormat: TStreamOriginalFormat)
18230: procedure ObjectTextToBinary(Input, Output: TStream)
18231: procedure ObjectTextToBinary1(Input, Output: TStream;var OriginalFormat: TStreamOriginalFormat)
18232: procedure ObjectTextToResource(Input, Output: TStream)
18233: procedure ObjectTextToResource1(Input, Output: TStream;var OriginalFormat: TStreamOriginalFormat)
18234: Procedure Open( const Name, Address, Service : string; Port : Word; Block : Boolean)
18235: Procedure Open( const UserID : WideString; const Password : WideString);
18236: Procedure Open;
18237: Procedure open1Click( Sender : TObject)
18238: Procedure OpenCdDrive
18239: Procedure OpenCloseCdDrive( OpenMode : Boolean; Drive : Char)
18240: Procedure OpenCurrent
18241: Procedure OpenFile(vfilenamepath: string)
18242: Procedure OpenDirectory1Click( Sender : TObject)
18243: Procedure OpenDir(adir: string);
18244: Procedure OpenIndexFile( const IndexName : string)
18245: Procedure OpenSchema(const Schema:TSchemaInf;const Restricts:OleVar;const
       SchemID:OleVariant;DataSet:TADODataSet)
18246: Procedure OpenWriteBuffer( const AThreshhold : Integer)
18247: Procedure OptimizeMem
18248: Procedure Options1( AURL : string);
18249: Procedure OutputDebugString(lpOutputString : PChar)
18250: Procedure PackBuffer
18251: Procedure Paint
18252: Procedure PaintToCanvas( Canvas : TCanvas; const Dest : TRect; HalftoneStretch : Boolean)
18253: Procedure PaintToTBitmap( Target : TBitmap)
18254: Procedure PaletteChanged
18255: Procedure ParentBiDiModeChanged
18256: Procedure PARENTBIDIMODECHANGED( ACONTROL : TOBJECT)
18257: Procedure PasteFromClipboard;
18258: Procedure PasteImage( Source : TLinearBitmap; X, Y : Integer)
18259: Procedure PathExtractElements( const Source : string; var Drive, Path, FileName, Ext : string)
18260: Procedure PerformEraseBackground(Control: TControl; DC: HDC);
18261: Procedure PError( Text : string)
18262: procedure Pie(X1, Y1, X2, Y2, X3, Y3, X4, Y4: Integer);
18263: procedure Pie(X1:Integer;Y1:Integer;X2:Integer;Y2:Integer;X3:Int;Y3:Integer;X4:Integer;Y4:Integer);
18264: Procedure Play( FromFrame, ToFrame : Word; Count : Integer)
18265: procedure playmp3(mpath: string);
18266: Procedure PlayMP31Click( Sender : TObject)
18267: Procedure PointCopy( var Dest : TPoint; const Source : TPoint)
18268: Procedure PointMove( var P : TPoint; const DeltaX, DeltaY : Integer)
18269: procedure PolyBezier(const Points: array of TPoint);
18270: procedure PolyBezierTo(const Points: array of TPoint);
18271: procedure Polygon(const Points: array of TPoint);
18272: procedure Polyline(const Points: array of TPoint);
18273: Procedure Pop
18274: Procedure POPULATEOLE2MENU(SHAREDMENU: HMENU;GROUPS: array of INT; var WIDTHS : array of LONGINT)
18275: Procedure PopulationVarianceAndMean( const X : TDynFloatArray; var Variance, Mean : Float)
18276: Procedure POPUP( X, Y : INTEGER)
18277: Procedure PopupURL(URL : WideString);
18278: Procedure POST
18279: Procedure Post4( AURL : string; const ASource : TStrings; const AResponseContent : TStream);
18280: Procedure Post5( AURL : string; const ASource, AResponseContent : TStream);
18281: Procedure Post6( AURL : string; const ASource : TIdMultiPartFormDataStream; AResponseContent : TStream);
18282: Procedure PostUser( const Email, FirstName, LastName : WideString)
18283: Procedure PostKeyEx32(key: Word; const shift: TShiftState; specialkey: Boolean);
18284: procedure Pred(X: int64);
18285: Procedure Prepare
18286: Procedure PrepareStatement
18287: Procedure PreProcessXML( AList : TStrings)
18288: Procedure PreventDestruction
18289: Procedure Print( const Caption : string)
18290: procedure PrintBitmap(aGraphic: TGraphic; Title: string);
18291: procedure printf(const format: String; const args: array of const);
18292: Procedure PrintList(Value: TStringList);
18293: Procedure PrintImage(aValue:TBitmap;Style:TBitmapStyle);//TBitmapStyle=(bsNormal,bsCentered,bsStretched)
18294: Procedure Printout1Click( Sender : TObject)
18295: Procedure ProcessHeaders
18296: Procedure PROCESSMENUCHAR( var MESSAGE : TWMMENUCHAR)
18297: Procedure ProcessMessage( AMsg : TIdMessage; AHeaderOnly : Boolean);
18298: Procedure ProcessMessage1( AMsg : TIdMessage; const AStream : TStream; AHeaderOnly : Boolean);
18299: Procedure ProcessMessage2( AMsg : TIdMessage; const AFilename : string; AHeaderOnly : Boolean);
18300: Procedure ProcessMessagesOFF;  //application.processmessages
18301: Procedure ProcessMessagesON;
18302: Procedure ProcessPath(const EditText:string;var Drive:Char; var DirPart:string; var FilePart : string)
18303: Procedure ProcessPath1(const EditText:string;var Drive:Char; var DirPart:string; var FilePart:string);
18304: Procedure Proclist Size is: 3797 /1415
18305: Procedure procMessClick( Sender : TObject)
18306: Procedure PSScriptCompile( Sender : TPSScript)
18307: Procedure PSScriptExecute( Sender : TPSScript)
18308: Procedure PSScriptLine( Sender : TObject)
18309: Procedure Push( ABoundary : string)
18310: procedure PushItem(AItem: Pointer)
18311: Procedure Put2( AURL : string; const ASource, AResponseContent : TStream);
18312: Procedure Put2( const ASourceFile : string; const ADestFile : string; const AAppend : boolean);
18313: procedure PutLinuxLines(const Value: string)
18314: Procedure Quit
```

```
18315: Procedure RaiseConversionError( const AText : string);
18316: Procedure RaiseConversionError1( const AText : string; const AArgs : array of const);
18317: Procedure RaiseConversionRegError( AFamily : TConvFamily; const ADescription : string)
18318: procedure RaiseException(Ex: TIFException; Param: String);
18319: Procedure RaiseExceptionForLastCmdResult;
18320: procedure RaiseLastException;
18321: procedure RaiseException2;
18322: Procedure RaiseException3(const Msg: string);
18323: Procedure RaiseExcept(const Msg: string);
18324: Procedure RaiseLastOSError
18325: Procedure RaiseLastWin32;
18326: procedure RaiseLastWin32Error)
18327: Procedure RaiseListError( const ATemplate : string; const AData : array of const)
18328: Procedure RandomFillStream( Stream : TMemoryStream)
18329: procedure randomize;
18330: Procedure Rasterize( Rasterizer : TRasterizer; Dst : TBitmap32; DstRect : TRect)
18331: Procedure RCS
18332: Procedure Read( Socket : TSocket)
18333: Procedure ReadBlobData
18334: procedure ReadBuffer(Buffer:String;Count:LongInt)
18335: procedure ReadOnly1Click(Sender: TObject);  -->maxform1.memo2.readonly:= false;
18336: Procedure ReadSection( const Section : string; Strings : TStrings)
18337: Procedure ReadSections( Strings : TStrings)
18338: Procedure ReadSections( Strings : TStrings);
18339: Procedure ReadSections1( const Section : string; Strings : TStrings);
18340: Procedure ReadSectionValues( const Section : string; Strings : TStrings)
18341: Procedure ReadStream( AStream : TStream; AByteCount:LongInt; const AReadUntilDisconnect : boolean)
18342: Procedure ReadStrings( ADest : TStrings; AReadLinesCount : Integer)
18343: Procedure ReadVersion2(aFileName: STRING; aVersion : TStrings);
18344: Function ReadVersion(aFileName: STRING; aVersion : TStrings): boolean;
18345: Procedure Realign;
18346: procedure Rectangle(X1, Y1, X2, Y2: Integer);
18347: Procedure Rectangle1( const Rect : TRect);
18348: Procedure RectCopy( var Dest : TRect; const Source : TRect)
18349: Procedure RectFitToScreen( var R : TRect)
18350: Procedure RectGrow( var R : TRect; const Delta : Integer)
18351: Procedure RectGrowX( var R : TRect; const Delta : Integer)
18352: Procedure RectGrowY( var R : TRect; const Delta : Integer)
18353: Procedure RectMove( var R : TRect; const DeltaX, DeltaY : Integer)
18354: Procedure RectMoveTo( var R : TRect; const X, Y : Integer)
18355: Procedure RectNormalize( var R : TRect)
18356: //  TFileCallbackProcedure = procedure(filename:string);
18357: Procedure RecurseDirectory(Dir: String;IncludeSubs: boolean;callback: TFileCallbackProcedure);
18358: Procedure RecurseDirectory2(Dir: String; IncludeSubs : boolean);
18359: Procedure RedirectTransition(oOldState:TniRegularExpressionState; oNewState : TniRegularExpressionState)
18360: Procedure Refresh;
18361: Procedure RefreshData( Options : TFetchOptions)
18362: Procedure REFRESHLOOKUPLIST
18363: Procedure regExPathfinder(Pathin, fileout, firstp, aregex, ext: string; asort: boolean);
18364: Procedure RegExPathfinder2(Pathin, fileout, firstp, aregex, ext: string; asort, acopy: boolean);
18365: Procedure RegisterAuthenticationMethod( MethodName : String; AuthClass : TIdAuthenticationClass)
18366: Procedure RegisterChanges( Value : TChangeLink)
18367: Procedure RegisterConversionFormat( const AExtension : string; AConversionClass : TConversionClass)
18368: Procedure RegisterFileFormat( const AExtension, ADescription : string; AGraphicClass : TGraphicClass)
18369: Procedure RegisterFileFormat(Extension,AppID:string;Description:string;Executable:string;IconIndex:Int)
18370: Procedure ReInitialize( ADelay : Cardinal)
18371: procedure RELEASE
18372: Procedure Remove( const AByteCount : integer)
18373: Procedure REMOVE( FIELD : TFIELD)
18374: Procedure REMOVE( ITEM : TMENUITEM)
18375: Procedure REMOVE( POPUP : TPOPUPMENU)
18376: Procedure RemoveAllPasswords
18377: procedure RemoveComponent(AComponent:TComponent)
18378: Procedure RemoveDir( const ADirName : string)
18379: Procedure RemoveLambdaTransitions( var bChanged : boolean)
18380: Procedure REMOVEPARAM( VALUE : TPARAM)
18381: Procedure RemoveTransitionTo( oState : TniRegularExpressionState; xCharacters : TCharset);
18382: Procedure RemoveTransitionTo1( oState : TniRegularExpressionState);
18383: Procedure Rename( const ASourceFile, ADestFile : string)
18384: Procedure Rename( const FileName : string; Reload : Boolean)
18385: Procedure RenameTable( const NewTableName : string)
18386: Procedure Replace( Index : Integer; Image, Mask : TBitmap)
18387: Procedure Replace1Click( Sender : TObject)
18388: Procedure ReplaceDate( var DateTime : TDateTime; NewDate : TDateTime)
18389: procedure ReplaceDate(var DateTime: TDateTime; const NewDate: TDateTime))
18390: Procedure ReplaceIcon( Index : Integer; Image : TIcon)
18391: Procedure ReplaceMasked( Index : Integer; NewImage : TBitmap; MaskColor : TColor)
18392: Procedure ReplaceTime( var DateTime : TDateTime; NewTime : TDateTime)
18393: procedure ReplaceTime(var DateTime: TDateTime; const NewTime: TDateTime);
18394: Procedure Requery( Options : TExecuteOptions)
18395: Procedure Reset
18396: Procedure Reset1Click( Sender : TObject)
18397: Procedure ResizeCanvas( XSiz, YSiz, XPos, YPos : Integer; Color : TColor)
18398: procedure ResourceExplore1Click(Sender: TObject);
18399: Procedure RestoreContents
18400: Procedure RestoreDefaults
18401: Procedure RestoreOtherInstance( MainFormClassName, MainFormCaption : string)
18402: Procedure RetrieveHeaders
18403: Procedure RevertRecord
```

```
18404: Procedure RGBAToBGRA( const Source, Target : Pointer; const BitsPerSample : Byte; Count : Cardinal)
18405: Procedure RGBToBGR( const Source, Target : Pointer; const BitsPerSample : Byte; Count : Cardinal);
18406: Procedure RGBToBGR1( const R, G, B, Target : Pointer; const BitsPerSample : Byte; Count : Cardinal);
18407: Procedure RGBToHSL( const R, G, B : Single; out H, S, L : Single);
18408: Procedure RGBToHSL1( const RGB : TColor32; out H, S, L : Single);
18409: Procedure RGBToHSV( r, g, b : Integer; var h, s, v : Integer)
18410: Procedure RleCompress2( Stream : TStream)
18411: Procedure RleDecompress2( Stream : TStream)
18412: Procedure RmDir(const S: string)
18413: Procedure Rollback
18414: Procedure Rollback( TransDesc : TTransactionDesc)
18415: Procedure RollbackFreeAndNil( var Transaction : TDBXTransaction)
18416: Procedure RollbackIncompleteFreeAndNil( var Transaction : TDBXTransaction)
18417: Procedure RollbackTrans
18418: procedure RoundRect(X1, Y1, X2, Y2, X3, Y3: Integer);
18419: Procedure RoundToAllocGranularity64( var Value : Int64; Up : Boolean)
18420: Procedure RoundToAllocGranularityPtr( var Value : Pointer; Up : Boolean)
18421: Procedure RunDll32Internal( Wnd : HWnd; const DLLName, FuncName, CmdLine : string; CmdShow : Integer)
18422: Procedure S_AddMessageToStrings( AMessages : TStrings; AMsg : string)
18423: Procedure S_EBox( const AText : string)
18424: Procedure S_GetEncryptionKeys(DateTime1,DateTime2:TDateTime;var StartKey:int;var MultKey:integer;var
       AddKey:int
18425: Procedure S_IBox( const AText : string)
18426: Procedure S_ReplaceChar( var cStr : string; cOldChr, cNewChr : char)
18427: Procedure S_ReplaceStringInFile( AFileName : string; ASearchString, AReplaceString : string)
18428: Procedure S_TokenInit( cBuffer : PChar; const cDelimiters : string)
18429: Procedure SampleVarianceAndMean
18430: ( const X : TDynFloatArray; var Variance, Mean : Float)
18431: Procedure Save2Click( Sender : TObject)
18432: Procedure Saveas3Click( Sender : TObject)
18433: Procedure Savebefore1Click( Sender : TObject)
18434: Procedure SaveBytesToFile(const Data: TBytes; const FileName: string);
18435: procedure SaveCanvas2(vCanvas: TCanvas; FileName: string);
18436: Procedure SaveConfigFile
18437: Procedure SaveOutput1Click( Sender : TObject)
18438: procedure SaveScreenshotClick(Sender: TObject);
18439: Procedure SaveLn(pathname, content: string);   //Saveln(exepath+'mysavelntest.txt', memo2.text);
18440: Procedure SaveToClipboardFormat( var AFormat : Word; var AData : THandle; var APalette : HPALETTE)
18441: Procedure SaveToClipboardFormat( var Format : Word; var Data : THandle; var APalette : HPALETTE)
18442: Procedure SaveToFile( AFileName : string)
18443: Procedure SAVETOFILE( const FILENAME : String)
18444: Procedure SaveToFile( const FileName : WideString)
18445: Procedure SaveToFile( const FileName : WideString; Format : TPersistFormat)
18446: Procedure SaveToFile( const FileName, FileType : string; Bitmap : TLinearBitmap)
18447: procedure SaveToFile(FileName: string);
18448: procedure SaveToFile(FileName:String)
18449: Procedure SaveToStream( AStream : TStream; const AHeadersOnly : Boolean)
18450: Procedure SaveToStream( OutStream : TSeekableStream; const Ext : string; Bitmap : TLinarBitmap)
18451: Procedure SaveToStream( S : TStream)
18452: Procedure SaveToStream( Stream : TSeekableStream; const Ext : string; Bitmap : TLinearBitmap)
18453: Procedure SaveToStream( Stream : TStream)
18454: Procedure SaveToStream( Stream : TStream; Format : TDataPacketFormat)
18455: procedure SaveToStream(Stream: TStream);
18456: procedure SaveToStream(Stream:TStream)
18457: Procedure SaveToStream1( Stream : TSeekableStream; const FormatExt : string);
18458: Procedure SaveToStream2( Stream : TStream; const FormatExt : string);
18459: Procedure SaveToStrings( AStrings : TStrings; const MimeSeparator : Char)
18460: procedure Say(const sText: string)
18461: Procedure SBytecode1Click( Sender : TObject)
18462: Procedure ScaleImage( const SourceBitmap, ResizedBitmap : TBitmap; const ScaleAmount : Double)
18463: procedure ScriptExplorer1Click(Sender: TObject);
18464: Procedure Scroll( Distance : Integer)
18465: Procedure Scroll( DX, DY : Integer)
18466: procedure ScrollBy(DeltaX, DeltaY: Integer);
18467: procedure SCROLLINVIEW(ACONTROL:TCONTROL)
18468: Procedure ScrollTabs( Delta : Integer)
18469: Procedure Search1Click( Sender : TObject)
18470: procedure SearchAndOpenDoc(vfilenamepath: string)
18471: procedure SearchAndOpenFile(vfilenamepath: string)
18472: procedure SearchAndReplace(aStrList: TStrings; aSearchStr, aNewStr: string)
18473: procedure SearchAndCopy(aStrList: TStrings; aSearchStr, aNewStr: string; offset: integer);
18474: Procedure SearchNext1Click( Sender : TObject)
18475: Procedure Select( Node : TTreeNode; ShiftState : TShiftState);
18476: Procedure Select1( const Nodes : array of TTreeNode);
18477: Procedure Select2( Nodes : TList);
18478: Procedure SelectNext( Direction : Boolean)
18479: Procedure SelectNextPage( GoForward : Boolean; CheckTabVisible : Boolean)
18480: Procedure SelfTestPEM  //unit uPSI_cPEM
18481: Procedure Send( AMsg : TIdMessage)
18482: //config forst in const MAILINIFILE = 'maildef.ini';
18483: //ex.:  SendEmail('max@kleiner.ch','max@kleiner.com','this test7','maxbox the SSL fox','
18484: Procedure SendEmail(mFrom,  mTo,  mSubject,  mBody,  mAttachment: variant);
18485: Procedure SendMail(mFrom,  mTo,  mSubject,  mBody,  mAttachment: variant);
18486: Procedure SendMsg( AMsg : TIdMessage; const AHeadersOnly : Boolean)
18487: Procedure SendMsg(AMsg: TIdMessage; const AHeadersOnly: Boolean = False)
18488: Procedure SendResponse
18489: Procedure SendStream( AStream : TStream)
18490: Procedure Set8087CW( NewCW : Word)
18491: Procedure SetAll( One, Two, Three, Four : Byte)
```

```
18492: Procedure SetAltRecBuffers( Old, New, Cur : PChar)
18493: Procedure SetAppDispatcher( const ADispatcher : TComponent)
18494: procedure SetArrayLength;
18495: procedure SetArrayLength2String(arr: T2StringArray; asize1, asize2: integer);  //2 dimension
18496: procedure SetArrayLength2Integer(arr: T2IntegerArray; asize1, asize2: integer);
18497: Procedure SetAsHandle( Format : Word; Value : THandle)
18498: procedure SetBounds(ALeft, ATop, AWidth, AHeight: Integer)
18499: procedure SetCaptureControl(Control: TControl);
18500: Procedure SetColumnAttributes
18501: Procedure SetCookieField(Values:TStrings;const ADomain,APath:string;AExpires:TDateTime;ASecure:Boolean)
18502: Procedure SetCustomHeader( const Name, Value : string)
18503: Procedure SetExprParams(const Text:Widestring;Opts:TFilterOpts;ParserOpts:TParserOpts;const
     FieldName:Widestring)
18504: Procedure SetFMTBcd( Buffer : TRecordBuffer; value : TBcd)
18505: Procedure SetFocus
18506: procedure SetFocus; virtual;
18507: Procedure SetInitialState
18508: Procedure SetKey
18509: procedure SetLastError(ErrorCode: Integer)
18510: procedure SetLength;
18511: Procedure SetLineBreakStyle( var T : Text; Style : TTextLineBreakStyle)
18512: Procedure SETOLE2MENUHANDLE( HANDLE : HMENU)
18513: Procedure SetParams( ADataset : TDataset; UpdateKind : TUpdateKind);
18514: procedure SETPARAMS(APOSITION,AMIN,AMAX:INTEGER)
18515: Procedure SetParams1( UpdateKind : TUpdateKind);
18516: Procedure SetPassword( const Password : string)
18517: Procedure SetPointer( Ptr : Pointer; Size : Longint)
18518: Procedure SetPrimalityTest( const Method : TPrimalityTestMethod)
18519: Procedure SetPrinter( ADevice, ADriver, APort : PChar; ADeviceMode : THandle)
18520: Procedure SetProvider( Provider : TComponent)
18521: Procedure SetProxy( const Proxy : string)
18522: Procedure SetPSResult( var PSResult : TPSResult; Value : TObject)
18523: Procedure SetRange( const StartValues, EndValues : array of const)
18524: Procedure SetRangeEnd
18525: Procedure SetRate( const aPercent, aYear : integer)
18526: procedure SetRate(const aPercent, aYear: integer)
18527: Procedure Set_ReportMemoryLeaksOnShutdown(abo: boolean)
18528: Procedure SetSafeCallExceptionMsg( Msg : String)
18529: procedure SETSELTEXTBUF(BUFFER:PCHAR)
18530: Procedure SetSize( AWidth, AHeight : Integer)
18531: procedure SetSize(NewSize:LongInt)
18532: procedure SetString(var s: string; buffer: PChar; len: Integer)
18533: Procedure SetStrings( List : TStrings)
18534: Procedure SetText( Text : PwideChar)
18535: procedure SetText(Text: PChar);
18536: Procedure SetTextBuf( Buffer : PChar)
18537: procedure SETTEXTBUF(BUFFER:PCHAR)
18538: Procedure SetTick( Value : Integer)
18539: Procedure SetTimeout( ATimeOut : Integer)
18540: Procedure SetTraceEvent( Event : TDBXTraceEvent)
18541: Procedure SetUserName( const UserName : string)
18542: Procedure SetWallpaper( Path : string);
18543: procedure ShellStyle1Click(Sender: TObject);
18544: Procedure SHORTCUTTOKEY( SHORTCUT : TSHORTCUT; var KEY : WORD; var SHIFT : TSHIFTSTATE)
18545: Procedure ShowFileProperties( const FileName : string)
18546: Procedure ShowInclude1Click( Sender : TObject)
18547: Procedure ShowInterfaces1Click( Sender : TObject)
18548: Procedure ShowLastException1Click( Sender : TObject)
18549: Procedure ShowMessage( const Msg : string)
18550: Procedure ShowMessageBig(const aText : string);
18551: Procedure ShowMessageBig2(const aText : string; aautosize: boolean);
18552: Procedure ShowMessageBig3(const aText : string; fsize: byte; aautosize: boolean);
18553: Procedure MsgBig(const aText : string);        //alias
18554: procedure showmessage(mytext: string);
18555: Procedure ShowMessageFmt( const Msg : string; Params : array of const)
18556: procedure ShowMessageFmt(const Msg: string; Params: array of const))
18557: Procedure ShowMessagePos( const Msg : string; X, Y : Integer)
18558: procedure ShowMessagePos(const Msg: string; X: Integer; Y: Integer))
18559: Procedure ShowSearchDialog( const Directory : string)
18560: Procedure ShowSpecChars1Click( Sender : TObject)
18561: Procedure ShowBitmap(bmap: TBitmap);  //draw in a form!
18562: Procedure ShredFile( const FileName : string; Times : Integer)
18563: procedure Shuffle(vQ: TStringList);
18564: Procedure ShuffleList( var List : array of Integer; Count : Integer)
18565: Procedure SimulateKeystroke( Key : byte; Shift : TShiftState)
18566: Procedure SinCos( const Theta : Extended; var Sin, Cos : Extended)
18567: Procedure SinCosE( X : Extended; out Sin, Cos : Extended)
18568: Procedure Site( const ACommand : string)
18569: Procedure SkipEOL
18570: Procedure Sleep( ATime : cardinal)
18571: Procedure Sleep( milliseconds : Cardinal)
18572: Function SleepEx( dwMilliseconds : DWORD; bAlertable : BOOL) : DWORD
18573: Procedure Slinenumbers1Click( Sender : TObject)
18574: Procedure Sort
18575: Procedure SortColorArray(ColorArray:TColorArray;L,R:Int;SortType:TColorArraySortType;Reverse:Bool)
18576: procedure Speak(const sText: string)   //async like voice
18577: procedure Speak2(const sText: string)  //sync
18578: procedure Split(Str: string;  SubStr: string; List: TStrings);
18579: Procedure SplitNameValue( const Line : string; var Name, Value : string)
```

```
18580: Procedure SplitColumns( const AData : String; AStrings : TStrings; const ADelim : String)
18581: Procedure SplitColumnsNoTrim( const AData : String; AStrings : TStrings; const ADelim : String)
18582: Procedure SplitLines( AData : PChar; ADataSize : Integer; AStrings : TStrings)
18583: Procedure SplitString( const AStr, AToken : String; var VLeft, VRight : String)
18584: procedure SQLSyntax1Click(Sender: TObject);
18585: Procedure SRand( Seed : RNG_IntType)
18586: Procedure Start
18587: Procedure StartCount( var Counter : TJclCounter; const Compensate : Boolean)
18588: procedure StartFileFinder3(spath,aext,searchstr: string; arecursiv: boolean; reslist: TStringlist);
18589: //Ex.  StartFileFinder3(exepath+'exercices','*.pas','record',false,seclist);
18590: Procedure StartTransaction( TransDesc : TTransactionDesc)
18591: Procedure Status( var AStatusList : TStringList)
18592: Procedure StatusBar1DblClick( Sender : TObject)
18593: Procedure StepInto1Click( Sender : TObject)
18594: Procedure StepIt
18595: Procedure StepOut1Click( Sender : TObject)
18596: Procedure Stop
18597: procedure stopmp3;
18598: procedure StartWeb(aurl: string);
18599: Procedure Str(aint: integer; astr: string); //of system
18600: Procedure StrDispose( Str : PChar)
18601: procedure StrDispose(Str: PChar)
18602: Procedure StrReplace(var Str: String; Old, New: String);
18603: Procedure StretchDIBits( DC : THandle; const Dest : TRect; HalftoneStretch : Boolean)
18604: procedure StretchDraw(const Rect: TRect; Graphic: TGraphic);
18605: Procedure StringToBytes( Value : String; Bytes : array of byte)
18606: procedure StrSet(c : Char; I : Integer; var s : String);
18607: Procedure StrSplitP(const Delimiter: Char; Input: string; const Strings: TStrings);
18608: Procedure StructureMount( APath : String)
18609: procedure STYLECHANGED(SENDER:TOBJECT)
18610: Procedure Subselect( Node : TTreeNode; Validate : Boolean)
18611: procedure Succ(X: int64);
18612: Procedure SumsAndSquares( const Data : array of Double; var Sum, SumOfSquares : Extended)
18613: procedure SwapChar(var X,Y: char);  //swapX follows
18614: Procedure SwapFloats( var X, Y : Float)
18615: procedure SwapGrid(grd: TStringGrid);
18616: Procedure SwapOrd( var I, J : Byte);
18617: Procedure SwapOrd( var X, Y : Integer)
18618: Procedure SwapOrd1( var I, J : Shortint);
18619: Procedure SwapOrd2( var I, J : Smallint);
18620: Procedure SwapOrd3( var I, J : Word);
18621: Procedure SwapOrd4( var I, J : Integer);
18622: Procedure SwapOrd5( var I, J : Cardinal);
18623: Procedure SwapOrd6( var I, J : Int64);
18624: Procedure SymetricCompareFiles(const plaintext, replaintext: string)
18625: Procedure Synchronize1( Method : TMethod);
18626: procedure SyntaxCheck1Click(Sender: TObject);
18627: Procedure SysFreeString(const S: WideString); stdcall;
18628: Procedure TakeOver( Other : TLinearBitmap)
18629: Procedure Talkln(const sText: string)  //async voice
18630: procedure tbtn6resClick(Sender: TObject);
18631: Procedure tbtnUseCaseClick( Sender : TObject)
18632: procedure TerminalStyle1Click(Sender: TObject);
18633: Procedure Terminate
18634: Procedure texSyntax1Click( Sender : TObject)
18635: procedure TextOut(X, Y: Integer; Text: string);
18636: Procedure TextRect( Rect : TRect; X, Y : Integer; const Text : string);
18637: procedure TextRect(Rect: TRect; X: Integer; Y: Integer; const Text: string);
18638: Procedure TextRect1( var Rect : TRect; var Text : string; TextFormat : TTextFormat);
18639: Procedure TextStart
18640: procedure TILE
18641: Procedure TimeStampToBytes( Value : TBcd; Bytes : array of byte)
18642: Procedure TitleClick( Column : TColumn)
18643: Procedure ToDo
18644: procedure toolbtnTutorialClick(Sender: TObject);
18645: Procedure Trace1( AURL : string; const AResponseContent : TStream);
18646: Procedure TransferMode( ATransferMode : TIdFTPTransferMode)
18647: Procedure Truncate
18648: procedure Tutorial101Click(Sender: TObject);
18649: procedure Tutorial10Statistics1Click(Sender: TObject);
18650: procedure Tutorial11Forms1Click(Sender: TObject);
18651: procedure Tutorial12SQL1Click(Sender: TObject);
18652: Procedure tutorial1Click( Sender : TObject)
18653: Procedure tutorial21Click( Sender : TObject)
18654: Procedure tutorial31Click( Sender : TObject)
18655: Procedure tutorial4Click( Sender : TObject)
18656: Procedure Tutorial5Click( Sender : TObject)
18657: procedure Tutorial6Click(Sender: TObject);
18658: procedure Tutorial91Click(Sender: TObject);
18659: Procedure UnhookSignal( RtlSigNum : Integer; OnlyIfHooked : Boolean)
18660: procedure UniqueString(var str: AnsiString)
18661: procedure UnloadLoadPackage(Module: HMODULE)
18662: Procedure Unlock
18663: Procedure UNMERGE( MENU : TMAINMENU)
18664: Procedure UnRegisterChanges( Value : TChangeLink)
18665: Procedure UnregisterConversionFamily( const AFamily : TConvFamily)
18666: Procedure UnregisterConversionType( const AType : TConvType)
18667: Procedure UnRegisterProvider( Prov : TCustomProvider)
18668: Procedure UPDATE
```

```
18669: Procedure UpdateBatch( AffectRecords : TAffectRecords)
18670: Procedure UPDATECURSORPOS
18671: Procedure UpdateFile
18672: Procedure UpdateItems( FirstIndex, LastIndex : Integer)
18673: Procedure UpdateResponse( AResponse : TWebResponse)
18674: Procedure UpdateScrollBar
18675: Procedure UpdateView1Click( Sender : TObject)
18676: procedure Val(const s: string; var n, z: Integer)
18677: procedure VarArraySet(c : Variant; I : Integer; var s : Variant);
18678: Procedure VarFMTBcdCreate( var ADest : Variant; const ABcd : TBcd);
18679: Procedure VariantAdd( const src : Variant; var dst : Variant)
18680: Procedure VariantAnd( const src : Variant; var dst : Variant)
18681: Procedure VariantArrayRedim( var V : Variant; High : Integer)
18682: Procedure VariantCast( const src : Variant; var dst : Variant; vt : Integer)
18683: Procedure VariantClear( var V : Variant)
18684: Procedure VariantCpy( const src : Variant; var dst : Variant)
18685: Procedure VariantDiv( const src : Variant; var dst : Variant)
18686: Procedure VariantMod( const src : Variant; var dst : Variant)
18687: Procedure VariantMul( const src : Variant; var dst : Variant)
18688: Procedure VariantOr( const src : Variant; var dst : Variant)
18689: Procedure VariantPutElement( var V : Variant; const data : Variant; i1 : integer);
18690: Procedure VariantPutElement1( var V : Variant; const data : Variant; i1, i2 : integer);
18691: Procedure VariantPutElement2( var V : Variant; const data : Variant; i1, i2, i3 : integer);
18692: Procedure VariantPutElement3( var V : Variant; const data : Variant; i1, i2, i3, i4 : integer);
18693: Procedure VariantPutElement4( var V : Variant; const data : Variant; i1, i2, i3, i4, i5 : integer);
18694: Procedure VariantShl( const src : Variant; var dst : Variant)
18695: Procedure VariantShr( const src : Variant; var dst : Variant)
18696: Procedure VariantSub( const src : Variant; var dst : Variant)
18697: Procedure VariantXor( const src : Variant; var dst : Variant)
18698: Procedure VarCastError;
18699: Procedure VarCastError1( const ASourceType, ADestType : TVarType);
18700: Procedure VarInvalidOp
18701: Procedure VarInvalidNullOp
18702: Procedure VarOverflowError( const ASourceType, ADestType : TVarType)
18703: Procedure VarRangeCheckError( const ASourceType, ADestType : TVarType)
18704: Procedure VarArrayCreateError
18705: Procedure VarResultCheck( AResult : HRESULT);
18706: Procedure VarResultCheck1( AResult : HRESULT; ASourceType, ADestType : TVarType);
18707: Procedure HandleConversionException( const ASourceType, ADestType : TVarType)
18708: Function VarTypeAsText( const AType : TVarType) : string
18709: procedure Voice(const sText: string) //async
18710: procedure Voice2(const sText: string) //sync
18711: Procedure WaitMiliSeconds( AMSec : word)
18712: Procedure WaitMS( AMSec : word)');
18713: procedure WebCamPic(picname: string);  //eg: c:\mypic.png
18714: Procedure WideAppend( var dst : WideString; const src : WideString)
18715: Procedure WideAssign( var dst : WideString; var src : WideString)
18716: Procedure WideDelete( var dst : WideString; index, count : Integer)
18717: Procedure WideFree( var s : WideString)
18718: Procedure WideFromAnsi( var dst : WideString; const src : AnsiString)
18719: Procedure WideFromPChar( var dst : WideString; src : PChar)
18720: Procedure WideInsert( var dst : WideString; const src : WideString; index : Integer)
18721: Procedure WideSetLength( var dst : WideString; len : Integer)
18722: Procedure WideString2Stream( aWideString : WideString; oStream : TStream)
18723: Procedure WideStringToBytes( Value : WideString; Bytes : array of byte)
18724: Procedure WinColorToOpenGLColor( const Color : TColor; out Red, Green, Blue : Float)
18725: Procedure WinInet_HttpGet(const Url: string; Stream:TStream);
18726: Procedure HttpGet(const Url: string; Stream:TStream);
18727: Procedure WordToTwoBytes( AWord : Word; ByteArray : TIdBytes; Index : integer)
18728: Procedure WordWrap1Click( Sender : TObject)
18729: Procedure Write( const AOut : string)
18730: Procedure Write( Socket : TSocket)
18731: procedure Write(S: string);
18732: Procedure WriteBinaryStream( const Section, Name : string; Value : TStream)
18733: Procedure WriteBool( const Section, Ident : string; Value : Boolean)
18734: Procedure WriteBuffer( const ABuffer, AByteCount : Longint; const AWriteNow : Boolean)
18735: procedure WriteBuffer(Buffer:String;Count:LongInt)
18736: Procedure WriteCardinal( AValue : Cardinal; const AConvert : Boolean)
18737: Procedure WriteChar( AValue : Char)
18738: Procedure WriteDate( const Section, Name : string; Value : TDateTime)
18739: Procedure WriteDateTime( const Section, Name : string; Value : TDateTime)
18740: Procedure WriteFloat( const Section, Name : string; Value : Double)
18741: Procedure WriteHeader( AHeader : TStrings)
18742: Procedure WriteInteger( AValue : Integer; const AConvert : Boolean)
18743: Procedure WriteInteger( const Section, Ident : string; Value : Longint)
18744: Procedure WriteLn( const AOut : string)
18745: procedure Writeln(s: string);
18746: Procedure WriteLog( const FileName, LogLine : string)
18747: Procedure WriteRFCReply( AReply : TIdRFCReply)
18748: Procedure WriteRFCStrings( AStrings : TStrings)
18749: Procedure WriteSmallInt( AValue : SmallInt; const AConvert : Boolean)
18750: Procedure WriteStream(AStream:TStream;const AAll:Bool;const AWriteByteCount:Bool;const ASize:Int)
18751: Procedure WriteString( const Section, Ident, Value : String)
18752: Procedure WriteStrings( AValue : TStrings; const AWriteLinesCount : Boolean)
18753: Procedure WriteTime( const Section, Name : string; Value : TDateTime)
18754: Procedure WriteObjectResourceHeader( ObjStream, Output : TStream)
18755: Procedure Write16bitResourceHeader( const AName : TBytes; DataSize : Integer; Output : TStream)
18756: Procedure Write32bitResourceHeader( const AName : TBytes; DataSize : Integer; Output : TStream)
18757: Procedure WriteDataSetToCSV(DataSet: TDataSet; FileName: String)');
```

```
18758: procedure WStrSet(c : AnyString; I : Integer; var s : AnyString);
18759: procedure XMLSyntax1Click(Sender: TObject);
18760: Procedure XOR_Streams2( Dest, Srce : TMemoryStream)
18761: Procedure XOR_Streams3( Dest, SrceA, SrceB : TMemoryStream)
18762: Procedure ZeroFillStream( Stream : TMemoryStream)
18763: procedure XMLSyntax1Click(Sender: TObject);
18764: Procedure ZeroMemory( Ptr : Pointer; Length : Longint)
18765: procedure(Control: TWinControl; Index: Integer; Rect: TRect; State: Byte)
18766: procedure(Control: TWinControl; Index: Integer; var Height: Integer)
18767: procedure(Sender, Source: TObject; X, Y: Integer; State: TDragState; var Accept: Boolean)
18768: procedure(Sender, Source: TObject;X, Y: Integer)
18769: procedure(Sender, Target: TObject; X, Y: Integer)
18770: procedure(Sender: TObject; ASection, AWidth: Integer)
18771: procedure(Sender: TObject; ScrollCode: TScrollCode;var ScrollPos: Integer)
18772: procedure(Sender: TObject; Shift: TShiftState; X, Y: Integer);
18773: procedure(Sender: TObject; var Action: TCloseAction)
18774: procedure(Sender: TObject; var CanClose: Boolean)
18775: procedure(Sender: TObject; var Key: Char);
18776: ProcedureName ProcedureNames ProcedureParametersCursor @
18777:
18778: *************Now Constructors constructor *************
18779:  Size is: 1248 1115 996 628 550 544 501 459 (381)
18780:  Attach( VersionInfoData : Pointer; Size : Integer)
18781:  constructor Create( ABuckets : TBucketListSizes)
18782:  Create( ACallBackWnd : HWND)
18783:  Create( AClient : TCustomTaskDialog)
18784:  Create( AClient : TIdTelnet)
18785:  Create( ACollection : TCollection)
18786:  Create( ACollection : TFavoriteLinkItems)
18787:  Create( ACollection : TTaskDialogButtons)
18788:  Create( AConnection : TIdCustomHTTP)
18789:  Create( ACreateSuspended : Boolean)
18790:  Create( ADataSet : TCustomSQLDataSet)
18791:  CREATE( ADATASET : TDATASET)
18792:  Create( Aggregates : TAggregates; ADataSet : TCustomClientDataSet);
18793:  Create( AGrid : TCustomDBGrid)
18794:  Create( AGrid : TStringGrid; AIndex : Longint)
18795:  Create( AHTTP : TIdCustomHTTP)
18796:  Create( AListItems : TListItems)
18797:  Create( AOnBytesRemoved : TIdBufferBytesRemoved)
18798:  Create( AOnBytesRemoved : TIdBufferBytesRemoved)
18799:  Create( AOwner : TCommonCalendar)
18800:  Create( AOwner : TComponent)
18801:  CREATE( AOWNER : TCOMPONENT)
18802:  Create( AOwner : TCustomListView)
18803:  Create( AOwner : TCustomOutline)
18804:  Create( AOwner : TCustomRichEdit)
18805:  Create( AOwner : TCustomRichEdit; AttributeType : TAttributeType)
18806:  Create( AOwner : TCustomTreeView)
18807:  Create( AOwner : TIdUserManager)
18808:  Create( AOwner : TListItems)
18809:  Create(AOwner:TObj;Handl:hDBICur;CBTyp:CBType;CBBuf:Ptr;CBBufSiz:Int;CallbkEvt:TBDECallbkEvt;Chain:Bool)
18810:  CREATE( AOWNER : TPERSISTENT)
18811:  Create( AOwner : TPersistent)
18812:  Create( AOwner : TTable)
18813:  Create( AOwner : TTreeNodes)
18814:  Create( AOwner : TWinControl; const ClassName : string)
18815:  Create( AParent : TIdCustomHTTP)
18816:  Create( AParent : TUpdateTree; AResolver : TCustomResolver)
18817:  Create( AProvider : TBaseProvider)
18818:  Create( AProvider : TCustomProvider);
18819:  Create( AProvider : TDataSetProvider)
18820:  Create( ASocket : TCustomWinSocket; TimeOut : Longint)
18821:  Create( ASocket : TSocket)
18822:  Create( AStrings : TWideStrings)
18823:  Create( AToolBar : TToolBar)
18824:  Create( ATreeNodes : TTreeNodes)
18825:  Create( Autofill : boolean)
18826:  Create( AWebPageInfo : TAbstractWebPageInfo)
18827:  Create( AWebRequest : TWebRequest)
18828:  Create( Collection : TCollection)
18829:  Create( Collection : TIdMessageParts; ABody : TStrings)
18830:  Create( Collection : TIdMessageParts; const AFileName : TFileName)
18831:  Create( Column : TColumn)
18832:  Create( const AConvFamily : TConvFamily; const ADescription : string)
18833:  Create( const AConvFamily : TConvFamily; const ADescription : string; const AFactor : Double)
18834:  Create( const AConvFamily : TConvFamily; const ADescription : string; const AToCommonProc,
       AFromCommonProc : TConversionProc)
18835:  Create( const AInitialState : Boolean; const AManualReset : Boolean)
18836:  Create( const ATabSet : TTabSet)
18837:  Create( const Compensate : Boolean)
18838:  Create( const FileMap : TJclCustomFileMapping; Access, Size : Cardinal; ViewOffset : Int64)
18839:  Create( const FileName : string)
18840:  Create( const FileName : string;FileMode:Cardinal; const Name:string; Protect:Cardinal; const MaximumSize
       : Int64; const SecAttr : PSecurityAttributes);
18841:  Create( const FileName : string; FileMode : WordfmShareDenyWrite)
18842:  Create( const MaskValue : string)
18843:  Create(const Name:string; Protect:Cardinal;const MaximumSize:Int64;const SecAttr:PSecurityAttributes)
18844:  Create( const Prefix : string)
```

```
18845:  Create( const sRegularExpression : string; xFlags : TniRegularExpressionMatchFlags)
18846:  Create( const sRule : string; xFlags : TniRegularExpressionMatchFlags)
18847:  Create( const sRule : string; xFlags : TniRegularExpressionMatchFlags)
18848:  Create( CoolBar : TCoolBar)
18849:  Create( CreateSuspended : Boolean; ASocket : TServerClientWinSocket)
18850:  Create( CreateSuspended : Boolean; ASocket : TServerWinSocket)
18851:  Create( DataSet :TDataSet; const
       Text:Widestring;Options:TFilterOptions;ParserOptions:TParserOptions;const FieldName : Widestring;
       DepFields : TBits; FieldMap : TFieldMap)
18852:  Create( DBCtrlGrid : TDBCtrlGrid)
18853:  Create( DSTableProducer : TDSTableProducer)
18854:  Create( DSTableProducer : TDSTableProducer; ColumnClass : THTMLTableColumnClass)
18855:  Create( ErrorCode : DBIResult)
18856:  Create( Field : TBlobField; Mode : TBlobStreamMode)
18857:  Create( Grid : TCustomDBGrid; ColumnClass : TColumnClass)
18858:  Create( HeaderControl : TCustomHeaderControl)
18859:  Create( HTTPRequest : TWebRequest)
18860:  Create( iStart : integer; sText : string)
18861:  Create( iValue : Integer)
18862:  Create( Kind : TMmTimerKind; Notification : TMmNotificationKind)
18863:  Create( MciErrNo : MCIERROR; const Msg : string)
18864:  Create(MemoryStream:TCustomMemStream;FreeStream:Boolean;const AIndexOption:TJclMappedTextReaderIndex);
18865:  Create( Message : string; ErrorCode : DBResult)
18866:  Create( Msg : string)
18867:  Create( NativeError, Context : string; ErrCode, PrevError : Integer; E : Exception)
18868:  Create( NativeError, Context : string; ErrorCode, PreviousError : DBResult)
18869:  Create( oExpression : TniRegularExpression; eType : TniRegularExpressionStateType)
18870:  Create( oOwner : TniRegularExpression; xFlags : TniRegularExpressionMatchFlags)
18871:  Create(oSource:TniRegularExpressState;oDestination:TniRegularExprState;xCharacts:TCharSet;bLambda:bool)
18872:  Create( Owner : EDBEngineError; ErrorCode : DBIResult; NativeError : Longint; Message : PChar)
18873:  Create( Owner : TCustomComboBoxEx)
18874:  CREATE( OWNER : TINDEXDEFS; const NAME, FIELDS: String; OPTIONS: TINDEXOPTIONS)
18875:  Create( Owner : TPersistent)
18876:  Create( Params : TStrings)
18877:  Create( Size : Cardinal)
18878:  Create( Socket : TSocket; ServerWinSocket : TServerWinSocket)
18879:  Create( StatusBar : TCustomStatusBar)
18880:  Create( WebDispatcher : TCustomWebDispatcher; ItemClass : TCollectionItemClass)
18881:  Create( WebResponse : TWebResponse; ItemClass : TCollectionItemClass)
18882:  Create(AHandle:Integer)
18883:  Create(AOwner: TComponent); virtual;
18884:  Create(const AURI : string)
18885:  Create(FileName:String;Mode:Word)
18886:  Create(Instance:THandle;ResName:String;ResType:PChar)
18887:  Create(Stream : TStream)
18888:  Create1( ADataset : TDataset);
18889:  Create1(const FileHandle:THandle;const Name:string;Protect:Cardinal;const MaximumSize:Int64;const
       SecAttr:PSecurityAttributes);
18890:  Create1( const FileName : string; const AIndexOption : TJclMappedTextReaderIndex);
18891:  Create2( Other : TObject);
18892:  CreateAt(FileMap: TJclCustomFileMapping; Access,Size:Cardinal;ViewOffset:Int64;Address: Pointer)
18893:  CreateError(const anErrCode: Integer;const asReplyMessage: string; const asErrorMessage: string)
18894:  CreateFmt( MciErrNo : MCIERROR; const Msg : string; const Args : array of const)
18895:  CreateFromId(Instance:THandle;ResId:Integer;ResType:PChar)
18896:  CreateLinked( DBCtrlGrid : TDBCtrlGrid)
18897:  CREATENEW(AOWNER:TCOMPONENT; Dummy: Integer)
18898:  CreateRes( Ident : Integer);
18899:  CreateRes( MciErrNo : MCIERROR; Ident : Integer)
18900:  CreateRes( ResStringRec : PResStringRec);
18901:  CreateResHelp( Ident : Integer; AHelpContext : Integer);
18902:  CreateResHelp( ResStringRec : PResStringRec; AHelpContext : Integer);
18903:  CreateShadow( AOwner : TComponent; ControlSide : TControlSide)
18904:  CreateSize( AWidth, AHeight : Integer)
18905:  Open( const Name : string; const InheritHandle : Boolean; const DesiredAccess : Cardinal)
18906:
18907: ------------------------------------------------------------------------------
18908: unit uPSI_MathMax;
18909: ------------------------------------------------------------------------------
18910:  CONSTS
18911:   Bernstein: Float = 0.280169499023869133036436491230 7;  // Bernstein constant
18912:   Cbrt2: Float     = 1.259921049894873164767210607278 2;  // CubeRoot(2)
18913:   Cbrt3: Float     = 1.442249570307408382321638310780 1;  // CubeRoot(3)
18914:   Cbrt10: Float    = 2.154434690031883721759293566519 4;  // CubeRoot(10)
18915:   Cbrt100: Float   = 4.641588833612778892410076350919 4;  // CubeRoot(100)
18916:   CbrtPi: Float    = 1.464591887561523263020142527263 8;  // CubeRoot(PI)
18917:   Catalan: Float   = 0.915965594177219015054603514932 4;  // Catalan constant
18918:   PiJ:    Float       = 3.14159265358979323846264338327 95;  // PI
18919:   PI:  Extended =  3.14159265358979323846264338327 95);
18920:   PiOn2: Float     = 1.570796326794896619231321691639 8;  // PI / 2
18921:   PiOn3: Float     = 1.047197551196597746154214461093 2;  // PI / 3
18922:   PiOn4: Float     = 0.785398163397448309615660845819 88; // PI / 4
18923:   Sqrt2: Float     = 1.414213562373095048801688724209 7;  // Sqrt(2)
18924:   Sqrt3: Float     = 1.732050807568877293527446341505 9;  // Sqrt(3)
18925:   Sqrt5: Float     = 2.236067977499789696409173668731 3;  // Sqrt(5)
18926:   Sqrt10: Float    = 3.162277660168379331998893544432 7;  // Sqrt(10)
18927:   SqrtPi: Float    = 1.772453850905516027298167483341 1;  // Sqrt(PI)
18928:   Sqrt2Pi: Float   = 2.506628274631000502415765284811;   // Sqrt(2 * PI)
18929:   TwoPi: Float     = 6.283185307179586476925286766559;   // 2 * PI
18930:   ThreePi: Float   = 9.424777960769379715387930149838 5;  // 3 * PI
```

```
18931:   Ln2: Float       = 0.693147180559945309417232121458 18; // Ln(2)
18932:   Ln10: Float      = 2.302585092994045684017991454684 4;  // Ln(10)
18933:   LnPi: Float      = 1.144729885849400174143427351353 1;  // Ln(PI)
18934:   Log2J: Float     = 0.301029995663981195213738894724 49; // Log10(2)
18935:   Log3: Float      = 0.477121254719662437295027903255 12; // Log10(3)
18936:   LogPi: Float     = 0.497149872694133854351268288290 9;  // Log10(PI)
18937:   LogE: Float      = 0.434294481903251827651128918916 61; // Log10(E)
18938:   E: Float         = 2.718281828459045235360287471352 7;  // Natural constant
18939:   hLn2Pi: Float    = 0.918938533204672741780329736405 62; // Ln(2*PI)/2
18940:   inv2Pi: Float    = 0.159154943091895335768883763372514362034459645740 46; // 0.5/Pi
18941:   TwoToPower63: Float = 9223372036854775808.0;          // 2^63
18942:   GoldenMean: Float   = 1.618033988749894848204586834365638;  // GoldenMean
18943:   EulerMascheroni: Float = 0.577215664901532860606512090082 4;  // Euler GAMMA
18944:   RadCor : Double = 57.29577951308232;    {number of degrees in a radian}
18945:   StDelta         : Extended = 0.00001;  {delta for difference equations}
18946:   StEpsilon       : Extended = 0.00001;  {epsilon for difference equations}
18947:   StMaxIterations : Integer  = 100;      {max attempts for convergence}
18948:
18949: procedure SIRegister_StdConvs(CL: TPSPascalCompiler);
18950: begin
18951:   MetersPerInch = 0.0254; // [1]
18952:   MetersPerFoot = MetersPerInch * 12;
18953:   MetersPerYard = MetersPerFoot * 3;
18954:   MetersPerMile = MetersPerFoot * 5280;
18955:   MetersPerNauticalMiles = 1852;
18956:   MetersPerAstronomicalUnit = 1.49598E11; // [4]
18957:   MetersPerLightSecond = 2.99792458E8; // [5]
18958:   MetersPerLightYear = MetersPerLightSecond * 31556925.9747; // [7]
18959:   MetersPerParsec = MetersPerAstronomicalUnit * 206264.806247096; // 60 * 60 * (180 / Pi)
18960:   MetersPerCubit = 0.4572; // [6][7]
18961:   MetersPerFathom = MetersPerFoot * 6;
18962:   MetersPerFurlong = MetersPerYard * 220;
18963:   MetersPerHand = MetersPerInch * 4;
18964:   MetersPerPace = MetersPerInch * 30;
18965:   MetersPerRod = MetersPerFoot * 16.5;
18966:   MetersPerChain = MetersPerRod * 4;
18967:   MetersPerLink = MetersPerChain / 100;
18968:   MetersPerPoint = MetersPerInch * 0.013837; // [7]
18969:   MetersPerPica = MetersPerPoint * 12;
18970:
18971:   SquareMetersPerSquareInch = MetersPerInch * MetersPerInch;
18972:   SquareMetersPerSquareFoot = MetersPerFoot * MetersPerFoot;
18973:   SquareMetersPerSquareYard = MetersPerYard * MetersPerYard;
18974:   SquareMetersPerSquareMile = MetersPerMile * MetersPerMile;
18975:   SquareMetersPerAcre = SquareMetersPerSquareYard * 4840;
18976:   SquareMetersPerSquareRod = MetersPerRod * MetersPerRod;
18977:
18978:   CubicMetersPerCubicInch = MetersPerInch * MetersPerInch * MetersPerInch;
18979:   CubicMetersPerCubicFoot = MetersPerFoot * MetersPerFoot * MetersPerFoot;
18980:   CubicMetersPerCubicYard = MetersPerYard * MetersPerYard * MetersPerYard;
18981:   CubicMetersPerCubicMile = MetersPerMile * MetersPerMile * MetersPerMile;
18982:   CubicMetersPerAcreFoot = SquareMetersPerAcre * MetersPerFoot;
18983:   CubicMetersPerAcreInch = SquareMetersPerAcre * MetersPerInch;
18984:   CubicMetersPerCord = CubicMetersPerCubicFoot * 128;
18985:   CubicMetersPerCordFoot = CubicMetersPerCubicFoot * 16;
18986:
18987:   CubicMetersPerUSFluidGallon = CubicMetersPerCubicInch * 231; // [2][3][7]
18988:   CubicMetersPerUSFluidQuart = CubicMetersPerUSFluidGallon / 4;
18989:   CubicMetersPerUSFluidPint = CubicMetersPerUSFluidQuart / 2;
18990:   CubicMetersPerUSFluidCup = CubicMetersPerUSFluidPint / 2;
18991:   CubicMetersPerUSFluidGill = CubicMetersPerUSFluidCup / 2;
18992:   CubicMetersPerUSFluidOunce = CubicMetersPerUSFluidCup / 8;
18993:   CubicMetersPerUSFluidTablespoon = CubicMetersPerUSFluidOunce / 2;
18994:   CubicMetersPerUSFluidTeaspoon = CubicMetersPerUSFluidOunce / 6;
18995:
18996:   CubicMetersPerUSDryGallon = CubicMetersPerCubicInch * 268.8025; // [7]
18997:   CubicMetersPerUSDryQuart = CubicMetersPerUSDryGallon / 4;
18998:   CubicMetersPerUSDryPint = CubicMetersPerUSDryQuart / 2;
18999:   CubicMetersPerUSDryPeck = CubicMetersPerUSDryGallon * 2;
19000:   CubicMetersPerUSDryBucket = CubicMetersPerUSDryPeck * 2;
19001:   CubicMetersPerUSDryBushel = CubicMetersPerUSDryBucket * 2;
19002:
19003:   CubicMetersPerUKGallon = 0.00454609; // [2][7]
19004:   CubicMetersPerUKPottle = CubicMetersPerUKGallon / 2;
19005:   CubicMetersPerUKQuart = CubicMetersPerUKPottle / 2;
19006:   CubicMetersPerUKPint = CubicMetersPerUKQuart / 2;
19007:   CubicMetersPerUKGill = CubicMetersPerUKPint / 4;
19008:   CubicMetersPerUKOunce = CubicMetersPerUKPint / 20;
19009:   CubicMetersPerUKPeck = CubicMetersPerUKGallon * 2;
19010:   CubicMetersPerUKBucket = CubicMetersPerUKPeck * 2;
19011:   CubicMetersPerUKBushel = CubicMetersPerUKBucket * 2;
19012:
19013:   GramsPerPound = 453.59237; // [1][7]
19014:   GramsPerDrams = GramsPerPound / 256;
19015:   GramsPerGrains = GramsPerPound / 7000;
19016:   GramsPerTons = GramsPerPound * 2000;
19017:   GramsPerLongTons = GramsPerPound * 2240;
19018:   GramsPerOunces = GramsPerPound / 16;
19019:   GramsPerStones = GramsPerPound * 14;
```

```
19020:
19021:   MaxAngle 9223372036854775808.0;
19022:   MaxTanH 5678.26170314707197474459655389854);
19023:   MaxFactorial( 1754);
19024:   MaxFloatingPoint(1.189731495357231765085759326628E+4932);
19025:   MinFloatingPoint',(3.362103143112093506262678173218E-4932);
19026:   MaxTanH( 354.89135644669199842162284618659);
19027:   MaxFactorial'LongInt'( 170);
19028:   MaxFloatingPointD(1.797693134862315907729305190789E+308);
19029:   MinFloatingPointD(2.225073858507201383090232717332 4E-308);
19030:   MaxTanH( 44.361419555836499802702855773323);
19031:   MaxFactorial'LongInt'( 33);
19032:   MaxFloatingPointS( 3.402823669209384634633746074317 7E+38);
19033:   MinFloatingPointS( 1.175494350822287507968736537222 2E-38);
19034:   PiExt( 3.14159265358979323846264338327 95);
19035:   RatioDegToRad( PiExt / 180.0);
19036:   RatioGradToRad( PiExt / 200.0);
19037:   RatioDegToGrad( 200.0 / 180.0);
19038:   RatioGradToDeg( 180.0 / 200.0);
19039:   Crc16PolynomCCITT'LongWord $1021);
19040:  Crc16PolynomIBM'LongWord $8005);
19041:  Crc16Bits'LongInt'( 16);
19042:  Crc16Bytes'LongInt'( 2);
19043:  Crc16HighBit'LongWord $8000);
19044:  NotCrc16HighBit','LongWord $7FFF);
19045:   Crc32PolynomIEEE','LongWord $04C11DB7);
19046:  Crc32PolynomCastagnoli','LongWord $1EDC6F41);
19047:  Crc32Koopman','LongWord $741B8CD7);
19048:  Crc32Bits','LongInt'( 32);
19049:  Crc32Bytes','LongInt'( 4);
19050:  Crc32HighBit','LongWord $80000000);
19051:  NotCrc32HighBit','LongWord $7FFFFFFF);
19052:
19053:   MinByte       = Low(Byte);
19054:   MaxByte       = High(Byte);
19055:   MinWord       = Low(Word);
19056:   MaxWord       = High(Word);
19057:   MinShortInt   = Low(ShortInt);
19058:   MaxShortInt   = High(ShortInt);
19059:   MinSmallInt   = Low(SmallInt);
19060:   MaxSmallInt   = High(SmallInt);
19061:   MinLongWord   = LongWord(Low(LongWord));
19062:   MaxLongWord   = LongWord(High(LongWord));
19063:   MinLongInt    = LongInt(Low(LongInt));
19064:   MaxLongInt    = LongInt(High(LongInt));
19065:   MinInt64      = Int64(Low(Int64));
19066:   MaxInt64      = Int64(High(Int64));
19067:   MinInteger    = Integer(Low(Integer));
19068:   MaxInteger    = Integer(High(Integer));
19069:   MinCardinal   = Cardinal(Low(Cardinal));
19070:   MaxCardinal   = Cardinal(High(Cardinal));
19071:   MinNativeUInt = NativeUInt(Low(NativeUInt));
19072:   MaxNativeUInt = NativeUInt(High(NativeUInt));
19073:   MinNativeInt  = NativeInt(Low(NativeInt));
19074:   MaxNativeInt  = NativeInt(High(NativeInt));
19075:  Function CosH( const Z : Float) : Float;
19076:  Function SinH( const Z : Float) : Float;
19077:  Function TanH( const Z : Float) : Float;
19078:
19079:
19080:   //***********from DMath.Dll Lib of types.inc in source\dmath_dll
19081:   InvLn2     = 1.44269504088896340736;  { 1/Ln(2) }
19082:   InvLn10    = 0.43429448190325182765;  { 1/Ln(10) }
19083:   TwoPi      = 6.28318530717958647693;  { 2*Pi }
19084:   PiDiv2     = 1.57079632679489661923;  { Pi/2 }
19085:   SqrtPi     = 1.77245385090551602730;  { Sqrt(Pi) }
19086:   Sqrt2Pi    = 2.50662827463100050242;  { Sqrt(2*Pi) }
19087:   InvSqrt2Pi = 0.39894228040143267794;  { 1/Sqrt(2*Pi) }
19088:   LnSqrt2Pi  = 0.91893853320467274178;  { Ln(Sqrt(2*Pi)) }
19089:   Ln2PiDiv2  = 0.91893853320467274178;  { Ln(2*Pi)/2 }
19090:   Sqrt2      = 1.41421356237309504880;  { Sqrt(2) }
19091:   Sqrt2Div2  = 0.70710678118654752440;  { Sqrt(2)/2 }
19092:   Gold       = 1.61803398874989484821;  { Golden Mean = (1 + Sqrt(5))/2 }
19093:   CGold      = 0.38196601125010515179;  { 2 - GOLD }
19094:   MachEp = 2.220446049250313E-16;   { 2^(-52) }
19095:   MaxNum = 1.797693134862315E+308;  { 2^1024 }
19096:   MinNum = 2.225073858507202E-308;  { 2^(-1022) }
19097:   MaxLog = 709.7827128933840;
19098:   MinLog = -708.3964185322641;
19099:   MaxFac = 170;
19100:   MaxGam = 171.624376956302;
19101:   MaxLgm = 2.556348E+305;
19102:   SingleCompareDelta   = 1.0E-34;
19103:   DoubleCompareDelta   = 1.0E-280;
19104:   {$IFDEF CLR}
19105:   ExtendedCompareDelta = DoubleCompareDelta;
19106:   {$ELSE}
19107:   ExtendedCompareDelta = 1.0E-4400;
19108:   {$ENDIF}
```

```
19109:   Bytes1KB  = 1024;
19110:   Bytes1MB  = 1024 * Bytes1KB;
19111:   Bytes1GB  = 1024 * Bytes1MB;
19112:   Bytes64KB = 64 * Bytes1KB;
19113:   Bytes64MB = 64 * Bytes1MB;
19114:   Bytes2GB  = 2 * LongWord(Bytes1GB);
19115:     clBlack32', $FF000000 ));
19116:     clDimGray32', $FF3F3F3F ));
19117:     clGray32', $FF7F7F7F ));
19118:     clLightGray32', $FFBFBFBF ));
19119:     clWhite32', $FFFFFFFF ));
19120:     clMaroon32', $FF7F0000 ));
19121:     clGreen32', $FF007F00 ));
19122:     clOlive32', $FF7F7F00 ));
19123:     clNavy32', $FF00007F ));
19124:     clPurple32', $FF7F007F ));
19125:     clTeal32', $FF007F7F ));
19126:     clRed32', $FFFF0000 ));
19127:     clLime32', $FF00FF00 ));
19128:     clYellow32', $FFFFFF00 ));
19129:     clBlue32', $FF0000FF ));
19130:     clFuchsia32', $FFFF00FF ));
19131:     clAqua32', $FF00FFFF ));
19132:     clAliceBlue32', $FFF0F8FF ));
19133:     clAntiqueWhite32', $FFFAEBD7 ));
19134:     clAquamarine32', $FF7FFFD4 ));
19135:     clAzure32', $FFF0FFFF ));
19136:     clBeige32', $FFF5F5DC ));
19137:     clBisque32', $FFFFE4C4 ));
19138:     clBlancheDalmond32', $FFFFEBCD ));
19139:     clBlueViolet32', $FF8A2BE2 ));
19140:     clBrown32', $FFA52A2A ));
19141:     clBurlyWood32', $FFDEB887 ));
19142:     clCadetblue32', $FF5F9EA0 ));
19143:     clChartReuse32', $FF7FFF00 ));
19144:     clChocolate32', $FFD2691E ));
19145:     clCoral32', $FFFF7F50 ));
19146:     clCornFlowerBlue32', $FF6495ED ));
19147:     clCornSilk32', $FFFFF8DC ));
19148:     clCrimson32', $FFDC143C ));
19149:     clDarkBlue32', $FF00008B ));
19150:     clDarkCyan32', $FF008B8B ));
19151:     clDarkGoldenRod32', $FFB8860B ));
19152:     clDarkGray32', $FFA9A9A9 ));
19153:     clDarkGreen32', $FF006400 ));
19154:     clDarkGrey32', $FFA9A9A9 ));
19155:     clDarkKhaki32', $FFBDB76B ));
19156:     clDarkMagenta32', $FF8B008B ));
19157:     clDarkOliveGreen32', $FF556B2F ));
19158:     clDarkOrange32', $FFFF8C00 ));
19159:     clDarkOrchid32', $FF9932CC ));
19160:     clDarkRed32', $FF8B0000 ));
19161:     clDarkSalmon32', $FFE9967A ));
19162:     clDarkSeaGreen32', $FF8FBC8F ));
19163:     clDarkSlateBlue32', $FF483D8B ));
19164:     clDarkSlateGray32', $FF2F4F4F ));
19165:     clDarkSlateGrey32', $FF2F4F4F ));
19166:     clDarkTurquoise32', $FF00CED1 ));
19167:     clDarkViolet32', $FF9400D3 ));
19168:     clDeepPink32', $FFFF1493 ));
19169:     clDeepSkyBlue32', $FF00BFFF ));
19170:     clDodgerBlue32', $FF1E90FF ));
19171:     clFireBrick32', $FFB22222 ));
19172:     clFloralWhite32', $FFFFFAF0 ));
19173:     clGainsBoro32', $FFDCDCDC ));
19174:     clGhostWhite32', $FFF8F8FF ));
19175:     clGold32', $FFFFD700 ));
19176:     clGoldenRod32', $FFDAA520 ));
19177:     clGreenYellow32', $FFADFF2F ));
19178:     clGrey32', $FF808080 ));
19179:     clHoneyDew32', $FFF0FFF0 ));
19180:     clHotPink32', $FFFF69B4 ));
19181:     clIndianRed32', $FFCD5C5C ));
19182:     clIndigo32', $FF4B0082 ));
19183:     clIvory32', $FFFFFFF0 ));
19184:     clKhaki32', $FFF0E68C ));
19185:     clLavender32', $FFE6E6FA ));
19186:     clLavenderBlush32', $FFFFF0F5 ));
19187:     clLawnGreen32', $FF7CFC00 ));
19188:     clLemonChiffon32', $FFFFFACD ));
19189:     clLightBlue32', $FFADD8E6 ));
19190:     clLightCoral32', $FFF08080 ));
19191:     clLightCyan32', $FFE0FFFF ));
19192:     clLightGoldenRodYellow32', $FFFAFAD2 ));
19193:     clLightGreen32', $FF90EE90 ));
19194:     clLightGrey32', $FFD3D3D3 ));
19195:     clLightPink32', $FFFFB6C1 ));
19196:     clLightSalmon32', $FFFFA07A ));
19197:     clLightSeagreen32', $FF20B2AA ));
```

```
19198:     clLightSkyblue32', $FF87CEFA ));
19199:     clLightSlategray32', $FF778899 ));
19200:     clLightSlategrey32', $FF778899 ));
19201:     clLightSteelblue32', $FFB0C4DE ));
19202:     clLightYellow32', $FFFFFFE0 ));
19203:     clLtGray32', $FFC0C0C0 ));
19204:     clMedGray32', $FFA0A0A4 ));
19205:     clDkGray32', $FF808080 ));
19206:     clMoneyGreen32', $FFC0DCC0 ));
19207:     clLegacySkyBlue32', $FFA6CAF0 ));
19208:     clCream32', $FFFFFBF0 ));
19209:     clLimeGreen32', $FF32CD32 ));
19210:     clLinen32', $FFFAF0E6 ));
19211:     clMediumAquamarine32', $FF66CDAA ));
19212:     clMediumBlue32', $FF0000CD ));
19213:     clMediumOrchid32', $FFBA55D3 ));
19214:     clMediumPurple32', $FF9370DB ));
19215:     clMediumSeaGreen32', $FF3CB371 ));
19216:     clMediumSlateBlue32', $FF7B68EE ));
19217:     clMediumSpringGreen32', $FF00FA9A ));
19218:     clMediumTurquoise32', $FF48D1CC ));
19219:     clMediumVioletRed32', $FFC71585 ));
19220:     clMidnightBlue32', $FF191970 ));
19221:     clMintCream32', $FFF5FFFA ));
19222:     clMistyRose32', $FFFFE4E1 ));
19223:     clMoccasin32', $FFFFE4B5 ));
19224:     clNavajoWhite32', $FFFFDEAD ));
19225:     clOldLace32', $FFFDF5E6 ));
19226:     clOliveDrab32', $FF6B8E23 ));
19227:     clOrange32', $FFFFA500 ));
19228:     clOrangeRed32', $FFFF4500 ));
19229:     clOrchid32', $FFDA70D6 ));
19230:     clPaleGoldenRod32', $FFEEE8AA ));
19231:     clPaleGreen32', $FF98FB98 ));
19232:     clPaleTurquoise32', $FFAFEEEE ));
19233:     clPaleVioletred32', $FFDB7093 ));
19234:     clPapayaWhip32', $FFFFEFD5 ));
19235:     clPeachPuff32', $FFFFDAB9 ));
19236:     clPeru32', $FFCD853F ));
19237:     clPlum32', $FFDDA0DD ));
19238:     clPowderBlue32', $FFB0E0E6 ));
19239:     clRosyBrown32', $FFBC8F8F ));
19240:     clRoyalBlue32', $FF4169E1 ));
19241:     clSaddleBrown32', $FF8B4513 ));
19242:     clSalmon32', $FFFA8072 ));
19243:     clSandyBrown32', $FFF4A460 ));
19244:     clSeaGreen32', $FF2E8B57 ));
19245:     clSeaShell32', $FFFFF5EE ));
19246:     clSienna32', $FFA0522D ));
19247:     clSilver32', $FFC0C0C0 ));
19248:     clSkyblue32', $FF87CEEB ));
19249:     clSlateBlue32', $FF6A5ACD ));
19250:     clSlateGray32', $FF708090 ));
19251:     clSlateGrey32', $FF708090 ));
19252:     clSnow32', $FFFFFAFA ));
19253:     clSpringgreen32', $FF00FF7F ));
19254:     clSteelblue32', $FF4682B4 ));
19255:     clTan32', $FFD2B48C ));
19256:     clThistle32', $FFD8BFD8 ));
19257:     clTomato32', $FFFF6347 ));
19258:     clTurquoise32', $FF40E0D0 ));
19259:     clViolet32', $FFEE82EE ));
19260:     clWheat32', $FFF5DEB3 ));
19261:     clWhitesmoke32', $FFF5F5F5 ));
19262:     clYellowgreen32', $FF9ACD32 ));
19263:     clTrWhite32', $7FFFFFFF ));
19264:     clTrBlack32', $7F000000 ));
19265:     clTrRed32', $7FFF0000 ));
19266:     clTrGreen32', $7F00FF00 ));
19267:     clTrBlue32', $7F0000FF ));
19268:   // Fixed point math constants
19269:   FixedOne = $10000;  FixedHalf = $7FFF;
19270:   FixedPI  = Round(PI * FixedOne);
19271:   FixedToFloat = 1/FixedOne;
19272:
19273:  Special Types
19274: ************************************************
19275:   type Complex = record
19276:     X, Y : Float;
19277:   end;
19278:   type TVector     = array of Float;
19279:   TIntVector  = array of Integer;
19280:   TCompVector = array of Complex;
19281:   TBoolVector = array of Boolean;
19282:   TStrVector  = array of String;
19283:   TMatrix     = array of TVector;
19284:   TIntMatrix  = array of TIntVector;
19285:   TCompMatrix = array of TCompVector;
19286:   TBoolMatrix = array of TBoolVector;
```

```
19287:   TStrMatrix  = array of TStrVector;
19288:   TByteArray = array[0..32767] of byte; !
19289:   THexArray = array [0..15] of Char; // = '0123456789ABCDEF';
19290:   TBitmapStyle = (bsNormal, bsCentered, bsStretched);
19291:   T2StringArray = array of array of string;
19292:   T2IntegerArray = array of array of integer;
19293:   AddTypeS('INT_PTR', 'Integer
19294:   AddTypeS('LONG_PTR', 'Integer
19295:   AddTypeS('UINT_PTR', 'Cardinal
19296:   AddTypeS('ULONG_PTR', 'Cardinal
19297:   AddTypeS('DWORD_PTR', 'ULONG_PTR
19298:   TIntegerDynArray', 'array of Integer
19299:   TCardinalDynArray', 'array of Cardinal
19300:   TWordDynArray', 'array of Word
19301:   TSmallIntDynArray', 'array of SmallInt
19302:   TByteDynArray', 'array of Byte
19303:   TShortIntDynArray', 'array of ShortInt
19304:   TInt64DynArray', 'array of Int64
19305:   TLongWordDynArray', 'array of LongWord
19306:   TSingleDynArray', 'array of Single
19307:   TDoubleDynArray', 'array of Double
19308:   TBooleanDynArray', 'array of Boolean
19309:   TStringDynArray', 'array of string
19310:   TWideStringDynArray', 'array of WideString
19311:   TDynByteArray     = array of Byte;
19312:   TDynShortintArray = array of Shortint;
19313:   TDynSmallintArray = array of Smallint;
19314:   TDynWordArray     = array of Word;
19315:   TDynIntegerArray  = array of Integer;
19316:   TDynLongintArray  = array of Longint;
19317:   TDynCardinalArray = array of Cardinal;
19318:   TDynInt64Array    = array of Int64;
19319:   TDynExtendedArray = array of Extended;
19320:   TDynDoubleArray   = array of Double;
19321:   TDynSingleArray   = array of Single;
19322:   TDynFloatArray    = array of Float;
19323:   TDynPointerArray  = array of Pointer;
19324:   TDynStringArray   = array of string;
19325:   TSynSearchOption = (ssoMatchCase, ssoWholeWord, ssoBackwards,
19326:     ssoEntireScope, ssoSelectedOnly, ssoReplace, ssoReplaceAll, ssoPrompt);
19327:   TSynSearchOptions = set of TSynSearchOption;
19328:
19329:
19330: //* Project  : Base Include RunTime Lib for maXbox *Name: pas_includebox.inc
19331: ----------------------------------------------------------------------------
19332: procedure drawPolygon(vPoints: TXYVector; cFrm: TForm);
19333: procedure drawPlot(vPoints: TXYVector; cFrm: TForm; vcolor: integer);
19334: procedure SaveCanvas(vCanvas: TCanvas; FileName: string);
19335: procedure SaveCanvas2(vCanvas: TCanvas; FileName: string);
19336: function CheckStringSum(vstring: string): integer;
19337: function HexToInt(HexNum: string): LongInt;
19338: function IntToBin(Int: Integer): String;
19339: function BinToInt(Binary: String): Integer;
19340: function HexToBin(HexNum: string): string; external2
19341: function BinToHex(Binary: String): string;
19342: function IntToFloat(i: Integer): double;
19343: function AddThousandSeparator(S: string; myChr: Char): string;
19344: function Max3(const X,Y,Z: Integer): Integer;
19345: procedure Swap(var X,Y: char); // faster without inline
19346: procedure ReverseString(var S: String);
19347: function CharToHexStr(Value: Char): string;
19348: function CharToUniCode(Value: Char): string;
19349: function Hex2Dec(Value: Str002): Byte;
19350: function HexStrCodeToStr(Value: string): string;
19351: function HexToStr(i: integer; value: string): string;
19352: function UniCodeToStr(Value: string): string;
19353: function CRC16(statement: string): string;
19354: function SearchForSubstrings(aStrList: TStrings; aSearchStr1, aSearchStr2: string): string;
19355: procedure SearchAndReplace(aStrList: TStrings; aSearchStr, aNewStr: string);
19356: procedure SearchAndCopy(aStrList: TStrings; aSearchStr, aNewStr: string; offset: integer);
19357: Procedure ExecuteCommand(executeFile, paramstring: string);
19358: Procedure ShellExecuteAndWait(executeFile, paramstring: string);
19359: function ExecConsoleApp(const AppName, Parameters: String; AppOutput: TStrings): DWORD;
19360: procedure SearchAndOpenDoc(vfilenamepath: string);
19361: procedure ShowInterfaces(myFile: string);
19362: function Fact2(av: integer): extended;
19363: Function BoolToStr(B: Boolean): string;
19364: Function GCD(x, y : LongInt) : LongInt;
19365: function LCM(m,n: longint): longint;
19366: function GetASCII: string;
19367: function GetItemHeight(Font: TFont): Integer;
19368: function myPlaySound(s: pchar; flag,syncflag: integer): boolean;
19369: function myGetWindowsDirectory(lpBuffer: PChar; uSize: longword): longword;
19370: function getHINSTANCE: longword;
19371: function getHMODULE: longword;
19372: function GetASCII: string;
19373: function ByteIsOk(const AByte: string; var VB: Byte): boolean;
19374: function WordIsOk(const AWord: string; var VW: Word): boolean;
19375: function TwentyFourBitValueIsOk(const AValue: string; var VI: Integer): boolean;
```

```
19376: function LongIsOk(const ALong: string; var VC: Cardinal): boolean;
19377: function SafeStr(const s: string): string;
19378: function ExtractUrlPath(const FileName: string): string;
19379: function ExtractUrlName(const FileName: string): string;
19380: function IsInternet: boolean;
19381: function RotateLeft1Bit_u32( Value: uint32): uint32;
19382: procedure LinearRegression(const KnownY:array of Double;const KnownX: array of Double;NData:Int;var
       LF:TStLinEst; ErrorStats : Boolean);
19383: procedure getEnvironmentInfo;
19384: procedure AntiFreeze;
19385: function GetCPUSpeed: Double;
19386: function IsVirtualPcGuest : Boolean;
19387: function IsVmWareGuest : Boolean;
19388: procedure StartSerialDialog;
19389: function IsWoW64: boolean;
19390: function IsWow64String(var s: string): Boolean;
19391: procedure StartThreadDemo;
19392: Function RGB(R,G,B: Byte): TColor;
19393: Function Sendln(amess: string): boolean;
19394: Procedure maXbox;
19395: Function AspectRatio(aWidth, aHeight: Integer): String;
19396: function wget(aURL, afile: string): boolean;
19397: procedure PrintList(Value: TStringList);
19398: procedure PrintImage(aValue: TBitmap; Style: TBitmapStyle);
19399: procedure getEnvironmentInfo;
19400: procedure AntiFreeze;
19401: function getBitmap(apath: string): TBitmap;
19402: procedure ShowMessageBig(const aText : string);
19403: function YesNoDialog(const ACaption, AMsg: string): boolean;
19404: procedure SetArrayLength2String(arr: T2StringArray; asize1, asize2: integer);
19405: procedure SetArrayLength2Integer(arr: T2IntegerArray; asize1, asize2: integer);
19406: //function myStrToBytes(const Value: String): TBytes;
19407: //function myBytesToStr(const Value: TBytes): String;
19408: function SaveAsExcelFile(AGrid: TStringGrid; ASheetName, AFileName: string; open: boolean): Boolean;
19409: function getBitmap(apath: string): TBitmap;
19410: procedure ShowMessageBig(const aText : string);
19411: Function StrToBytes(const Value: String): TBytes;
19412: Function BytesToStr(const Value: TBytes): String;
19413: function SaveAsExcelFile(AGrid: TStringGrid; ASheetName, AFileName: string; open: boolean): Boolean;
19414: function ReverseDNSLookup(const IPAdrs:String;const DNSServer:String;Timeout,Retris:Int;var
       HostName:String):Bool;
19415: function FindInPaths(const fileName, paths : String) : String;
19416: procedure initHexArray(var hexn: THexArray);
19417: function josephusG(n,k: integer; var graphout: string): integer;
19418: function isPowerof2(num: int64): boolean;
19419: function powerOf2(exponent: integer): int64;
19420: function getBigPI: string;
19421: procedure MakeSound(Frequency{Hz}, Duration{mSec}: Integer; Volume: TVolumeLevel; savefilePath: string);
19422:  function GetASCIILine: string;
19423: procedure MakeComplexSound(N:integer{stream # to use}; freqlist:TStrings; Duration{mSec}: Integer;
19424:                            pinknoise: boolean; shape: integer; Volume: TVolumeLevel);
19425: procedure SetComplexSoundElements(freqedt,Phaseedt,AmpEdt,WaveGrp:integer);
19426: procedure AddComplexSoundObjectToList(newf,newp,newa,news:integer; freqlist: TStrings);
19427: function mapfunc(ax, in_min, in_max, out_min, out_max: integer): integer;
19428: function mapmax(ax, in_min, in_max, out_min, out_max: integer): integer;
19429: function isKeypressed: boolean;
19430: function Keypress: boolean;
19431: procedure StrSplitP(const Delimiter: Char; Input: string; const Strings: TStrings);
19432: function ReadReg(Base: HKEY; KeyName, ValueName: string): string;
19433: function ReadRegistry(Base: HKEY; KeyName, ValueName: string): string;
19434: function GetOSName: string;
19435: function GetOSVersion: string;
19436: function GetOSNumber: string;
19437: function getEnvironmentString: string;
19438: procedure StrReplace(var Str: String; Old, New: String);
19439: procedure SendEmail(mFrom,  mTo,  mSubject,  mBody,  mAttachment: variant);
19440: function getTeamViewerID: string;
19441: Procedure RecurseDirectory(Dir:String; IncludeSubs:boolean; callback:TFileCallbackProcedure);
19442: Procedure RecurseDirectory2(Dir : String; IncludeSubs : boolean);
19443: procedure WinInet_HttpGet(const Url: string; Stream:TStream);
19444: procedure GetQrCode2(Width,Height: Word;Correct_Level:string;const Data:string;apath:string);
19445: function StartSocketService: Boolean;
19446: procedure StartSocketServiceForm;
19447: function GetFileList(FileList: TStringlist; apath: string): TStringlist;
19448: function GetFileList1(apath: string): TStringlist;
19449: procedure LetFileList(FileList: TStringlist; apath: string);
19450: procedure StartWeb(aurl: string);
19451: function GetTodayFiles(startdir, amask: string): TStringlist;
19452: function PortTCPIsOpen(dwPort : Word; ipAddressStr: String): boolean;
19453: function JavahashCode(val: string): Integer;
19454: procedure PostKeyEx32(key: Word; const shift: TShiftState; specialkey: Boolean);
19455: procedure SaveBytesToFile2(const Data: Sysutils.TBytes; const FileName: string);
19456: Procedure HideWindowForSeconds(secs: integer);   {//3 seconds}
19457: Procedure HideWindowForSeconds2(secs: integer; apphandle, aself: TForm);   {//3 seconds}
19458: Procedure ConvertToGray(Cnv: TCanvas);
19459: function GetFileDate(aFile:string; aWithTime:Boolean):string;
19460: procedure ShowMemory;
19461: function ShowMemory2: string;
19462: function getHostIP: string;
```

```
19463: procedure ShowBitmap(bmap: TBitmap);
19464: function GetOsVersionInfo: TOSVersionInfo;      //thx to wischnewski
19465: function CreateDBGridForm(dblist: TStringList): TListbox;
19466: function isService: boolean;
19467: function isApplication: boolean;
19468: function isTerminalSession: boolean;
19469:
19470:
19471: // News of 3.9.8 up
19472: Halt-Stop Program in Menu, WebServer2, Stop Event Recompile,
19473: Conversion Routines, Prebuild Forms, more RCData, DebugOutString
19474: CodeSearchEngine to search code patterns in /examples <Ctrl F3>
19475: JvChart - TJvChart Component - 2009 Public
19476: MemoryLeakReport in ini-file (MEMORYREPORT=Y)
19477: PerlRegEx PCRE obj lib included, Perl & Python Syntax Editor, bitbox3 logic example
19478: TAdoQuery.SQL.Add() fixed, ShLwAPI extensions, Indy HTTPHeader Extensions
19479: DMath DLL included incl. Demos
19480: Interface Navigator menu/View/Intf Navigator
19481: Unit Explorer menu/Debug/Units Explorer
19482: EKON 16 Slides ..\maxbox3\docs\utils Excel Export maXcel
19483: Tutorial 19 WinCOM with Arduino Tutorial 20 RegEx Coding
19484: Script History to 9 Files WebServer light /Options/Addons/WebServer
19485: Full Text Finder, JVSimLogic Simulator Package
19486: Halt-Stop Program in Menu, WebServer2, Stop Event ,
19487: Conversion Routines, Prebuild Forms, CodeSearch
19488: Halt-Stop Program in Menu, WebServer2, Stop Event Recompile,
19489: Conversion Routines, Prebuild Forms, more RCData, DebugOutString
19490: CodeSearchEngine to search code patterns in /examples <Ctrl F3>
19491: JvChart - TJvChart Component - 2009 Public, mXGames, JvgXMLSerializer, TJvPaintFX
19492: Compress-Decompress Zip, Services Tutorial22, Synopse framework, PFDLib
19493: SynEdit API, Macro, Macro Recorder, DLL Spy, Configuration Tutorial
19494: IDE Reflection API, Session Service Shell S3
19495: additional SynEdit API, isKeyPressed Routine, Bookmarks, OpenToolsAPI Catalog (OTAC)
19496: Class TMonitor, Configuration Tutorial maxbox_starter25.pdf, Chess.dll Game
19497: arduino map() function, PMRandom Generator
19498: StBarCode Lib, StreamReaderClass, BarCode Package, Astro Package
19499: more ShellAPI, add 32 more units, Simulated Annealing, GenAlgo
19500: REST Test Lib, Multilang Component, Forth Interpreter
19501: New Macros, Sendmail (instant email), DevCUnits, Tetris Addon
19502: DCOM, MDAC, MIDI, TLS support, Posmarks, Utils Addon
19503: Routines for LaTeX/PS, Utils Addon, Indy Package3, TAR Archive, @Callbacks
19504: Routines for LaTeX/PS, Utils Addon, Indy Package3, TAR Archive, @Callbacks
19505: First LCL of Lazarus, CmdLine API, ToDo List, 36 more Units preCompiled
19506: QRCode Service, add more CFunctions like CDateTime of Synapse
19507: Gamma Functions, IndyPackage4, HotLog Threadable, FormTemplateLibrary FTL
19508: Nonlinear regression, ADO Workbench Addon, Assign fixing, IntfNavigator fixing, Applet
19509: 30 more Units preCompiled, QRCode Indy Service, more CFunctions like CFill or SRand
19510: RestartDialog, RTF, SQL Scanner, RichEdit, 15 more Units
19511: Tool Section, SOAP Tester, Hot Log Logger2, TCPPortScan, 28 more Units
19512: BOLD Package, Indy Package5, maTRIx. MATHEMAX
19513: SPS Utils WDOS, Plc BitBus (PetriNet), 40 more units
19514: emax layers: system-package-component-unit-class-function-block
19515: HighPrecision Timers,  Indy Package6, AutoDetect, UltraForms
19516: Reversi, GOL, bugfixing, 8 more units, Tutorial 24 Clean Code
19517: Tutorial 18_3 RGB LED, OpenGL Geometry, maxpix, statictext
19518: OpenGL Game Demo: ..Options/Add Ons/Reversi
19519: IBUtils Refactor, InterBase Package, DotNet Routines (JvExControls)
19520: add 31 units, mX4 Introduction Paper, more Socket&Streams, ShortString Routines
19521: 7% performance gain (hot spot profiling)
19522: PEP -Pascal Education Program , GSM Module, CGI, PHP Runner
19523: add 42 + 22  (64 units), memcached database, autobookmark, Alcinoe PAC, IPC Lib
19524: Orpheus PAC, AsyncFree Library advapi32 samples, FirebirdExp+MySQL units
19525: FBX Lib, psAPI, SMS Cell Module, OpenGL, Borland Tools
19526:
19527: add routines in 3.9.7.5
19528: 097: procedure RIRegister_BarCodeScaner_Routines(S: TPSExec);
19529: 996: procedure RIRegister_DBCtrls_Routines(S: TPSExec);
19530: 069: procedure RIRegister_IdStrings_Routines(S: TPSExec);
19531: 516: procedure RIRegister_JclMultimedia_Routines(S: TPSExec);
19532: 215: procedure RIRegister_PNGLoader_Routines(S: TPSExec);
19533: 374: procedure RIRegister_SerDlgs_Routines(S: TPSExec);
19534: 777: procedure RIRegister_LinarBitmap_Routines(S: TPSExec);
19535:
19536: ////////////////////////// TestUnits //////////////////////////
19537:   SelftestPEM;
19538:   SelfTestCFundamentUtils;
19539:   SelfTestCFileUtils;
19540:   SelfTestCDateTime;
19541:   SelfTestCTimer;
19542:   SelfTestCRandom;
19543:   Test with e.g.: Assert(PathHasDriveLetter('A:'), 'PathHasDriveLetter
19544:              Assert(WinPathToUnixPath('\c\d.f') = '/c/d.f', 'WinPathToUnixPath
19545:
19546:   // Note: There's no need for installing a client certificate in the
19547:   //       webbrowser. The server asks the webbrowser to send a certificate but
19548:   //       if nothing is installed the software will work because the server
19549:   //       doesn't check to see if a client certificate was supplied. If you want you can install:
19550:   //       file: c_cacert.p12
19551:   //       password: c_cakey
```

```
19552:
19553:   TGraphicControl = class(TControl)
19554:   private
19555:     FCanvas: TCanvas;
19556:     procedure WMPaint(var Message: TWMPaint); message WM_PAINT;
19557:   protected
19558:     procedure Paint; virtual;
19559:     property Canvas: TCanvas read FCanvas;
19560:   public
19561:     constructor Create(AOwner: TComponent); override;
19562:     destructor Destroy; override;
19563:   end;
19564:
19565:   TCustomControl = class(TWinControl)
19566:   private
19567:     FCanvas: TCanvas;
19568:     procedure WMPaint(var Message: TWMPaint); message WM_PAINT;
19569:   protected
19570:     procedure Paint; virtual;
19571:     procedure PaintWindow(DC: HDC); override;
19572:     property Canvas: TCanvas read FCanvas;
19573:   public
19574:     constructor Create(AOwner: TComponent); override;
19575:     destructor Destroy; override;
19576:   end;
19577:     RegisterPublishedProperties;
19578:     ('ONCHANGE', 'TNotifyEvent', iptrw);
19579:     ('ONCLICK', 'TNotifyEvent', iptrw);
19580:     ('ONDBLCLICK', 'TNotifyEvent', iptrw);
19581:     ('ONENTER', 'TNotifyEvent', iptrw);
19582:     ('ONEXIT', 'TNotifyEvent', iptrw);
19583:     ('ONKEYDOWN', 'TKeyEvent', iptrw);
19584:     ('ONKEYPRESS', 'TKeyPressEvent', iptrw);
19585:     ('ONMOUSEDOWN', 'TMouseEvent', iptrw);
19586:     ('ONMOUSEMOVE', 'TMouseMoveEvent', iptrw);
19587:     ('ONMOUSEUP', 'TMouseEvent', iptrw);
19588: //*********************************************************************
19589:   // To stop the while loop, click on Options/Show Include (boolean switch)!
19590:   Control a loop in a script with a form event:
19591:   IncludeON;   //control the while loop
19592:   while maxform1.ShowInclude1.checked do begin  //menu event Options/Show Include
19593:
19594: //---------------------------------------------------------------------------
19595: //*************mX4 ini-file Configuration***********************************
19596: //---------------------------------------------------------------------------
19597:   using config file maxboxdef.ini       menu/Help/Config File
19598:
19599: //*** Definitions for maXbox mX3 ***
19600: [FORM]
19601: LAST_FILE=E:\maXbox\maxbox3\examples\140_drive_typedemo.txt //history up to 10 files
19602: FONTSIZE=14
19603: EXTENSION=txt
19604: SCREENX=1386
19605: SCREENY=1077
19606: MEMHEIGHT=350
19607: PRINTFONT=Courier New //GUI Settings
19608: LINENUMBERS=Y   //line numbers at gutter in editor at left side
19609: EXCEPTIONLOG=Y  //store excepts and success in 2 log files see below! -menu Debug/Show Last Exceptions
19610: EXECUTESHELL=Y  //prevents execution of ExecuteShell() or ExecuteCommand()
19611: BOOTSCRIPT=Y    //enabling load a boot script
19612: MEMORYREPORT=Y  //shows memory report on closing maXbox
19613: MACRO=Y         //expand macros (see below) in code e.g. #path:E:\maxbox3\mXGit39988\maxbox3\docs\
19614: NAVIGATOR=N     //shows function list at the right side of editor
19615: NAVWIDTH=350    //width of the right side interface list <CTRL L>  >=200
19616: AUTOBOOKMARK=Y  //sets on all functions a bookmark to jump
19617: [WEB]
19618: IPPORT=8080     //for internal webserver - menu /Options/Add Ons/WebServer
19619: IPHOST=192.168.1.53
19620: ROOTCERT=filepathY
19621: SCERT=filepathY
19622: RSAKEY=filepathY
19623: VERSIONCHECK=Y
19624:
19625: using Logfile: maxboxlog.log  , Exceptionlogfile: maxboxerrorlog.txt
19626:
19627: Also possible to set report memory in script to override ini setting
19628: procedure Set_ReportMemoryLeaksOnShutdown(abo: boolean)
19629:
19630:
19631: After Change the ini file you can reload the file with ../Help/Config Update
19632:
19633: //---------------------------------------------------------------------------
19634: //*************mX4 maildef.ini ini-file Configuration*********************
19635: //---------------------------------------------------------------------------
19636: //*** Definitions for maXMail ***
19637: //sendemail, HOST=mail.hover.com, PORT=465 (SSL)
19638: [MAXMAIL]
19639: HOST=getmail.softwareschule.ch
19640: USER=mailusername
```

```
19641: PASS=password
19642: PORT=110
19643: SSL=Y
19644: BODY=Y
19645: LAST=5
19646:
19647: ADO Connection String:
19648: Provider=MSDASQL;DSN=mx3base;Uid=sa;Pwd=admin
19649:
19650: \452_dbtreeview2access.txt
19651: program TestDbTreeViewMainForm2_ACCESS;
19652:   ConnectionString:='Provider=Microsoft.Jet.OLEDB.4.0;Data Source='
19653:                    +Exepath+'\examples\detail.mdb;Persist Security Info=False';
19654:
19655: OpenSSL Lib:  unit ssl_openssl_lib;
19656: {$IFDEF CIL}
19657: const
19658:   {$IFDEF LINUX}
19659:   DLLSSLName = 'libssl.so';
19660:   DLLUtilName = 'libcrypto.so';
19661:   {$ELSE}
19662:   DLLSSLName = 'ssleay32.dll';
19663:   DLLUtilName = 'libeay32.dll';
19664:   {$ENDIF}
19665: {$ELSE}
19666: var
19667:   {$IFNDEF MSWINDOWS}
19668:     {$IFDEF DARWIN}
19669:     DLLSSLName: string = 'libssl.dylib';
19670:     DLLUtilName: string = 'libcrypto.dylib';
19671:     {$ELSE}
19672:     DLLSSLName: string = 'libssl.so';
19673:     DLLUtilName: string = 'libcrypto.so';
19674:     {$ENDIF}
19675:   {$ELSE}
19676:   DLLSSLName: string = 'ssleay32.dll';
19677:   DLLSSLName2: string = 'libssl32.dll';
19678:   DLLUtilName: string = 'libeay32.dll';
19679:   {$ENDIF}
19680: {$ENDIF}
19681:
19682:
19683: //-------------------------------------------------------------------------
19684: //**************mX4 Macro Tags  ********************************************
19685: //-------------------------------------------------------- ----------------
19686:
19687:   asm #name #hostmAPSN2APSN211le, #head,max: APSN21: 04.01.2014 19:05:50
      E:\maxbox\maxbox3\docs\maxbox_extract_funclist399.txt end
19688:
19689: //Tag Macros
19690:
19691:   asm #name, #date, #host, #path, #file, #head, #sign #tech #net end
19692:
19693: //Tag Macros
19694: 10188: SearchAndCopy(memo1.lines, '#name', getUserNameWin, 11);
19695: 10189: SearchAndCopy(memo1.lines, '#date', datetimetoStr(now), 11);
19696: 10190: SearchAndCopy(memo1.lines, '#host', getComputernameWin, 11);
19697: 10191: SearchAndCopy(memo1.lines, '#path', fpath, 11);
19698: 10192: SearchAndCopy(memo1.lines, '#file', fname, 11);
19699: 10199  SearchAndCopy(memo1.lines, '#fils', fname +' '+SHA1(Act_Filename), 11);
19700: 10193: SearchAndCopy(memo1.lines, '#locs', intToStr(getCodeEnd), 11);
19701: 10194: SearchAndCopy(memo1.lines, '#perf', perftime, 11);
19702: 10195: SearchAndCopy(memo1.lines, '#sign', Format('%s: %s: %s',
19703:        [getUserNameWin, getComputernameWin, datetimetoStr(now),
19704: 10196: SearchAndCopy(memo1.lines, '#head',Format('%s: %s: %s %s ',
19705: 10197: [getUserNameWin, getComputernameWin, datetimetoStr(now), Act_Filename]),11);
19706:        [getUserNameWin, getComputernameWin, datetimetoStr(now), Act_Filename]),11);
19707: 10198: SearchAndCopy(memo1.lines, '#tech',Format('perf: %s threads: %d %s %s',
19708:        [perftime, numprocessthreads, getIPAddress(getComputerNameWin), timetoStr(time), mbversion]), 11);
19709: 10298:  SearchAndCopy(memo1.lines, '#net',Format('DNS: %s; local IPs: %s; local IP: %s',
19710:        [getDNS, GetLocalIPs, getIPAddress(getComputerNameWin)]), 10);
19711:
19712: //#tech!perf: 0:0:29.297 threads: 3 192.168.174.1 19:26:30
19713:
19714: //Replace Macros
19715:   SearchAndCopy(memo1.lines, '<TIME>', timetoStr(time), 6);
19716:   SearchAndCopy(memo1.lines, '<DATE>', datetoStr(date), 6);
19717:   SearchAndCopy(memo1.lines, '<PATH>', fpath, 6);
19718:   SearchAndCopy(memo1.lines, '<EXEPATH>', EXEPath, 9);
19719:   SearchAndCopy(memo1.lines, '<FILE>', fname, 6);
19720:   SearchAndCopy(memo1.lines, '<SOURCE>', ExePath+'Source', 8);
19721:
19722:   SearchAndCopy(memo1.lines, '#tech'perf:  threads: 2 192.168.1.53 19:05:50 3.9.9.84
19723:        [perftime,numprocessthreads,getIPAddress(getComputerNameWin),timetoStr(time),mbversion]), 11);
19724: //#tech!84perf:  threads: 2 192.168.1.53 19:05:50 3.9.9.84
19725:   SearchAndCopy(memo1.lines, 'maxbox_extract_funclist399.txt
19726:
19727: //-------------------------------------------------------------------------
19728: //**************mX4 ToDo List Tags  ../Help/ToDo List************************
```

```
19729: //------------------------------------------------------------ --------------------
19730:
19731:     while I < sl.Count do begin
19732: //      if MatchesMask(sl[I], '*/? TODO ([a-z0-9_]*#[1-9]#)*:*') then
19733:       if MatchesMask(sl[I], '*/? TODO (?*#?#)*:*') then
19734:         BreakupToDo(Filename, sl, I, 'TODO', True, True) // full info TODO
19735:       else if MatchesMask(sl[I], '*/? DONE (?*#?#)*:*') then
19736:         BreakupToDo(Filename, sl, I, 'DONE', True, True) // full info DONE
19737:       else if MatchesMask(sl[I], '*/? TODO (#?#)*:*') then
19738:         BreakupToDo(Filename, sl, I, 'TODO', False, True) // only priority info TODO
19739:       else if MatchesMask(sl[I], '*/? DONE (#?#)*:*') then
19740:         BreakupToDo(Filename, sl, I, 'DONE', False, True) // only priority info DONE
19741:       else if MatchesMask(sl[I], '*/?*TODO*:*') then
19742:         BreakupToDo(Filename, sl, I, 'TODO', False, False) // custom TODO
19743:       else if MatchesMask(sl[I], '*/?*DONE*:*') then
19744:         BreakupToDo(Filename, sl, I, 'DONE', False, False); // custom DONE
19745:       Inc(I);
19746:     end;
19747:
19748:
19749: //-----------------------------------------------------------------------------
19750: //*************mX4 Public  Tools API ***************************************
19751: //-----------------------------------------------------------------------------
19752:   file : unit uPSI_fMain.pas;              {$OTAP} Open Tools API Catalog
19753:  // Those functions concern the editor and preprocessor, all of the IDE
19754:  Example: Call it with maxform1.Info1Click(self)
19755:  Note: Call all Methods with maxForm1., e.g.:
19756:                       maxForm1.ShellStyle1Click(self);
19757:
19758: procedure SIRegister_fMain(CL: TPSPascalCompiler);
19759: begin
19760:  Const('BYTECODE','String 'bytecode.txt'
19761:  Const('PSTEXT','String PS Scriptfiles (*.txt)|*.TXT)'
19762:  Const('PSMODEL','String PS Modelfiles (*.uc)|*.UC
19763:  Const('PSPASCAL','String PS Pascalfiles (*.pas)|*.PAS
19764:  Const('PSINC','String PS Includes (*.inc)|*.INC
19765:  Const('DEFFILENAME','String 'firstdemo.txt
19766:  Const('DEFINIFILE','String 'maxboxdef.ini
19767:  Const('EXCEPTLOGFILE','String 'maxboxerrorlog.txt
19768:  Const('ALLFUNCTIONSLIST','String 'upsi_allfunctionslist.txt
19769:  Const('ALLFUNCTIONSLISTPDF','String 'maxbox_functions_all.pdf
19770:  Const('ALLOBJECTSLIST','String 'docs\VCL.pdf
19771:  Const('ALLRESOURCELIST','String 'docs\upsi_allresourcelist.txt
19772:  Const('ALLUNITLIST','String 'docs\maxbox3_9.xml');
19773:  Const('INCLUDEBOX','String 'pas_includebox.inc
19774:  Const('BOOTSCRIPT','String 'maxbootscript.txt
19775:  Const('MBVERSION','String '3.9.9.98
19776:  Const('VERSION','String'3.9.9.98
19777:  Const('MBVER','String '399
19778:  Const('MBVERI','Integer'(399);
19779:  Const('MBVERIALL','Integer'(39998);
19780:  Const('EXENAME','String 'maXbox3.exe
19781:  Const('MXSITE','String 'http://www.softwareschule.ch/maxbox.htm
19782:  Const('MXVERSIONFILE','String 'http://www.softwareschule.ch/maxvfile.txt
19783:  Const('MXVERSIONFILE2','String 'http://www.softwareschule.ch/maxvfile2.txt
19784:  Const('MXINTERNETCHECK','String 'www.ask.com
19785:  Const('MXMAIL','String 'max@kleiner.com
19786:  Const('TAB','Char #$09);
19787:  Const('CODECOMPLETION','String 'bds_delphi.dci
19788:  SIRegister_TMaxForm1(CL);
19789: end;
19790:
19791:   with FindClass('TForm'),'TMaxForm1') do begin
19792:     memo2', 'TMemo', iptrw);
19793:     memo1', 'TSynMemo', iptrw);
19794:     CB1SCList', 'TComboBox', iptrw);
19795:     mxNavigator', 'TComboBox', iptrw);
19796:     IPHost', 'string', iptrw);
19797:     IPPort', 'integer', iptrw);
19798:     COMPort', 'integer', iptrw);      //3.9.6.4
19799:     Splitter1', 'TSplitter', iptrw);
19800:     PSScript', 'TPSScript', iptrw);
19801:     PS3DllPlugin', 'TPSDllPlugin', iptrw);
19802:     MainMenu1', 'TMainMenu', iptrw);
19803:     Program1', 'TMenuItem', iptrw);
19804:     Compile1', 'TMenuItem', iptrw);
19805:     Files1', 'TMenuItem', iptrw);
19806:     open1', 'TMenuItem', iptrw);
19807:     Save2', 'TMenuItem', iptrw);
19808:     Options1', 'TMenuItem', iptrw);
19809:     Savebefore1', 'TMenuItem', iptrw);
19810:     Largefont1', 'TMenuItem', iptrw);
19811:     sBytecode1', 'TMenuItem', iptrw);
19812:     Saveas3', 'TMenuItem', iptrw);
19813:     Clear1', 'TMenuItem', iptrw);
19814:     Slinenumbers1', 'TMenuItem', iptrw);
19815:     About1', 'TMenuItem', iptrw);
19816:     Search1', 'TMenuItem', iptrw);
19817:     SynPasSyn1', 'TSynPasSyn', iptrw);
```

```
19818:     memo1', 'TSynMemo', iptrw);
19819:     SynEditSearch1', 'TSynEditSearch', iptrw);
19820:     WordWrap1', 'TMenuItem', iptrw);
19821:     XPManifest1', 'TXPManifest', iptrw);
19822:     SearchNext1', 'TMenuItem', iptrw);
19823:     Replace1', 'TMenuItem', iptrw);
19824:     PSImport_Controls1', 'TPSImport_Controls', iptrw);
19825:     PSImport_Classes1', 'TPSImport_Classes', iptrw);
19826:     ShowInclude1', 'TMenuItem', iptrw);
19827:     SynEditPrint1', 'TSynEditPrint', iptrw);
19828:     Printout1', 'TMenuItem', iptrw);
19829:     mnPrintColors1', 'TMenuItem', iptrw);
19830:     dlgFilePrint', 'TPrintDialog', iptrw);
19831:     dlgPrintFont1', 'TFontDialog', iptrw);
19832:     mnuPrintFont1', 'TMenuItem', iptrw);
19833:     Include1', 'TMenuItem', iptrw);
19834:     CodeCompletionList1', 'TMenuItem', iptrw);
19835:     IncludeList1', 'TMenuItem', iptrw);
19836:     ImageList1', 'TImageList', iptrw);
19837:     ImageList2', 'TImageList', iptrw);
19838:     CoolBar1', 'TCoolBar', iptrw);
19839:     ToolBar1', 'TToolBar', iptrw);
19840:     tbtnLoad', 'TToolButton', iptrw);
19841:     ToolButton2', 'TToolButton', iptrw);
19842:     tbtnFind', 'TToolButton', iptrw);
19843:     tbtnCompile', 'TToolButton', iptrw);
19844:     tbtnTrans', 'TToolButton', iptrw);
19845:     tbtnUseCase', 'TToolButton', iptrw);   //3.8
19846:     toolbtnTutorial', 'TToolButton', iptrw);
19847:     tbtn6res', 'TToolButton', iptrw);
19848:     ToolButton5', 'TToolButton', iptrw);
19849:     ToolButton1', 'TToolButton', iptrw);
19850:     ToolButton3', 'TToolButton', iptrw);
19851:     statusBar1', 'TStatusBar', iptrw);
19852:     SaveOutput1', 'TMenuItem', iptrw);
19853:     ExportClipboard1', 'TMenuItem', iptrw);
19854:     Close1', 'TMenuItem', iptrw);
19855:     Manual1', 'TMenuItem', iptrw);
19856:     About2', 'TMenuItem', iptrw);
19857:     loadLastfile1', 'TMenuItem', iptrw);
19858:     imglogo', 'TImage', iptrw);
19859:     cedebug', 'TPSScriptDebugger', iptrw);
19860:     debugPopupMenu1', 'TPopupMenu', iptrw);
19861:     BreakPointMenu', 'TMenuItem', iptrw);
19862:     Decompile1', 'TMenuItem', iptrw);
19863:     StepInto1', 'TMenuItem', iptrw);
19864:     StepOut1', 'TMenuItem', iptrw);
19865:     Reset1', 'TMenuItem', iptrw);
19866:     DebugRun1', 'TMenuItem', iptrw);
19867:     PSImport_ComObj1', 'TPSImport_ComObj', iptrw);
19868:     PSImport_StdCtrls1', 'TPSImport_StdCtrls', iptrw);
19869:     PSImport_Forms1', 'TPSImport_Forms', iptrw);
19870:     PSImport_DateUtils1', 'TPSImport_DateUtils', iptrw);
19871:     tutorial4', 'TMenuItem', iptrw);
19872:     ExporttoClipboard1', 'TMenuItem', iptrw);
19873:     ImportfromClipboard1', 'TMenuItem', iptrw);
19874:     N4', 'TMenuItem', iptrw);
19875:     N5', 'TMenuItem', iptrw);
19876:     N6', 'TMenuItem', iptrw);
19877:     ImportfromClipboard2', 'TMenuItem', iptrw);
19878:     tutorial1', 'TMenuItem', iptrw);
19879:     N7', 'TMenuItem', iptrw);
19880:     ShowSpecChars1', 'TMenuItem', iptrw);
19881:     OpenDirectory1', 'TMenuItem', iptrw);
19882:     procMess', 'TMenuItem', iptrw);
19883:     tbtnUseCase', 'TToolButton', iptrw);
19884:     ToolButton7', 'TToolButton', iptrw);
19885:     EditFont1', 'TMenuItem', iptrw);
19886:     UseCase1', 'TMenuItem', iptrw);
19887:     tutorial21', 'TMenuItem', iptrw);
19888:     OpenUseCase1', 'TMenuItem', iptrw);
19889:     PSImport_DB1', 'TPSImport_DB', iptrw);
19890:     tutorial31', 'TMenuItem', iptrw);
19891:     SynHTMLSyn1', 'TSynHTMLSyn', iptrw);
19892:     HTMLSyntax1', 'TMenuItem', iptrw);
19893:     ShowInterfaces1', 'TMenuItem', iptrw);
19894:     Tutorial5', 'TMenuItem', iptrw);
19895:     AllFunctionsList1', 'TMenuItem', iptrw);
19896:     ShowLastException1', 'TMenuItem', iptrw);
19897:     PlayMP31', 'TMenuItem', iptrw);
19898:     SynTeXSyn1', 'TSynTeXSyn', iptrw);
19899:     texSyntax1', 'TMenuItem', iptrw);
19900:     N8', 'TMenuItem', iptrw);
19901:     GetEMails1', 'TMenuItem', iptrw);
19902:     SynCppSyn1', 'TSynCppSyn', iptrw);
19903:     CSyntax1', 'TMenuItem', iptrw);
19904:     Tutorial6', 'TMenuItem', iptrw);
19905:     New1', 'TMenuItem', iptrw);
19906:     AllObjectsList1', 'TMenuItem', iptrw);
```

```
19907:     LoadBytecode1', 'TMenuItem', iptrw);
19908:     CipherFile1', 'TMenuItem', iptrw);
19909:     N9', 'TMenuItem', iptrw);
19910:     N10', 'TMenuItem', iptrw);
19911:     Tutorial11', 'TMenuItem', iptrw);
19912:     Tutorial71', 'TMenuItem', iptrw);
19913:     UpdateService1', 'TMenuItem', iptrw);
19914:     PascalSchool1', 'TMenuItem', iptrw);
19915:     Tutorial81', 'TMenuItem', iptrw);
19916:     DelphiSite1', 'TMenuItem', iptrw);
19917:     Output1', 'TMenuItem', iptrw);
19918:     TerminalStyle1', 'TMenuItem', iptrw);
19919:     ReadOnly1', 'TMenuItem', iptrw);
19920:     ShellStyle1', 'TMenuItem', iptrw);
19921:     BigScreen1', 'TMenuItem', iptrw);
19922:     Tutorial91', 'TMenuItem', iptrw);
19923:     SaveOutput2', 'TMenuItem', iptrw);
19924:     N11', 'TMenuItem', iptrw);
19925:     SaveScreenshot', 'TMenuItem', iptrw);
19926:     Tutorial101', 'TMenuItem', iptrw);
19927:     SQLSyntax1', 'TMenuItem', iptrw);
19928:     SynSQLSyn1', 'TSynSQLSyn', iptrw);
19929:     Console1', 'TMenuItem', iptrw);
19930:     SynXMLSyn1', 'TSynXMLSyn', iptrw);
19931:     XMLSyntax1', 'TMenuItem', iptrw);
19932:     ComponentCount1', 'TMenuItem', iptrw);
19933:     NewInstance1', 'TMenuItem', iptrw);
19934:     toolbtnTutorial', 'TToolButton', iptrw);
19935:     Memory1', 'TMenuItem', iptrw);
19936:     SynJavaSyn1', 'TSynJavaSyn', iptrw);
19937:     JavaSyntax1', 'TMenuItem', iptrw);
19938:     SyntaxCheck1', 'TMenuItem', iptrw);
19939:     Tutorial10Statistics1', 'TMenuItem', iptrw);
19940:     ScriptExplorer1', 'TMenuItem', iptrw);
19941:     FormOutput1', 'TMenuItem', iptrw);
19942:     ArduinoDump1', 'TMenuItem', iptrw);
19943:     AndroidDump1', 'TMenuItem', iptrw);
19944:     GotoEnd1', 'TMenuItem', iptrw);
19945:     AllResourceList1', 'TMenuItem', iptrw);
19946:     ToolButton4', 'TToolButton', iptrw);
19947:     tbtn6res', 'TToolButton', iptrw);
19948:     Tutorial11Forms1', 'TMenuItem', iptrw);
19949:     Tutorial12SQL1', 'TMenuItem', iptrw);
19950:     ResourceExplore1', 'TMenuItem', iptrw);
19951:     Info1', 'TMenuItem', iptrw);
19952:     N12', 'TMenuItem', iptrw);
19953:     CryptoBox1', 'TMenuItem', iptrw);
19954:     Tutorial13Ciphering1', 'TMenuItem', iptrw);
19955:     CipherFile2', 'TMenuItem', iptrw);
19956:     N13', 'TMenuItem', iptrw);
19957:     ModulesCount1', 'TMenuItem', iptrw);
19958:     AddOns2', 'TMenuItem', iptrw);
19959:     N4GewinntGame1', 'TMenuItem', iptrw);
19960:     DocuforAddOns1', 'TMenuItem', iptrw);
19961:     Tutorial14Async1', 'TMenuItem', iptrw);
19962:     Lessons15Review1', 'TMenuItem', iptrw);
19963:     SynPHPSyn1', 'TSynPHPSyn', iptrw);
19964:     PHPSyntax1', 'TMenuItem', iptrw);
19965:     Breakpoint1', 'TMenuItem', iptrw);
19966:     SerialRS2321', 'TMenuItem', iptrw);
19967:     N14', 'TMenuItem', iptrw);
19968:     SynCSSyn1', 'TSynCSSyn', iptrw);
19969:     CSyntax2', 'TMenuItem', iptrw);
19970:     Calculator1', 'TMenuItem', iptrw);
19971:     tbtnSerial', 'TToolButton', iptrw);
19972:     ToolButton8', 'TToolButton', iptrw);
19973:     Tutorial151', 'TMenuItem', iptrw);
19974:     N15', 'TMenuItem', iptrw);
19975:     N16', 'TMenuItem', iptrw);
19976:     ControlBar1', 'TControlBar', iptrw);
19977:     ToolBar2', 'TToolBar', iptrw);
19978:     BtnOpen', 'TToolButton', iptrw);
19979:     BtnSave', 'TToolButton', iptrw);
19980:     BtnPrint', 'TToolButton', iptrw);
19981:     BtnColors', 'TToolButton', iptrw);
19982:     btnClassReport', 'TToolButton', iptrw);
19983:     BtnRotateRight', 'TToolButton', iptrw);
19984:     BtnFullSize', 'TToolButton', iptrw);
19985:     BtnFitToWindowSize', 'TToolButton', iptrw);
19986:     BtnZoomMinus', 'TToolButton', iptrw);
19987:     BtnZoomPlus', 'TToolButton', iptrw);
19988:     Panel1', 'TPanel', iptrw);
19989:     LabelBrettgroesse', 'TLabel', iptrw);
19990:     CB1SCList', 'TComboBox', iptrw);
19991:     ImageListNormal', 'TImageList', iptrw);
19992:     spbtnexplore', 'TSpeedButton', iptrw);
19993:     spbtnexample', 'TSpeedButton', iptrw);
19994:     spbsaveas', 'TSpeedButton', iptrw);
19995:     imglogobox', 'TImage', iptrw);
```

```
19996:     EnlargeFont1', 'TMenuItem', iptrw);
19997:     EnlargeFont2', 'TMenuItem', iptrw);
19998:     ShrinkFont1', 'TMenuItem', iptrw);
19999:     ThreadDemo1', 'TMenuItem', iptrw);
20000:     HEXEditor1', 'TMenuItem', iptrw);
20001:     HEXView1', 'TMenuItem', iptrw);
20002:     HEXInspect1', 'TMenuItem', iptrw);
20003:     SynExporterHTML1', 'TSynExporterHTML', iptrw);
20004:     ExporttoHTML1', 'TMenuItem', iptrw);
20005:     ClassCount1', 'TMenuItem', iptrw);
20006:     HTMLOutput1', 'TMenuItem', iptrw);
20007:     HEXEditor2', 'TMenuItem', iptrw);
20008:     Minesweeper1', 'TMenuItem', iptrw);
20009:     N17', 'TMenuItem', iptrw);
20010:     PicturePuzzle1', 'TMenuItem', iptrw);
20011:     sbvclhelp', 'TSpeedButton', iptrw);
20012:     DependencyWalker1', 'TMenuItem', iptrw);
20013:     WebScanner1', 'TMenuItem', iptrw);
20014:     View1', 'TMenuItem', iptrw);
20015:     mnToolbar1', 'TMenuItem', iptrw);
20016:     mnStatusbar2', 'TMenuItem', iptrw);
20017:     mnConsole2', 'TMenuItem', iptrw);
20018:     mnCoolbar2', 'TMenuItem', iptrw);
20019:     mnSplitter2', 'TMenuItem', iptrw);
20020:     WebServer1', 'TMenuItem', iptrw);
20021:     Tutorial17Server1', 'TMenuItem', iptrw);
20022:     Tutorial18Arduino1', 'TMenuItem', iptrw);
20023:     SynPerlSyn1', 'TSynPerlSyn', iptrw);
20024:     PerlSyntax1', 'TMenuItem', iptrw);
20025:     SynPythonSyn1', 'TSynPythonSyn', iptrw);
20026:     PythonSyntax1', 'TMenuItem', iptrw);
20027:     DMathLibrary1', 'TMenuItem', iptrw);
20028:     IntfNavigator1', 'TMenuItem', iptrw);
20029:     EnlargeFontConsole1', 'TMenuItem', iptrw);
20030:     ShrinkFontConsole1', 'TMenuItem', iptrw);
20031:     SetInterfaceList1', 'TMenuItem', iptrw);
20032:     popintfList', 'TPopupMenu', iptrw);
20033:     intfAdd1', 'TMenuItem', iptrw);
20034:     intfDelete1', 'TMenuItem', iptrw);
20035:     intfRefactor1', 'TMenuItem', iptrw);
20036:     Defactor1', 'TMenuItem', iptrw);
20037:     Tutorial19COMArduino1', 'TMenuItem', iptrw);
20038:     Tutorial20Regex', 'TMenuItem', iptrw);
20039:     N18', 'TMenuItem', iptrw);
20040:     ManualE1', 'TMenuItem', iptrw);
20041:     FullTextFinder1', 'TMenuItem', iptrw);
20042:     Move1', 'TMenuItem', iptrw);
20043:     FractalDemo1', 'TMenuItem', iptrw);
20044:     Tutorial21Android1', 'TMenuItem', iptrw);
20045:     Tutorial0Function1', 'TMenuItem', iptrw);
20046:     SimuLogBox1', 'TMenuItem', iptrw);
20047:     OpenExamples1', 'TMenuItem', iptrw);
20048:     SynJScriptSyn1', 'TSynJScriptSyn', iptrw);
20049:     JavaScriptSyntax1', 'TMenuItem', iptrw);
20050:     Halt1', 'TMenuItem', iptrw);
20051:     CodeSearch1', 'TMenuItem', iptrw);
20052:     SynRubySyn1', 'TSynRubySyn', iptrw);
20053:     RubySyntax1', 'TMenuItem', iptrw);
20054:     Undo1', 'TMenuItem', iptrw);
20055:     SynUNIXShellScriptSyn1', 'TSynUNIXShellScriptSyn', iptrw);
20056:     LinuxShellScript1', 'TMenuItem', iptrw);
20057:     Rename1', 'TMenuItem', iptrw);
20058:     spdcodesearch', 'TSpeedButton', iptrw);
20059:     Preview1', 'TMenuItem', iptrw);
20060:     Tutorial22Services1', 'TMenuItem', iptrw);
20061:     Tutorial23RealTime1', 'TMenuItem', iptrw);
20062:     Configuration1', 'TMenuItem', iptrw);
20063:     MP3Player1', 'TMenuItem', iptrw);
20064:     DLLSpy1', 'TMenuItem', iptrw);
20065:     SynURIOpener1', 'TSynURIOpener', iptrw);
20066:     SynURISyn1', 'TSynURISyn', iptrw);
20067:     URILinksClicks1', 'TMenuItem', iptrw);
20068:     EditReplace1', 'TMenuItem', iptrw);
20069:     GotoLine1', 'TMenuItem', iptrw);
20070:     ActiveLineColor1', 'TMenuItem', iptrw);
20071:     ConfigFile1', 'TMenuItem', iptrw);
20072:     Sort1Intflist', 'TMenuItem', iptrw);
20073:     Redo1', 'TMenuItem', iptrw);
20074:     Tutorial24CleanCode1', 'TMenuItem', iptrw);
20075:     Tutorial25Configuration1', 'TMenuItem', iptrw);
20076:     IndentSelection1', 'TMenuItem', iptrw);
20077:     UnindentSection1', 'TMenuItem', iptrw);
20078:     SkyStyle1', 'TMenuItem', iptrw);
20079:     N19', 'TMenuItem', iptrw);
20080:     CountWords1', 'TMenuItem', iptrw);
20081:     imbookmarkimages', 'TImageList', iptrw);
20082:     Bookmark11', 'TMenuItem', iptrw);
20083:     N20', 'TMenuItem', iptrw);
20084:     Bookmark21', 'TMenuItem', iptrw);
```

```
20085:     Bookmark31', 'TMenuItem', iptrw);
20086:     Bookmark41', 'TMenuItem', iptrw);
20087:     SynMultiSyn1', 'TSynMultiSyn', iptrw);
20088:
20089:     Procedure IFPS3ClassesPlugin1CompImport( Sender : TObject; x : TPSPascalCompiler)
20090:     Procedure IFPS3ClassesPlugin1ExecImport(Sender: TObject; Exec: TPSExec; x:TPSRuntimeClassImporter);
20091:     Procedure PSScriptCompile( Sender : TPSScript)
20092:     Procedure Compile1Click( Sender : TObject)
20093:     Procedure PSScriptExecute( Sender : TPSScript)
20094:     Procedure open1Click( Sender : TObject)
20095:     Procedure Save2Click( Sender : TObject)
20096:     Procedure Savebefore1Click( Sender : TObject)
20097:     Procedure Largefont1Click( Sender : TObject)
20098:     Procedure FormActivate( Sender : TObject)
20099:     Procedure SBytecode1Click( Sender : TObject)
20100:     Procedure FormKeyPress( Sender : TObject; var Key : Char)
20101:     Procedure Saveas3Click( Sender : TObject)
20102:     Procedure Clear1Click( Sender : TObject)
20103:     Procedure Slinenumbers1Click( Sender : TObject)
20104:     Procedure About1Click( Sender : TObject)
20105:     Procedure Search1Click( Sender : TObject)
20106:     Procedure FormCreate( Sender : TObject)
20107:     Procedure Memo1ReplaceText(Sender:TObject;const ASearch,AReplace:String;Line,Column:Integer;
20108:                                                 var Action : TSynReplaceAction)
20109:     Procedure Memo1StatusChange( Sender : TObject; Changes : TSynStatusChanges)
20110:     Procedure WordWrap1Click( Sender : TObject)
20111:     Procedure SearchNext1Click( Sender : TObject)
20112:     Procedure Replace1Click( Sender : TObject)
20113:     Function PSScriptNeedFile(Sender:TObject;const OrginFileName:String;var FName,Output:String):Bool;
20114:     Procedure ShowInclude1Click( Sender : TObject)
20115:     Procedure Printout1Click( Sender : TObject)
20116:     Procedure mnuPrintFont1Click( Sender : TObject)
20117:     Procedure Include1Click( Sender : TObject)
20118:     Procedure FormDestroy( Sender : TObject)
20119:     Procedure FormClose( Sender : TObject; var Action : TCloseAction)
20120:     Procedure UpdateView1Click( Sender : TObject)
20121:     Procedure CodeCompletionList1Click( Sender : TObject)
20122:     Procedure SaveOutput1Click( Sender : TObject)
20123:     Procedure ExportClipboard1Click( Sender : TObject)
20124:     Procedure Close1Click( Sender : TObject)
20125:     Procedure Manual1Click( Sender : TObject)
20126:     Procedure LoadLastFile1Click( Sender : TObject)
20127:     Procedure Memo1Change( Sender : TObject)
20128:     Procedure Decompile1Click( Sender : TObject)
20129:     Procedure StepInto1Click( Sender : TObject)
20130:     Procedure StepOut1Click( Sender : TObject)
20131:     Procedure Reset1Click( Sender : TObject)
20132:     Procedure cedebugAfterExecute( Sender : TPSScript)
20133:     Procedure cedebugBreakpoint(Sender:TObject; const FileName:String; Position,Row, Col: Cardinal)
20134:     Procedure cedebugCompile( Sender : TPSScript)
20135:     Procedure cedebugExecute( Sender : TPSScript)
20136:     Procedure cedebugIdle( Sender : TObject)
20137:     Procedure cedebugLineInfo( Sender:TObject;const FileName:String; Position, Row, Col : Cardinal)
20138:     Procedure Memo1SpecialLineColors(Sender: TObject; Line:Int; var Special:Boolean;var FG,BG:TColor);
20139:     Procedure BreakPointMenuClick( Sender : TObject)
20140:     Procedure DebugRun1Click( Sender : TObject)
20141:     Procedure tutorial4Click( Sender : TObject)
20142:     Procedure ImportfromClipboard1Click( Sender : TObject)
20143:     Procedure ImportfromClipboard2Click( Sender : TObject)
20144:     Procedure tutorial1Click( Sender : TObject)
20145:     Procedure ShowSpecChars1Click( Sender : TObject)
20146:     Procedure StatusBar1DblClick( Sender : TObject)
20147:     Procedure PSScriptLine( Sender : TObject)
20148:     Procedure OpenDirectory1Click( Sender : TObject)
20149:     Procedure procMessClick( Sender : TObject)
20150:     Procedure tbtnUseCaseClick( Sender : TObject)
20151:     Procedure EditFont1Click( Sender : TObject)
20152:     Procedure tutorial21Click( Sender : TObject)
20153:     Procedure tutorial31Click( Sender : TObject)
20154:     Procedure HTMLSyntax1Click( Sender : TObject)
20155:     Procedure ShowInterfaces1Click( Sender : TObject)
20156:     Procedure Tutorial5Click( Sender : TObject)
20157:     Procedure ShowLastException1Click( Sender : TObject)
20158:     Procedure PlayMP31Click( Sender : TObject)
20159:     Procedure AllFunctionsList1Click( Sender : TObject)
20160:     Procedure texSyntax1Click( Sender : TObject)
20161:     Procedure GetEMails1Click( Sender : TObject)
20162:     procedure DelphiSite1Click(Sender: TObject);
20163:     procedure TerminalStyle1Click(Sender: TObject);
20164:     procedure ReadOnly1Click(Sender: TObject); -->maxform1.memo2.readonly:= false;
20165:     procedure ShellStyle1Click(Sender: TObject);
20166:     procedure Console1Click(Sender: TObject);     //3.2
20167:     procedure BigScreen1Click(Sender: TObject);
20168:     procedure Tutorial91Click(Sender: TObject);
20169:     procedure SaveScreenshotClick(Sender: TObject);
20170:     procedure Tutorial101Click(Sender: TObject);
20171:     procedure SQLSyntax1Click(Sender: TObject);
20172:     procedure XMLSyntax1Click(Sender: TObject);
20173:     procedure ComponentCount1Click(Sender: TObject);
```

```
20174:     procedure NewInstance1Click(Sender: TObject);
20175:     procedure CSyntax1Click(Sender: TObject);
20176:     procedure Tutorial6Click(Sender: TObject);
20177:     procedure New1Click(Sender: TObject);
20178:     procedure AllObjectsList1Click(Sender: TObject);
20179:     procedure LoadBytecode1Click(Sender: TObject);
20180:     procedure CipherFile1Click(Sender: TObject);  //V3.5
20181:     procedure NewInstance1Click(Sender: TObject);
20182:     procedure toolbtnTutorialClick(Sender: TObject);
20183:     procedure Memory1Click(Sender: TObject);
20184:     procedure JavaSyntax1Click(Sender: TObject);
20185:     procedure SyntaxCheck1Click(Sender: TObject);
20186:     procedure ScriptExplorer1Click(Sender: TObject);
20187:     procedure FormOutput1Click(Sender: TObject);  //V3.6
20188:     procedure GotoEnd1Click(Sender: TObject);
20189:     procedure AllResourceList1Click(Sender: TObject);
20190:     procedure tbtn6resClick(Sender: TObject);   //V3.7
20191:     procedure Info1Click(Sender: TObject);
20192:     procedure Tutorial10Statistics1Click(Sender: TObject);
20193:     procedure Tutorial11Forms1Click(Sender: TObject);
20194:     procedure Tutorial12SQL1Click(Sender: TObject);  //V3.8
20195:     procedure ResourceExplore1Click(Sender: TObject);
20196:     procedure Info1Click(Sender: TObject);
20197:     procedure CryptoBox1Click(Sender: TObject);
20198:     procedure ModulesCount1Click(Sender: TObject);
20199:     procedure N4GewinntGame1Click(Sender: TObject);
20200:     procedure PHPSyntax1Click(Sender: TObject);
20201:     procedure SerialRS2321Click(Sender: TObject);
20202:     procedure CSyntax2Click(Sender: TObject);
20203:     procedure Calculator1Click(Sender: TObject);
20204:     procedure Tutorial13Ciphering1Click(Sender: TObject);
20205:     procedure Tutorial14Async1Click(Sender: TObject);
20206:     procedure PHPSyntax1Click(Sender: TObject);
20207:     procedure BtnZoomPlusClick(Sender: TObject);
20208:     procedure BtnZoomMinusClick(Sender: TObject);
20209:     procedure btnClassReportClick(Sender: TObject);
20210:     procedure ThreadDemo1Click(Sender: TObject);
20211:     procedure HEXView1Click(Sender: TObject);
20212:     procedure ExporttoHTML1Click(Sender: TObject);
20213:     procedure Minesweeper1Click(Sender: TObject);
20214:     procedure PicturePuzzle1Click(Sender: TObject); //V3.9
20215:     procedure sbvclhelpClick(Sender: TObject);
20216:     procedure DependencyWalker1Click(Sender: TObject);
20217:     procedure CB1SCListDrawItem(Control:TWinControl;Index:Int;aRect:TRect;State:TOwnerDrawState);
20218:     procedure WebScanner1Click(Sender: TObject);
20219:     procedure mnToolbar1Click(Sender: TObject);
20220:     procedure mnStatusbar2Click(Sender: TObject);
20221:     procedure mnConsole2Click(Sender: TObject);
20222:     procedure mnCoolbar2Click(Sender: TObject);
20223:     procedure mnSplitter2Click(Sender: TObject);
20224:     procedure WebServer1Click(Sender: TObject);
20225:     procedure PerlSyntax1Click(Sender: TObject);
20226:     procedure PythonSyntax1Click(Sender: TObject);
20227:     procedure DMathLibrary1Click(Sender: TObject);
20228:     procedure IntfNavigator1Click(Sender: TObject);
20229:     procedure FullTextFinder1Click(Sender: TObject);
20230:     function AppName: string;
20231:     function ScriptName: string;
20232:     function LastName: string;
20233:     procedure FractalDemo1Click(Sender: TObject);
20234:     procedure SimuLogBox1Click(Sender: TObject);
20235:     procedure OpenExamples1Click(Sender: TObject);
20236:     procedure Halt1Click(Sender: TObject);
20237:     procedure Stop;
20238:     procedure CodeSearch1Click(Sender: TObject);
20239:     procedure RubySyntax1Click(Sender: TObject);
20240:     procedure Undo1Click(Sender: TObject);
20241:     procedure LinuxShellScript1Click(Sender: TObject);
20242:     procedure WebScannerDirect(urls: string);
20243:     procedure WebScanner(urls: string);
20244:     procedure LoadInterfaceList2;
20245:     procedure DLLSpy1Click(Sender: TObject);
20246:     procedure Memo1DblClick(Sender: TObject);
20247:     procedure URILinksClicks1Click(Sender: TObject);
20248:     procedure GotoLine1Click(Sender: TObject);
20249:     procedure ConfigFile1Click(Sender: TObject);
20250:     Procedure Sort1IntflistClick( Sender : TObject)
20251:     Procedure Redo1Click( Sender : TObject)
20252:     Procedure Tutorial24CleanCode1Click( Sender : TObject)
20253:     Procedure IndentSelection1Click( Sender : TObject)
20254:     Procedure UnindentSection1Click( Sender : TObject)
20255:     Procedure SkyStyle1Click( Sender : TObject)
20256:     Procedure CountWords1Click( Sender : TObject)
20257:     Procedure Memo1PlaceBookmark( Sender : TObject; var Mark : TSynEditMark)
20258:     Procedure Memo1GutterClick(Sender:TObject;Button:TMouseButton;X,Y,Line:Integer;Mark:TSynEditMark);
20259:     Procedure Bookmark11Click( Sender : TObject)
20260:     Procedure Bookmark21Click( Sender : TObject)
20261:     Procedure Bookmark31Click( Sender : TObject)
20262:     Procedure Bookmark41Click( Sender : TObject)
```

```
20263:     Procedure SynMultiSyn1CustomRange(Sender:TSynMultiSyn;Operat:TRangeOperation;var Range:Pointer);
20264:     'STATMemoryReport', 'boolean', iptrw);
20265:     'IPPort', 'integer', iptrw);
20266:     'COMPort', 'integer', iptrw);
20267:     'lbintflist', 'TListBox', iptrw);
20268:     Function GetStatChange : boolean
20269:     Procedure SetStatChange( vstat : boolean)
20270:     Function GetActFileName : string
20271:     Procedure SetActFileName( vname : string)
20272:     Function GetLastFileName : string
20273:     Procedure SetLastFileName( vname : string)
20274:     Procedure WebScannerDirect( urls : string)
20275:     Procedure LoadInterfaceList2
20276:     Function GetStatExecuteShell : boolean
20277:     Procedure DoEditorExecuteCommand( EditorCommand : word)
20278:     function GetActiveLineColor: TColor
20279:     procedure SetActiveLineColor(acolor: TColor)
20280:     procedure ScriptListbox1Click(Sender: TObject);
20281:     procedure Memo2KeyPress(Sender: TObject; var Key: Char);
20282:     procedure EnlargeGutter1Click(Sender: TObject);
20283:     procedure Tetris1Click(Sender: TObject);
20284:     procedure ToDoList1Click(Sender: TObject);
20285:     procedure ProcessList1Click(Sender: TObject);
20286:     procedure MetricReport1Click(Sender: TObject);
20287:     procedure ProcessList1Click(Sender: TObject);
20288:     procedure TCPSockets1Click(Sender: TObject);
20289:     procedure ConfigUpdate1Click(Sender: TObject);
20290:     procedure ADOWorkbench1Click(Sender: TObject);
20291:     procedure SocketServer1Click(Sender: TObject);
20292:     procedure FormDemo1Click(Sender: TObject);
20293:     procedure Richedit1Click(Sender: TObject);
20294:     procedure SimpleBrowser1Click(Sender: TObject);
20295:     procedure DOSShell1Click(Sender: TObject);
20296:     procedure SynExport1Click(Sender: TObject);
20297:     procedure ExporttoRTF1Click(Sender: TObject);
20298:     procedure FormCloseQuery(Sender: TObject; var CanClose: Boolean);
20299:     procedure SOAPTester1Click(Sender: TObject);
20300:     procedure Sniffer1Click(Sender: TObject);
20301:     procedure AutoDetectSyntax1Click(Sender: TObject);
20302:     procedure FPlot1Click(Sender: TObject);
20303:     procedure PasStyle1Click(Sender: TObject);
20304:     procedure Tutorial183RGBLED1Click(Sender: TObject);
20305:     procedure Reversi1Click(Sender: TObject);
20306:     procedure ManualmaXbox1Click(Sender: TObject);
20307:     procedure BlaisePascalMagazine1Click(Sender: TObject);
20308:     procedure AddToDo1Click(Sender: TObject);
20309:     procedure CreateGUID1Click(Sender: TObject);
20310:     procedure Tutorial27XML1Click(Sender: TObject);
20311:     procedure CreateDLLStub1Click(Sender: TObject);
20312:     procedure Tutorial28DLL1Click(Sender: TObject);');
20313:     procedure ResetKeyPressed;');
20314:     procedure KeyPressedFalse;
20315:     procedure FileChanges1Click(Sender: TObject);');
20316:     procedure OpenGLTry1Click(Sender: TObject);');
20317:     procedure AllUnitList1Click(Sender: TObject);');
20318:     procedure Tutorial29UMLClick(Sender: TObject);
20319:     procedure CreateHeader1Click(Sender: TObject);
20320:     procedure Oscilloscope1Click(Sender: TObject);');
20321:     procedure Tutorial30WOT1Click(Sender: TObject);');
20322:     procedure GetWebScript1Click(Sender: TObject);');
20323:     procedure Checkers1Click(Sender: TObject);');
20324:     procedure TaskMgr1Click(Sender: TObject);');
20325:     procedure WebCam1Click(Sender: TObject);');
20326:
20327:
20328: //-------------------------------------------------------------------------
20329: //**************mX4 Editor SynEdit Tools API ***********************************
20330: //-------------------------------------------------------------------------
20331: procedure SIRegister_TCustomSynEdit(CL: TPSPascalCompiler);
20332: begin
20333:   //with RegClassS(CL,'TCustomControl', 'TCustomSynEdit') do
20334:   with FindClass('TCustomControl'),'TCustomSynEdit') do begin
20335:     Constructor Create( AOwner : TComponent)
20336:     SelStart', 'Integer', iptrw);
20337:     SelEnd', 'Integer', iptrw); AlwaysShowCaret', 'Boolean', iptrw);
20338:     Procedure UpdateCaret
20339:     Procedure AddKey(Command: TSynEditorCommand;Key1:word;SS1:TShiftState; Key2:word;SS2:TShiftState);
20340:     Procedure AddKey(Command: TSynEditorCommand;Key1:word;SS1:TShiftState; Key2: word;SS2:TShiftState);
20341:     Procedure BeginUndoBlock
20342:     Procedure BeginUpdate
20343:     Function CaretInView : Boolean
20344:     Function CharIndexToRowCol( Index : integer) : TBufferCoord
20345:     Procedure Clear
20346:     Procedure ClearAll
20347:     Procedure ClearBookMark( BookMark : Integer)
20348:     Procedure ClearSelection
20349:     Procedure CommandProcessor( Command : TSynEditorCommand; AChar : char; Data : pointer)
20350:     Procedure ClearUndo
20351:     Procedure CopyToClipboard
```

```
20352:     Procedure CutToClipboard
20353:     Procedure DoCopyToClipboard( const SText : string)
20354:     Procedure EndUndoBlock
20355:     Procedure EndUpdate
20356:     Procedure EnsureCursorPosVisible
20357:     Procedure EnsureCursorPosVisibleEx( ForceToMiddle : Boolean)
20358:     Procedure FindMatchingBracket
20359:     Function GetMatchingBracket : TBufferCoord
20360:     Function GetMatchingBracketEx( const APoint : TBufferCoord) : TBufferCoord
20361:     Procedure ExecuteCommand( Command : TSynEditorCommand; AChar : char; Data : pointer)
20362:     Function GetBookMark( BookMark : integer; var X, Y : integer) : boolean
20363:     Function GetHighlighterAttriAtRowCol( const XY: TBufferCoord; var Token : string; var Attri
20364:               : TSynHighlighterAttributes) : boolean
20365:     Function GetHighlighterAttriAtRowColEx( const XY : TBufferCoord; var Token : string;
20366:               var TokenType, Start : Integer; var Attri:TSynHighlighterAttributes):boolean
20367:     Function GetPositionOfMouse( out aPos : TBufferCoord) : Boolean
20368:     Function GetWordAtRowCol( const XY : TBufferCoord) : string
20369:     Procedure GotoBookMark( BookMark : Integer)
20370:     Procedure GotoLineAndCenter( ALine : Integer)
20371:     Function IdentChars : TSynIdentChars
20372:     Procedure InvalidateGutter
20373:     Procedure InvalidateGutterLine( aLine : integer)
20374:     Procedure InvalidateGutterLines( FirstLine, LastLine : integer)
20375:     Procedure InvalidateLine( Line : integer)
20376:     Procedure InvalidateLines( FirstLine, LastLine : integer)
20377:     Procedure InvalidateSelection
20378:     Function IsBookmark( BookMark : integer) : boolean
20379:     Function IsPointInSelection( const Value : TBufferCoord) : boolean
20380:     Procedure LockUndo
20381:     Function BufferToDisplayPos( const p : TBufferCoord) : TDisplayCoord
20382:     Function DisplayToBufferPos( const p : TDisplayCoord) : TBufferCoord
20383:     Function LineToRow( aLine : integer) : integer
20384:     Function RowToLine( aRow : integer) : integer
20385:     Function NextWordPos : TBufferCoord
20386:     Function NextWordPosEx( const XY : TBufferCoord) : TBufferCoord
20387:     Procedure PasteFromClipboard
20388:     Function WordStart : TBufferCoord
20389:     Function WordStartEx( const XY : TBufferCoord) : TBufferCoord
20390:     Function WordEnd : TBufferCoord
20391:     Function WordEndEx( const XY : TBufferCoord) : TBufferCoord
20392:     Function PrevWordPos : TBufferCoord
20393:     Function PrevWordPosEx( const XY : TBufferCoord) : TBufferCoord
20394:     Function PixelsToRowColumn( aX, aY : integer) : TDisplayCoord
20395:     Function PixelsToNearestRowColumn( aX, aY : integer) : TDisplayCoord
20396:     Procedure Redo
20397:     Procedure RegisterCommandHandler(const AHandlerProc:THookedCommandEvent;AHandlerData:pointer);
20398:     Function RowColumnToPixels( const RowCol : TDisplayCoord) : TPoint
20399:     Function RowColToCharIndex( RowCol : TBufferCoord) : integer
20400:     Function SearchReplace( const ASearch, AReplace:string; AOptions:TSynSearchOptions): integer
20401:     Procedure SelectAll
20402:     Procedure SetBookMark( BookMark : Integer; X : Integer; Y : Integer)
20403:     Procedure SetCaretAndSelection( const ptCaret, ptBefore, ptAfter : TBufferCoord)
20404:     Procedure SetDefaultKeystrokes
20405:     Procedure SetSelWord
20406:     Procedure SetWordBlock( Value : TBufferCoord)
20407:     Procedure Undo
20408:     Procedure UnlockUndo
20409:     Procedure UnregisterCommandHandler( AHandlerProc : THookedCommandEvent)
20410:     Procedure AddKeyUpHandler( aHandler : TKeyEvent)
20411:     Procedure RemoveKeyUpHandler( aHandler : TKeyEvent)
20412:     Procedure AddKeyDownHandler( aHandler : TKeyEvent)
20413:     Procedure RemoveKeyDownHandler( aHandler : TKeyEvent)
20414:     Procedure AddKeyPressHandler( aHandler : TKeyPressEvent)
20415:     Procedure RemoveKeyPressHandler( aHandler : TKeyPressEvent)
20416:     Procedure AddFocusControl( aControl : TWinControl)
20417:     Procedure RemoveFocusControl( aControl : TWinControl)
20418:     Procedure AddMouseDownHandler( aHandler : TMouseEvent)
20419:     Procedure RemoveMouseDownHandler( aHandler : TMouseEvent)
20420:     Procedure AddMouseUpHandler( aHandler : TMouseEvent)
20421:     Procedure RemoveMouseUpHandler( aHandler : TMouseEvent)
20422:     Procedure AddMouseCursorHandler( aHandler : TMouseCursorEvent)
20423:     Procedure RemoveMouseCursorHandler( aHandler : TMouseCursorEvent)
20424:     Procedure SetLinesPointer( ASynEdit : TCustomSynEdit)
20425:     Procedure RemoveLinesPointer
20426:     Procedure HookTextBuffer( aBuffer : TSynEditStringList; aUndo, aRedo : TSynEditUndoList)
20427:     Procedure UnHookTextBuffer
20428:     BlockBegin', 'TBufferCoord', iptrw);
20429:     BlockEnd', 'TBufferCoord', iptrw);
20430:     CanPaste', 'Boolean', iptr);
20431:     CanRedo', 'boolean', iptr);
20432:     CanUndo', 'boolean', iptr);
20433:     CaretX', 'Integer', iptrw);
20434:     CaretY', 'Integer', iptrw);
20435:     CaretXY', 'TBufferCoord', iptrw);
20436:     ActiveLineColor', 'TColor', iptrw);
20437:     DisplayX', 'Integer', iptr);
20438:     DisplayY', 'Integer', iptr);
20439:     DisplayXY', 'TDisplayCoord', iptr);
20440:     DisplayLineCount', 'integer', iptr);
```

```
20441:     CharsInWindow', 'Integer', iptr);
20442:     CharWidth', 'integer', iptr);
20443:     Font', 'TFont', iptrw);
20444:     GutterWidth', 'Integer', iptr);
20445:     Highlighter', 'TSynCustomHighlighter', iptrw);
20446:     LeftChar', 'Integer', iptrw);
20447:     LineHeight', 'integer', iptr);
20448:     LinesInWindow', 'Integer', iptr);
20449:     LineText', 'string', iptrw);
20450:     Lines', 'TStrings', iptrw);
20451:     Marks', 'TSynEditMarkList', iptr);
20452:     MaxScrollWidth', 'integer', iptrw);
20453:     Modified', 'Boolean', iptrw);
20454:     PaintLock', 'Integer', iptr);
20455:     ReadOnly', 'Boolean', iptrw);
20456:     SearchEngine', 'TSynEditSearchCustom', iptrw);
20457:     SelAvail', 'Boolean', iptr); SelLength', 'integer', iptrw);
20458:     SelTabBlock', 'Boolean', iptr);
20459:     SelTabLine', 'Boolean', iptr);
20460:     SelText', 'string', iptrw);
20461:     StateFlags', 'TSynStateFlags', iptr);
20462:     Text', 'string', iptrw);
20463:     TopLine', 'Integer', iptrw);
20464:     WordAtCursor', 'string', iptr);
20465:     WordAtMouse', 'string', iptr);
20466:     UndoList', 'TSynEditUndoList', iptr);
20467:     RedoList', 'TSynEditUndoList', iptr);
20468:     OnProcessCommand', 'TProcessCommandEvent', iptrw);
20469:     BookMarkOptions', 'TSynBookMarkOpt', iptrw);
20470:     BorderStyle', 'TSynBorderStyle', iptrw);
20471:     ExtraLineSpacing', 'integer', iptrw);
20472:     Gutter', 'TSynGutter', iptrw);
20473:     HideSelection', 'boolean', iptrw);
20474:     InsertCaret', 'TSynEditCaretType', iptrw);
20475:     InsertMode', 'boolean', iptrw);
20476:     IsScrolling', 'Boolean', iptr);
20477:     Keystrokes', 'TSynEditKeyStrokes', iptrw);
20478:     MaxUndo', 'Integer', iptrw);
20479:     Options', 'TSynEditorOptions', iptrw);
20480:     OverwriteCaret', 'TSynEditCaretType', iptrw);
20481:     RightEdge', 'Integer', iptrw); RightEdgeColor', 'TColor', iptrw);
20482:     ScrollHintColor', 'TColor', iptrw);
20483:     ScrollHintFormat', 'TScrollHintFormat', iptrw);
20484:     ScrollBars', 'TScrollStyle', iptrw);
20485:     SelectedColor', 'TSynSelectedColor', iptrw);
20486:     SelectionMode', 'TSynSelectionMode', iptrw);
20487:     ActiveSelectionMode', 'TSynSelectionMode', iptrw);
20488:     TabWidth', 'integer', iptrw);  WantReturns', 'boolean', iptrw);
20489:     WantTabs', 'boolean', iptrw);  WordWrap', 'boolean', iptrw);
20490:     WordWrapGlyph', 'TSynGlyph', iptrw);
20491:     OnChange', 'TNotifyEvent', iptrw);
20492:     OnClearBookmark', 'TPlaceMarkEvent', iptrw);
20493:     OnCommandProcessed', 'TProcessCommandEvent', iptrw);
20494:     OnContextHelp', 'TContextHelpEvent', iptrw);
20495:     OnDropFiles', 'TDropFilesEvent', iptrw);
20496:     OnGutterClick', 'TGutterClickEvent', iptrw);
20497:     OnGutterGetText', 'TGutterGetTextEvent', iptrw);
20498:     OnGutterPaint', 'TGutterPaintEvent', iptrw);
20499:     OnMouseCursor', 'TMouseCursorEvent', iptrw);
20500:     OnPaint', 'TPaintEvent', iptrw);
20501:     OnPlaceBookmark', 'TPlaceMarkEvent', iptrw);
20502:     OnProcessUserCommand', 'TProcessCommandEvent', iptrw);
20503:     OnReplaceText', 'TReplaceTextEvent', iptrw);
20504:     OnSpecialLineColors', 'TSpecialLineColorsEvent', iptrw);
20505:     OnStatusChange', 'TStatusChangeEvent', iptrw);
20506:     OnPaintTransient', 'TPaintTransient', iptrw);
20507:     OnScroll', 'TScrollEvent', iptrw);
20508:    end;
20509:  Procedure RegisterPlaceableHighlighter(highlighter : TSynCustomHighlighterClass)
20510:  Function GetPlaceableHighlighters : TSynHighlighterList
20511:  Function EditorCommandToDescrString( Cmd : TSynEditorCommand) : string
20512:  Function EditorCommandToCodeString( Cmd : TSynEditorCommand) : string
20513:  Procedure GetEditorCommandValues( Proc : TGetStrProc)
20514:  Procedure GetEditorCommandExtended( Proc : TGetStrProc)
20515:  Function IdentToEditorCommand( const Ident : string; var Cmd : longint) : boolean
20516:  Function EditorCommandToIdent( Cmd : longint; var Ident : string) : boolean
20517:  Function ConvertCodeStringToExtended( AString : String) : String
20518:  Function ConvertExtendedToCodeString( AString : String) : String
20519:  Function ConvertExtendedToCommand( AString : String) : TSynEditorCommand
20520:  Function ConvertCodeStringToCommand( AString : String) : TSynEditorCommand
20521:  Function IndexToEditorCommand( const AIndex : Integer) : Integer
20522:
20523:   TSynEditorOption = (
20524:     eoAltSetsColumnMode,       //Holding down the Alt Key will put the selection mode into columnar format
20525:     eoAutoIndent,              //Will indent caret on newlines with same amount of leading whitespace as
20526:                                // preceding line
20527:     eoAutoSizeMaxScrollWidth,  //Automatically resizes the MaxScrollWidth property when inserting text
20528:     eoDisableScrollArrows,     //Disables the scroll bar arrow buttons when you can't scroll in that
20529:                                //direction any more
```

```
20530:     eoDragDropEditing,         //Allows to select a block of text and drag it within document to another
20531:                                // location
20532:     eoDropFiles,               //Allows the editor accept OLE file drops
20533:     eoEnhanceHomeKey,          //enhances home key positioning, similar to visual studio
20534:     eoEnhanceEndKey,           //enhances End key positioning, similar to JDeveloper
20535:     eoGroupUndo,               //When undoing/redoing actions, handle all continous changes the same kind
20536:                                // in one call
20537:                                //instead undoing/redoing each command separately
20538:     eoHalfPageScroll,          //When scrolling with page-up and page-down commands, only scroll a half
20539:                                //page at a time
20540:     eoHideShowScrollbars,      //if enabled, then scrollbars will only show if necessary.
20541:     If you have ScrollPastEOL, then it the horizontal bar will always be there (it uses MaxLength instead)
20542:     eoKeepCaretX,              //When moving through lines w/o cursor Past EOL, keeps X position of cursor
20543:     eoNoCaret,                 //Makes it so the caret is never visible
20544:     eoNoSelection,             //Disables selecting text
20545:     eoRightMouseMovesCursor,   //When clicking with right mouse for popup menu, moves cursor to location
20546:     eoScrollByOneLess,         //Forces scrolling to be one less
20547:     eoScrollHintFollows,       //The scroll hint follows the mouse when scrolling vertically
20548:     eoScrollPastEof,           //Allows the cursor to go past the end of file marker
20549:     eoScrollPastEol,           //Allows cursor to go past last character into white space at end of a line
20550:     eoShowScrollHint,          //Shows a hint of the visible line numbers when scrolling vertically
20551:     eoShowSpecialChars,        //Shows the special Characters
20552:     eoSmartTabDelete,          //similar to Smart Tabs, but when you delete characters
20553:     eoSmartTabs,               //When tabbing, cursor will go to non-white space character of previous line
20554:     eoSpecialLineDefaultFg,    //disables the foreground text color override using OnSpecialLineColor event
20555:     eoTabIndent,               //If active <Tab>and<Shift><Tab> act block indent,unindent when text select
20556:     eoTabsToSpaces,            //Converts a tab character to a specified number of space characters
20557:     eoTrimTrailingSpaces       //Spaces at the end of lines will be trimmed and not saved
20558:
20559:     *********************************Important Editor Short Cuts*****************************);
20560:     Double click to select a word and count words with highlightning.
20561:     Triple click to select a line.
20562:     CTRL+SHIFT+click to extend a selection.
20563:     Drag with the ALT key down to select columns of text !!!
20564:     Drag and drop is supported.
20565:     Type CTRL+Z to undo and SHIFT+CTRL+Z to redo.
20566:     Type CTRL+A to select all.
20567:     Type CTRL+N to set a new line.
20568:     Type CTRL+T to delete a line or token. //Tokenizer
20569:     Type CTRL+C to copy to clipboard. Type CTRL+V to paste from clipboard.
20570:     Type CTRL+Shift+T to add ToDo in line and list.
20571:     Type CTRL+Shift+[0..9] to set bookmarks.   //Bookmark
20572:     Type CTRL[0..9] to jump or get to bookmarks.
20573:     Type Home to position cursor at beginning of current line and End to position it at end of line.
20574:     Type CTRL+Home to position cursor at start of doc and CTRL+End to position it at end of document.
20575:     Page Up and Page Down work as expected.
20576:     CTRL+Page Up sends cursor to top of viewed portion and CTRL+Page Down sends it to bottom.
20577:     using http://pp4s.co.uk/main/tu-form2-help-demo-laz.html
20578:
20579: {$ Short Key Positions Ctrl<A-Z>: }
20580: def
20581:    <A> Select All
20582:    <B> Count Words
20583:    <C> Copy
20584:    <D> Internet Start
20585:    <E> Script List
20586:    <F> Find
20587:    <G> Goto
20588:    <H> Mark Line
20589:    <I> Interface List
20590:    <J> Code Completion
20591:    <K> Console
20592:    <L> Interface List Box
20593:    <M> Font Larger -
20594:    <N> New Line
20595:    <O> Open File
20596:    <P> Font Smaller +
20597:    <Q> Quit
20598:    <R> Replace
20599:    <S> Save!
20600:    <T> Delete Line
20601:    <U> Use Case Editor
20602:    <V> Paste
20603:    <W> URI Links
20604:    <X> Reserved for coding use internal
20605:    <Y> Delete Line
20606:    <Z> Undo
20607:
20608: ref
20609:    F1 Help
20610:    F2 Syntax Check
20611:    F3 Search Next
20612:    F4 New Instance
20613:    F5 Line Mark /Breakpoint
20614:    F6 Goto End
20615:    F7 Debug Step Into
20616:    F8 Debug Step Out
20617:    F9 Compile
20618:    F10 Menu
```

```
20619:    F11 Word Count Highlight
20620:    F12 Reserved for coding use internal
20621:
20622:  def ReservedWords: array[0..82] of string =
20623:     ('and', 'array', 'as', 'asm', 'at', 'begin', 'case', 'class', 'const',
20624:      'constructor', 'default', 'destructor', 'dispinterface', 'div', 'do',
20625:      'downto', 'else', 'end', 'except', 'exports', 'file', 'finalization',
20626:      'finally', 'for', 'function', 'goto', 'if', 'implementation', 'in',
20627:      'inherited', 'initialization', 'inline', 'interface', 'is', 'label',
20628:      'library', 'message', 'mod', 'nil', 'not', 'object', 'of', 'on', 'or',
20629:      'out', 'packed', 'procedure', 'program', 'property', 'raise', 'read',
20630:      'record', 'repeat', 'resourcestring', 'set', 'shl', 'shr', 'string',
20631:      'stored', 'then', 'threadvar', 'to', 'try', 'type', 'unit', 'until',
20632:      'uses', 'var', 'while', 'with', 'write', 'xor', 'private', 'protected',
20633:      'public', 'published','def','ref','using','typedef','memo1','memo2','doc','maxform1';
20634:   AllowedChars: array[0..5] of string = ('(',')', '[', ']',' ',' t,t1,t2,t3: boolean;
20635: //-------------------------------------------------------------------------
20636: //**************End of mX4 Public  Tools API *********************************
20637: //-------------------------------------------------------------------------
20638:
20639: Amount of Functions: 13173
20640: Amount of Procedures: 8185
20641: Amount of Constructors: 1320
20642: Totals of Calls: 22678
20643: SHA1: Win 3.9.9.98 9332386628C609D8DAE419C5D76F010C89380BD7
20644:
20645:
20646: ************************************************************
20647:  Doc Short Manual with 50 Tips!
20648: ************************************************************
20649: - Install: just save your maxboxdef.ini before and then extract the zip file!
20650: - Toolbar: Click on the red maXbox Sign (right on top) opens your work directory or jump to <Help>
20651: - Menu: With <F2> you check syntax with <F8> you debug and <F9> you compile!
20652: - Menu: With <Crtl><F3> you can search for code on examples
20653: - Menu: Open in menu Output a new instance <F4> of the box to compare or prepare your scripts
20654: - Menu: Set Interface Naviagator in menu /View/Intf Navigator
20655: - Menu: Switch or toogle between the last 2 scripts in menu File/LoadLast (History is set to 9 files)
20656:
20657: - Inifile: Set memory report in ini: MEMORYREPORT=Y :report on memory leaks on shutdown by dialog
20658: - Inifile: Refresh (reload) the inifile after edit with ../Help/Config Update
20659: - Context Menu: You can printout your scripts as a pdf-file or html-export
20660: - Context: You do have a context menu with the right mouse click
20661:
20662: - Menu: With the UseCase Editor you can convert graphic formats too.
20663: - Menu: On menu Options you find Addons as compiled scripts
20664: - IDE: You don't need a mouse to handle maXbox, use shortcuts
20665: - Menu: Check Options/ProcessMessages! if something is wrong or you can't see graphics in a time
20666: - IDE: Dragndrop your scripts in box or the model in use case editor (Cut,Copy,Paste always available)
20667: - Editor: You can get templates as code completion with <ctrl j> in editor like classp or iinterface
20668:          or ttimer (you type classp and then CTRL J),or you type tstringlist and <Ctrl><J>
20669:
20670: - Menu: In menu output (console) you can set output menu in edit mode by unchecking <read only output>
20671: - Editor: After the end. you can write or copy notes or descriptions concerning the app or code
20672: - Code: If you code a loop till key-pressed use function: isKeyPressed;
20673: - Code: Macro set the macros #name,, #paAdministratorth, #file,startmaxbox_extract_funclist399.txter25.pdf
20674: - Code: change Syntax in autoboot macro 'maxbootscript.txt'
20675: - Editor: - <F11> Click on Word in Editor search amount of words with highlighting, Dbl Click on Bookmarks
20676:          to delete and Click and mark to drag a bookmark
20677: - Menu: To start handling from CD-ROM (read only mode) uncheck in Menu /Options/Save before Compile
20678: - IDE: A file info with system and script information you find in menu Program/Information
20679: - IDE: After change the config file in help you can update changes in menu Help/Config Update
20680: - IDE: Make a screenshot of the content and environment in menu Output/Save Screenshot
20681: - IDE: Use a boot loader script 'maxbootscript.txt' (as auto start) to change box each time you start it.
20682: - IDE: With escape or <Ctrl> Q you can also leave the box or stop a script in menu program - stop program
20683: - Editor: Set Bookmarks to check your work in app or code
20684: - Editor: With <Ctrl H> you set {$Active Line Color} and F11 you get Word Count Statistic on Output too
20685: - Editor: With {//TODO: some description} or DONE you set code entries for ToDo List in ../Help/ToDo List
20686: - Editor: With <Ctrl W> you set active URL links in your code to test availability in Context Menu
20687:
20688: - IDE with  menu /Options/ADO SQL Workbench you can manage your Database
20689: - Context Menu: You can write your docus with RichEdit RTF printout /Editor Form Options/Richedit
20690: - Menu: Set Interface Naviagator also with  toogle <Ctrl L> or /View/Intf Navigator
20691: - Toolbar: In menu /View switch Off Toolbar and Coolbar to get more coding space
20692: - Code: Put some resources in your code /Help/Resource Explorer like bitbtn, forms, dialogs;
20693: - Code Editor: Compile with <F9> but also Alt C in case <F9> isnt available;
20694: - IDE set bookmarks with  <Ctrl Shift> (0..9) and jump with <Ctrl> (0..9)
20695: - IDE menu /Help/Tools/ write with RTF Editor or open a DOS Shell or browse
20696: - IDE menu /Help/Tools/ open the Task Manager
20697:
20698: - Add on write your Requirements in RTF Docu with <CTRL ALT R> in context menu
20699: - Add on when no browser is available start /Options/Add ons/Easy Browser
20700: - Add on SOAP Tester with SOP POST File
20701: - Add on IP Protocol Sniffer with List View
20702: - Add on OpenGL mX Robot Demo for android
20703: - Add on Checkers Game
20704:   Add on Oscilloscope
20705:
20706: - Menu: Help/Tools as a Tool Section with DOS Opener
20707: - Menu Editor: export the code as RTF File
```

```
20708: - Menu: Help/Tools/Syn Export your code as available in HTML or RTF
20709: - Menu: Help/Tools/ with <Alt H-S-D> you start the DOS Shell
20710: - Context: Auto Detect of Syntax depending on file extension
20711: - Code: some Windows API function start with w in the name like wGetAtomName();
20712: - IDE Close - if you cant close the box then reset it <Ctrl F2> in menu /Debug
20713: - IDE File Check with menu ..View/File Changes/...
20714: - Context: Create a Header with Create Header in Navigator List at right window
20715: - Code: use  SysErrorMessage to get a real Error Description, Ex.
20716:         RemoveDir('c:\NoSuchFolder') ;
20717:         writeln('System Error Message: '+ SysErrorMessage(GetLastError));
20718: - IDE getWebScript from a URL with menu ..Help/Get Web Script/...
20719:
20720: - using DLL example in maXbox: //function: {*****************************************}
20721:    Function GetProcessMemoryInfo(Process: THandle; var MemoryCounters: TProcessMemoryCounters;
20722:                                  cb: DWORD): BOOL; //stdcall;;
20723:      External 'GetProcessMemoryInfo@psapi.dll stdcall';
20724:    Function OpenProcess(dwDesiredAccess:DWORD; bInheritHandle:BOOL; dwProcessId: DWORD):THandle;
20725:      External  'OpenProcess@kernel32.dll stdcall';
20726:
20727: GCC Compile Ex Script
20728: procedure TFormMain_btnCompileClick(Sender: TObject);
20729: begin
20730:   AProcess:= TProcess.Create(Nil);
20731:   try
20732:     AProcess.CommandLine := 'gcc.exe "' + OpenDialog1.FileName + '"'
20733:       + ' -o "' + OpenDialog2.FileName + '"';
20734:     AProcess.Options:= AProcess.Options + [poWaitOnExit, poUsePipes];
20735:     AProcess.Execute;
20736:     Memo2.Lines.BeginUpdate;
20737:     Memo2.Lines.Clear;
20738:     Memo2.Lines.LoadFromStream(AProcess.Output);
20739:     Memo2.Lines.EndUpdate;
20740:   finally
20741:     AProcess.Free;
20742:   end;
20743: end;
20744:
20745: Stopwatch pattern
20746: Time1:= Time;
20747:   writeln(formatdatetime('"start:" hh:mm:ss:zzz',Time))
20748:   if initAndStartBoard then
20749:      writeln('Filesize: '+inttoStr(filesize(FILESAVE)));
20750:   writeln(formatDateTime('"stop:" hh:mm:ss:zzz',Time))
20751:   PrintF('%d %s',[Trunc((Time-Time1)*24),
20752:                   FormatDateTime('"h runtime:" nn:ss:zzz',Time-Time1)])
20753:
20754:     POST git-receive-pack (chunked)
20755: Pushing to https://github.com/maxkleiner/maXbox3.git
20756: To https://github.com/maxkleiner/maXbox3.git
20757:    f127d21..c6a98da  masterbox2 -> masterbox2
20758: updating local tracking ref 'refs/remotes/maXbox3Remote/masterbox2'
20759:
20760: History Shell Hell
20761: PCT Precompile Technology , mX4 ScriptStudio
20762: Indy, JCL, Jedi, VCL, Systools, TurboPower, Fundamentals, ExtendedRTL, Synedit
20763: DMath, devC, Graphics32, ExtPascal, mX4, LCL, CLX, FCL, CPort and more
20764: emax layers: system-package-component-unit-class-function-block
20765: new keywords def ref using maXCalcF
20766: UML: use case act class state seq pac comp dep - lib lab
20767: FBX Lib, psAPI, SMS Cell Module, OpenGL, Borland Tools
20768: Tutorials, 30 Units add, VCL constructors, controls plus, unit list
20769: 2 Tutorials, 36 Units add, Synapse V40, LDAP, OpenSSL, AVScan
20770: 1 Report, 15 Units add, DBCtrls, Stream+, IRadio, Wininet
20771: 1 DLL Report, 24 Units add, DRTable, Remote+, Cindy functions!
20772: DLL Report, UML Tutor, 32 Units add, DRTable, Remote+, Cindy functions!
20773: Oscilloscope V4, Mixer, 17 Units add, URLMon, Form properties+, mathmax
20774: SendBuffer, Color+Caption hack, ComboSet,SetPrivilege, WakeOnLAN, ParaDice 3D Cube Polygraph, OCR
20775: GetScript or GetWebScript, GPS Example, Profiler, Checkers, Toolbox commons
20776: Add 15 Units, Wav resources, RoundTo, OpenOffice, Pipes
20777: TFixedCriticalSection, XPlatform beta, GCC Command Pipe
20778: Inno Install and Setup Routines
20779: Add 32 Units, Wav res, RoundTo, OpenOffice, Pipes, GSM2
20780: TFixedCriticalSection, XPlatform beta, GCC Command Pipe
20781: VfW (Video), FindFirst3, ResFiler, AssemblyCache, UnitTest
20782:
20783: Ref:
20784: https://unibe-ch.academia.edu/MaxKleiner
20785: http://www.slideshare.net/maxkleiner1
20786: http://www.scribd.com/max_kleiner
20787: http://www.delphiforfun.org/Programs/Utilities/index.htm
20788: http://www.slideshare.net/maxkleiner1
20789: http://s3.amazonaws.com/PreviewLinks/22959.html
20790: http://www.softwareschule.ch/arduino_training.pdf
20791: http://www.jrsoftware.org/isinfo.php
20792: http://www.be-precision.com/products/precision-builder/express/
20793: http://www.blaisepascal.eu/
20794: http://www.delphibasics.co.uk/
20795: http://www.youtube.com/watch?v=av89HAbqAsI
20796:
```

```
20797:
20798: ************************************************************
20799:  unit List asm internal end
20800: ************************************************************
20801: 01 unit RIRegister_StrUtils_Routines(exec);    //Delphi
20802: 02 unit SIRegister_IdStrings                   //Indy Sockets
20803: 03 unit RIRegister_niSTRING_Routines(Exec);    //from RegEx
20804: 04 unit uPSI_fMain Functions;                  //maXbox Open Tools API
20805: 05 unit IFSI_WinForm1puzzle;                   //maXbox
20806: 06 unit RIRegister_LinarBitmap_Routines(Exec); //ImageFileLibBCB
20807: 07 unit RegisterDateTimeLibrary_R(exec);       //Delphi
20808: 08 unit RIRegister_MathMax_Routines(exec);     //Jedi & Delphi
20809: 09 unit RIRegister_IdGlobal_Routines(exec);    //Indy Sockets
20810: 10 unit RIRegister_SysUtils_Routines(Exec);    //Delphi
20811: 11 unit uPSI_IdTCPConnection;                  //Indy some functions
20812: 12 unit uPSCompiler.pas;                       //PS kernel functions
20813: 13 unit uPSI_DBCommon;                         //DB Common_Routines and Types
20814: 14 unit uPSI_Printers.pas                      //Delphi VCL
20815: 15 unit uPSI_MPlayer.pas                      //Delphi VCL
20816: 16 unit uPSC_comobj;                          //COM Functions
20817: 17 unit uPSI_Clipbrd;                         //Delphi VCL
20818: 18 unit Filectrl in IFSI_SysUtils_max;        //VCL Runtime
20819: 19 unit uPSI_SqlExpr;                        //DBX3
20820: 20 unit uPSI_ADODB;                          //ADODB
20821: 21 unit uPSI_StrHlpr;                        //String Helper Routines
20822: 22 unit uPSI_DateUtils;                      //Expansion to DateTimeLib
20823: 23 unit uPSI_FileUtils;                      //Expansion to Sys/File Utils
20824: 24 unit JUtils / gsUtils;                    //Jedi / Metabase
20825: 25 unit JvFunctions_max;                     //Jedi Functions
20826: 26 unit HTTPParser;                          //Delphi VCL
20827: 27 unit HTTPUtil;                           //Delphi VCL
20828: 28 unit uPSI_XMLUtil;                       //Delphi VCL
20829: 29 unit uPSI_SOAPHTTPClient;                 //Delphi VCL SOAP WebService V3.5
20830: 30 unit uPSI_Contnrs;                       //Delphi RTL Container of Classes
20831: 31 unit uPSI_MaskUtils;                     //RTL Edit and Mask functions
20832: 32 unit uPSI_MyBigInt;                      //big integer class with Math
20833: 33 unit uPSI_ConvUtils;                     //Delphi VCL Conversions engine
20834: 34 unit Types_Variants;                     //Delphi\Win32\rtl\sys
20835: 35 unit uPSI_IdHashSHA1;                    //Indy Crypto Lib
20836: 36 unit uPSI_IdHashMessageDigest           //Indy Crypto;
20837: 37 unit uPSI_IdASN1Util;                    //Indy ASN1Utility Routines;
20838: 38 unit uPSI_IdLogFile;                     //Indy Logger from LogBase
20839: 39 unit uPSI_IdIcmpClient;                  //Indy Ping ICMP
20840: 40 unit uPSI_IdHashMessageDigest_max       //Indy Crypto &OpenSSL;
20841: 41 unit uPSI_FileCtrl;                      //Delphi RTL
20842: 42 unit uPSI_Outline;                       //Delphi VCL
20843: 43 unit uPSI_ScktComp;                      //Delphi RTL
20844: 44 unit uPSI_Calendar;                      //Delphi VCL
20845: 45 unit uPSI_VListView                      //VListView;
20846: 46 unit uPSI_DBGrids;                       //Delphi VCL
20847: 47 unit uPSI_DBCtrls;                       //Delphi VCL
20848: 48 unit ide_debugoutput;                    //maXbox
20849: 49 unit uPSI_ComCtrls;                      //Delphi VCL
20850: 50 unit uPSC_stdctrls+;                     //Delphi VCL
20851: 51 unit uPSI_Dialogs;                       //Delphi VCL
20852: 52 unit uPSI_StdConvs;                      //Delphi RTL
20853: 53 unit uPSI_DBClient;                      //Delphi RTL
20854: 54 unit uPSI_DBPlatform;                    //Delphi RTL
20855: 55 unit uPSI_Provider;                      //Delphi RTL
20856: 56 unit uPSI_FMTBcd;                        //Delphi RTL
20857: 57 unit uPSI_DBCGrids;                      //Delphi VCL
20858: 58 unit uPSI_CDSUtil;                       //MIDAS
20859: 59 unit uPSI_VarHlpr;                       //Delphi RTL
20860: 60 unit uPSI_ExtDlgs;                       //Delphi VCL
20861: 61 unit sdpStopwatch;                       //maXbox
20862: 62 unit uPSI_JclStatistics;                 //JCL
20863: 63 unit uPSI_JclLogic;                      //JCL
20864: 64 unit uPSI_JclMiscel;                     //JCL
20865: 65 unit uPSI_JclMath_max;                   //JCL RTL
20866: 66 unit uPSI_uTPLb_StreamUtils;             //LockBox 3
20867: 67 unit uPSI_MathUtils;                     //BCB
20868: 68 unit uPSI_JclMultimedia;                 //JCL
20869: 69 unit uPSI_WideStrUtils;                  //Delphi API/RTL
20870: 70 unit uPSI_GraphUtil;                     //Delphi RTL
20871: 71 unit uPSI_TypeTrans;                     //Delphi RTL
20872: 72 unit uPSI_HTTPApp;                       //Delphi VCL
20873: 73 unit uPSI_DBWeb;                         //Delphi VCL
20874: 74 unit uPSI_DBBdeWeb;                      //Delphi VCL
20875: 75 unit uPSI_DBXpressWeb;                   //Delphi VCL
20876: 76 unit uPSI_ShadowWnd;                     //Delphi VCL
20877: 77 unit uPSI_ToolWin;                       //Delphi VCL
20878: 78 unit uPSI_Tabs;                          //Delphi VCL
20879: 79 unit uPSI_JclGraphUtils;                 //JCL
20880: 80 unit uPSI_JclCounter;                    //JCL
20881: 81 unit uPSI_JclSysInfo;                    //JCL
20882: 82 unit uPSI_JclSecurity;                   //JCL
20883: 83 unit uPSI_JclFileUtils;                  //JCL
20884: 84 unit uPSI_IdUserAccounts;                //Indy
20885: 85 unit uPSI_IdAuthentication;              //Indy
```

```
20886: 86 unit uPSI_uTPLb_AES;                    //LockBox 3
20887: 87 unit uPSI_IdHashSHA1;                   //LockBox 3
20888: 88 unit uTPLb_BlockCipher;                 //LockBox 3
20889: 89 unit uPSI_ValEdit.pas;                  //Delphi VCL
20890: 90 unit uPSI_JvVCLUtils;                   //JCL
20891: 91 unit uPSI_JvDBUtil;                     //JCL
20892: 92 unit uPSI_JvDBUtils;                    //JCL
20893: 93 unit uPSI_JvAppUtils;                   //JCL
20894: 94 unit uPSI_JvCtrlUtils;                  //JCL
20895: 95 unit uPSI_JvFormToHtml;                 //JCL
20896: 96 unit uPSI_JvParsing;                    //JCL
20897: 97 unit uPSI_SerDlgs;                      //Toolbox
20898: 98 unit uPSI_Serial;                       //Toolbox
20899: 99 unit uPSI_JvComponent;                  //JCL
20900: 100 unit uPSI_JvCalc;                     //JCL
20901: 101 unit uPSI_JvBdeUtils;                 //JCL
20902: 102 unit uPSI_JvDateUtil;                 //JCL
20903: 103 unit uPSI_JvGenetic;                  //JCL
20904: 104 unit uPSI_JclBase;                    //JCL
20905: 105 unit uPSI_JvUtils;                    //JCL
20906: 106 unit uPSI_JvStrUtil;                  //JCL
20907: 107 unit uPSI_JvStrUtils;                 //JCL
20908: 108 unit uPSI_JvFileUtil;                 //JCL
20909: 109 unit uPSI_JvMemoryInfos;              //JCL
20910: 110 unit uPSI_JvComputerInfo;             //JCL
20911: 111 unit uPSI_JvgCommClasses;             //JCL
20912: 112 unit uPSI_JvgLogics;                  //JCL
20913: 113 unit uPSI_JvLED;                      //JCL
20914: 114 unit uPSI_JvTurtle;                   //JCL
20915: 115 unit uPSI_SortThds; unit uPSI_ThSort; //maXbox
20916: 116 unit uPSI_JvgUtils;                   //JCL
20917: 117 unit uPSI_JvExprParser;               //JCL
20918: 118 unit uPSI_HexDump;                    //Borland
20919: 119 unit uPSI_DBLogDlg;                   //VCL
20920: 120 unit uPSI_SqlTimSt;                   //RTL
20921: 121 unit uPSI_JvHtmlParser;               //JCL
20922: 122 unit uPSI_JvgXMLSerializer;           //JCL
20923: 123 unit uPSI_JvJCLUtils;                 //JCL
20924: 124 unit uPSI_JvStrings;                  //JCL
20925: 125 unit uPSI_uTPLb_IntegerUtils;         //TurboPower
20926: 126 unit uPSI_uTPLb_HugeCardinal;         //TurboPower
20927: 127 unit uPSI_uTPLb_HugeCardinalUtils;    //TurboPower
20928: 128 unit uPSI_SynRegExpr;                 //SynEdit
20929: 129 unit uPSI_StUtils;                    //SysTools4
20930: 130 unit uPSI_StToHTML;                   //SysTools4
20931: 131 unit uPSI_StStrms;                    //SysTools4
20932: 132 unit uPSI_StFIN;                      //SysTools4
20933: 133 unit uPSI_StAstroP;                   //SysTools4
20934: 134 unit uPSI_StStat;                     //SysTools4
20935: 135 unit uPSI_StNetCon;                   //SysTools4
20936: 136 unit uPSI_StDecMth;                   //SysTools4
20937: 137 unit uPSI_StOStr;                     //SysTools4
20938: 138 unit uPSI_StPtrns;                    //SysTools4
20939: 139 unit uPSI_StNetMsg;                   //SysTools4
20940: 140 unit uPSI_StMath;                     //SysTools4
20941: 141 unit uPSI_StExpEng;                   //SysTools4
20942: 142 unit uPSI_StCRC;                      //SysTools4
20943: 143 unit uPSI_StExport,                   //SysTools4
20944: 144 unit uPSI_StExpLog,                   //SysTools4
20945: 145 unit uPSI_ActnList;                   //Delphi VCL
20946: 146 unit uPSI_jpeg;                       //Borland
20947: 147 unit uPSI_StRandom;                   //SysTools4
20948: 148 unit uPSI_StDict;                     //SysTools4
20949: 149 unit uPSI_StBCD;                      //SysTools4
20950: 150 unit uPSI_StTxtDat;                   //SysTools4
20951: 151 unit uPSI_StRegEx;                    //SysTools4
20952: 152 unit uPSI_IMouse;                     //VCL
20953: 153 unit uPSI_SyncObjs;                   //VCL
20954: 154 unit uPSI_AsyncCalls;                 //Hausladen
20955: 155 unit uPSI_ParallelJobs;               //Saraiva
20956: 156 unit uPSI_Variants;                   //VCL
20957: 157 unit uPSI_VarCmplx;                   //VCL Wolfram
20958: 158 unit uPSI_DTDSchema;                  //VCL
20959: 159 unit uPSI_ShLwApi;                    //Brakel
20960: 160 unit uPSI_IBUtils;                    //VCL
20961: 161 unit uPSI_CheckLst;                   //VCL
20962: 162 unit uPSI_JvSimpleXml;                //JCL
20963: 163 unit uPSI_JclSimpleXml;               //JCL
20964: 164 unit uPSI_JvXmlDatabase;              //JCL
20965: 165 unit uPSI_JvMaxPixel;                 //JCL
20966: 166 unit uPSI_JvItemsSearchs;             //JCL
20967: 167 unit uPSI_StExpEng2;                  //SysTools4
20968: 168 unit uPSI_StGenLog;                   //SysTools4
20969: 169 unit uPSI_JvLogFile;                  //Jcl
20970: 170 unit uPSI_CPort;                      //ComPort Lib v4.11
20971: 171 unit uPSI_CPortCtl;                   //ComPort
20972: 172 unit uPSI_CPortEsc;                   //ComPort
20973: 173 unit BarCodeScaner;                   //ComPort
20974: 174 unit uPSI_JvGraph;                    //JCL
```

```
20975: 175 unit uPSI_JvComCtrls;                    //JCL
20976: 176 unit uPSI_GUITesting;                    //D Unit
20977: 177 unit uPSI_JvFindFiles;                   //JCL
20978: 178 unit uPSI_StSystem;                      //SysTools4
20979: 179 unit uPSI_JvKeyboardStates;              //JCL
20980: 180 unit uPSI_JvMail;                        //JCL
20981: 181 unit uPSI_JclConsole;                    //JCL
20982: 182 unit uPSI_JclLANMan;                     //JCL
20983: 183 unit uPSI_IdCustomHTTPServer;           //Indy
20984: 184 unit IdHTTPServer                       //Indy
20985: 185 unit uPSI_IdTCPServer;                  //Indy
20986: 186 unit uPSI_IdSocketHandle;               //Indy
20987: 187 unit uPSI_IdIOHandlerSocket;            //Indy
20988: 188 unit IdIOHandler;                       //Indy
20989: 189 unit uPSI_cutils;                       //Bloodshed
20990: 190 unit uPSI_BoldUtils;                    //boldsoft
20991: 191 unit uPSI_IdSimpleServer;               //Indy
20992: 192 unit uPSI_IdSSLOpenSSL;                 //Indy
20993: 193 unit uPSI_IdMultipartFormData;          //Indy
20994: 194 unit uPSI_SynURIOpener;                 //SynEdit
20995: 195 unit uPSI_PerlRegEx;                    //PCRE
20996: 196 unit uPSI_IdHeaderList;                 //Indy
20997: 197 unit uPSI_StFirst;                      //SysTools4
20998: 198 unit uPSI_JvCtrls;                      //JCL
20999: 199 unit uPSI_IdTrivialFTPBase;             //Indy
21000: 200 unit uPSI_IdTrivialFTP;                 //Indy
21001: 201 unit uPSI_IdUDPBase;                    //Indy
21002: 202 unit uPSI_IdUDPClient;                  //Indy
21003: 203 unit uPSI_utypes;                       //for DMath.DLL
21004: 204 unit uPSI_ShellAPI;                     //Borland
21005: 205 unit uPSI_IdRemoteCMDClient;            //Indy
21006: 206 unit uPSI_IdRemoteCMDServer;            //Indy
21007: 207 unit IdRexecServer;                     //Indy
21008: 208 unit IdRexec; (unit uPSI_IdRexec;)      //Indy
21009: 209 unit IdUDPServer;                       //Indy
21010: 210 unit IdTimeUDPServer;                   //Indy
21011: 211 unit IdTimeServer;                      //Indy
21012: 212 unit IdTimeUDP; (unit uPSI_IdUDPServer;) //Indy
21013: 213 unit uPSI_IdIPWatch;                    //Indy
21014: 214 unit uPSI_IdIrcServer;                  //Indy
21015: 215 unit uPSI_IdMessageCollection;          //Indy
21016: 216 unit uPSI_cPEM;                         //Fundamentals 4
21017: 217 unit uPSI_cFundamentUtils;              //Fundamentals 4
21018: 218 unit uPSI_uwinplot;                     //DMath
21019: 219 unit uPSI_xrtl_util_CPUUtils;          //ExtentedRTL
21020: 220 unit uPSI_GR32_System;                  //Graphics32
21021: 221 unit uPSI_cFileUtils;                   //Fundamentals 4
21022: 222 unit uPSI_cDateTime; (timemachine)     //Fundamentals 4
21023: 223 unit uPSI_cTimers; (high precision timer) //Fundamentals 4
21024: 224 unit uPSI_cRandom;                      //Fundamentals 4
21025: 225 unit uPSI_ueval;                        //DMath
21026: 226 unit uPSI_xrtl_net_URIUtils;            //ExtendedRTL
21027: 227 unit xrtl_net_URIUtils;                 //ExtendedRTL
21028: 228 unit uPSI_ufft;  (FFT)                  //DMath
21029: 229 unit uPSI_DBXChannel;                   //Delphi
21030: 230 unit uPSI_DBXIndyChannel;               //Delphi Indy
21031: 231 unit uPSI_xrtl_util_COMCat;             //ExtendedRTL
21032: 232 unit uPSI_xrtl_util_StrUtils;           //ExtendedRTL
21033: 233 unit uPSI_xrtl_util_VariantUtils;       //ExtendedRTL
21034: 234 unit uPSI_xrtl_util_FileUtils;          //ExtendedRTL
21035: 235 unit xrtl_util_Compat;                  //ExtendedRTL
21036: 236 unit uPSI_OleAuto;                      //Borland
21037: 237 unit uPSI_xrtl_util_COMUtils;           //ExtendedRTL
21038: 238 unit uPSI_CmAdmCtl;                     //Borland
21039: 239 unit uPSI_ValEdit2;                     //VCL
21040: 240 unit uPSI_GR32;  //Graphics32          //Graphics32
21041: 241 unit uPSI_GR32_Image;                   //Graphics32
21042: 242 unit uPSI_xrtl_util_TimeUtils;          //ExtendedRTL
21043: 243 unit uPSI_xrtl_util_TimeZone;           //ExtendedRTL
21044: 244 unit uPSI_xrtl_util_TimeStamp;          //ExtendedRTL
21045: 245 unit uPSI_xrtl_util_Map;                //ExtendedRTL
21046: 246 unit uPSI_xrtl_util_Set;                //ExtendedRTL
21047: 247 unit uPSI_CPortMonitor;                 //ComPort
21048: 248 unit uPSI_StIniStm;                     //SysTools4
21049: 249 unit uPSI_GR32_ExtImage;                //Graphics32
21050: 250 unit uPSI_GR32_OrdinalMaps;             //Graphics32
21051: 251 unit uPSI_GR32_Rasterizers;             //Graphics32
21052: 252 unit uPSI_xrtl_util_Exception;          //ExtendedRTL
21053: 253 unit uPSI_xrtl_util_Value;              //ExtendedRTL
21054: 254 unit uPSI_xrtl_util_Compare;            //ExtendedRTL
21055: 255 unit uPSI_FlatSB;                       //VCL
21056: 256 unit uPSI_JvAnalogClock;                //JCL
21057: 257 unit uPSI_JvAlarms;                     //JCL
21058: 258 unit uPSI_JvSQLS;                       //JCL
21059: 259 unit uPSI_JvDBSecur;                    //JCL
21060: 260 unit uPSI_JvDBQBE;                      //JCL
21061: 261 unit uPSI_JvStarfield;                  //JCL
21062: 262 unit uPSI_JVCLMiscal;                   //JCL
21063: 263 unit uPSI_JvProfiler32;                 //JCL
```

```
21064: 264 unit uPSI_JvDirectories,                  //JCL
21065: 265 unit uPSI_JclSchedule,                    //JCL
21066: 266 unit uPSI_JclSvcCtrl,                     //JCL
21067: 267 unit uPSI_JvSoundControl,                 //JCL
21068: 268 unit uPSI_JvBDESQLScript,                 //JCL
21069: 269 unit uPSI_JvgDigits,                      //JCL>
21070: 270 unit uPSI_ImgList;                        //TCustomImageList
21071: 271 unit uPSI_JclMIDI;                        //JCL>
21072: 272 unit uPSI_JclWinMidi;                     //JCL>
21073: 273 unit uPSI_JclNTFS;                        //JCL>
21074: 274 unit uPSI_JclAppInst;                     //JCL>
21075: 275 unit uPSI_JvRle;                          //JCL>
21076: 276 unit uPSI_JvRas32;                        //JCL>
21077: 277 unit uPSI_JvImageDrawThread,              //JCL>
21078: 278 unit uPSI_JvImageWindow,                  //JCL>
21079: 279 unit uPSI_JvTransparentForm;              //JCL>
21080: 280 unit uPSI_JvWinDialogs;                   //JCL>
21081: 281 unit uPSI_JvSimLogic,                     //JCL>
21082: 282 unit uPSI_JvSimIndicator,                 //JCL>
21083: 283 unit uPSI_JvSimPID,                       //JCL>
21084: 284 unit uPSI_JvSimPIDLinker,                 //JCL>
21085: 285 unit uPSI_IdRFCReply;                     //Indy
21086: 286 unit uPSI_IdIdent;                        //Indy
21087: 287 unit uPSI_IdIdentServer;                  //Indy
21088: 288 unit uPSI_JvPatchFile;                    //JCL
21089: 289 unit uPSI_StNetPfm;                       //SysTools4
21090: 290 unit uPSI_StNet;                          //SysTools4
21091: 291 unit uPSI_JclPeImage;                     //JCL
21092: 292 unit uPSI_JclPrint;                       //JCL
21093: 293 unit uPSI_JclMime;                        //JCL
21094: 294 unit uPSI_JvRichEdit;                     //JCL
21095: 295 unit uPSI_JvDBRichEd;                     //JCL
21096: 296 unit uPSI_JvDice;                         //JCL
21097: 297 unit uPSI_JvFloatEdit;                    //JCL 3.9.8
21098: 298 unit uPSI_JvDirFrm;                       //JCL
21099: 299 unit uPSI_JvDualList;                     //JCL
21100: 300 unit uPSI_JvSwitch;                       ////JCL
21101: 301 unit uPSI_JvTimerLst;                     ////JCL
21102: 302 unit uPSI_JvMemTable;                     //JCL
21103: 303 unit uPSI_JvObjStr;                       //JCL
21104: 304 unit uPSI_StLArr;                         //SysTools4
21105: 305 unit uPSI_StWmDCpy;                       //SysTools4
21106: 306 unit uPSI_StText;                         //SysTools4
21107: 307 unit uPSI_StNTLog;                        //SysTools4
21108: 308 unit uPSI_xrtl_math_Integer;              //ExtendedRTL
21109: 309 unit uPSI_JvImagPrvw;                     //JCL
21110: 310 unit uPSI_JvFormPatch;                    //JCL
21111: 311 unit uPSI_JvPicClip;                      //JCL
21112: 312 unit uPSI_JvDataConv;                     //JCL
21113: 313 unit uPSI_JvCpuUsage;                     //JCL
21114: 314 unit uPSI_JclUnitConv_mX2;                //JCL
21115: 315 unit JvDualListForm;                      //JCL
21116: 316 unit uPSI_JvCpuUsage2;                    //JCL
21117: 317 unit uPSI_JvParserForm;                   //JCL
21118: 318 unit uPSI_JvJanTreeView;                  //JCL
21119: 319 unit uPSI_JvTransLED;                     //JCL
21120: 320 unit uPSI_JvPlaylist;                     //JCL
21121: 321 unit uPSI_JvFormAutoSize;                 //JCL
21122: 322 unit uPSI_JvYearGridEditForm;             //JCL
21123: 323 unit uPSI_JvMarkupCommon;                 //JCL
21124: 324 unit uPSI_JvChart;                        //JCL
21125: 325 unit uPSI_JvXPCore;                       //JCL
21126: 326 unit uPSI_JvXPCoreUtils;                  //JCL
21127: 327 unit uPSI_StatsClasses;                   //mX4
21128: 328 unit uPSI_ExtCtrls2;                      //VCL
21129: 329 unit uPSI_JvUrlGrabbers;                  //JCL
21130: 330 unit uPSI_JvXmlTree;                      //JCL
21131: 331 unit uPSI_JvWavePlayer;                   //JCL
21132: 332 unit uPSI_JvUnicodeCanvas;                //JCL
21133: 333 unit uPSI_JvTFUtils;                      //JCL
21134: 334 unit uPSI_IdServerIOHandler;              //Indy
21135: 335 unit uPSI_IdServerIOHandlerSocket;        //Indy
21136: 336 unit uPSI_IdMessageCoder;                 //Indy
21137: 337 unit uPSI_IdMessageCoderMIME;             //Indy
21138: 338 unit uPSI_IdMIMETypes;                    //Indy
21139: 339 unit uPSI_JvConverter;                    //JCL
21140: 340 unit uPSI_JvCsvParse;                     //JCL
21141: 341 unit uPSI_umath;  unit uPSI_ugamma;       //DMath
21142: 342 unit uPSI_ExcelExport;(Nat:TJsExcelExport) //JCL
21143: 343 unit uPSI_JvDBGridExport;                 //JCL
21144: 344 unit uPSI_JvgExport;                      //JCL
21145: 345 unit uPSI_JvSerialMaker;                  //JCL
21146: 346 unit uPSI_JvWin32;                        //JCL
21147: 347 unit uPSI_JvPaintFX;                      //JCL
21148: 348 unit uPSI_JvOracleDataSet; (beta)         //JCL
21149: 349 unit uPSI_JvValidators; (preview)         //JCL
21150: 350 unit uPSI_JvNTEventLog;                   //JCL
21151: 351 unit uPSI_ShellZipTool;                   //mX4
21152: 352 unit uPSI_JvJoystick;                     //JCL
```

```
21153: 353 unit uPSI_JvMailSlots;                  //JCL
21154: 354 unit uPSI_JclComplex;                   //JCL
21155: 355 unit uPSI_SynPdf;                       //Synopse
21156: 356 unit uPSI_Registry;                     //VCL
21157: 357 unit uPSI_TlHelp32;                     //VCL
21158: 358 unit uPSI_JclRegistry;                  //JCL
21159: 359 unit uPSI_JvAirBrush;                   //JCL
21160: 360 unit uPSI_mORMotReport;                 //Synopse
21161: 361 unit uPSI_JclLocales;                   //JCL
21162: 362 unit uPSI_SynEdit;                      //SynEdit
21163: 363 unit uPSI_SynEditTypes;                 //SynEdit
21164: 364 unit uPSI_SynMacroRecorder;             //SynEdit
21165: 365 unit uPSI_LongIntList;                  //SynEdit
21166: 366 unit uPSI_devcutils;                    //DevC
21167: 367 unit uPSI_SynEditMiscClasses;           //SynEdit
21168: 368 unit uPSI_SynEditRegexSearch;           //SynEdit
21169: 369 unit uPSI_SynEditHighlighter;           //SynEdit
21170: 370 unit uPSI_SynHighlighterPas;            //SynEdit
21171: 371 unit uPSI_JvSearchFiles;                //JCL
21172: 372 unit uPSI_SynHighlighterAny;            //Lazarus
21173: 373 unit uPSI_SynEditKeyCmds;               //SynEdit
21174: 374 unit uPSI_SynEditMiscProcs,             //SynEdit
21175: 375 unit uPSI_SynEditKbdHandler             //SynEdit
21176: 376 unit uPSI_JvAppInst,                    //JCL
21177: 377 unit uPSI_JvAppEvent;                   //JCL
21178: 378 unit uPSI_JvAppCommand;                 //JCL
21179: 379 unit uPSI_JvAnimTitle;                  //JCL
21180: 380 unit uPSI_JvAnimatedImage;              //JCL
21181: 381 unit uPSI_SynEditExport;                //SynEdit
21182: 382 unit uPSI_SynExportHTML;                //SynEdit
21183: 383 unit uPSI_SynExportRTF;                 //SynEdit
21184: 384 unit uPSI_SynEditSearch;                //SynEdit
21185: 385 unit uPSI_fMain_back                    //maXbox;
21186: 386 unit uPSI_JvZoom;                       //JCL
21187: 387 unit uPSI_PMrand;                       //PM
21188: 388 unit uPSI_JvSticker;                    //JCL
21189: 389 unit uPSI_XmlVerySimple;                //mX4
21190: 390 unit uPSI_Services;                     //ExtPascal
21191: 391 unit uPSI_ExtPascalUtils;               //ExtPascal
21192: 392 unit uPSI_SocketsDelphi;                //ExtPascal
21193: 393 unit uPSI_StBarC;                       //SysTools
21194: 394 unit uPSI_StDbBarC;                     //SysTools
21195: 395 unit uPSI_StBarPN;                      //SysTools
21196: 396 unit uPSI_StDbPNBC;                     //SysTools
21197: 397 unit uPSI_StDb2DBC;                     //SysTools
21198: 398 unit uPSI_StMoney;                      //SysTools
21199: 399 unit uPSI_JvForth;                      //JCL
21200: 400 unit uPSI_RestRequest;                  //mX4
21201: 401 unit uPSI_HttpRESTConnectionIndy;       //mX4
21202: 402 unit uPSI_JvXmlDatabase; //update       //JCL
21203: 403 unit uPSI_StAstro;                      //SysTools
21204: 404 unit uPSI_StSort;                       //SysTools
21205: 405 unit uPSI_StDate;                       //SysTools
21206: 406 unit uPSI_StDateSt;                     //SysTools
21207: 407 unit uPSI_StBase;                       //SysTools
21208: 408 unit uPSI_StVInfo;                      //SysTools
21209: 409 unit uPSI_JvBrowseFolder;               //JCL
21210: 410 unit uPSI_JvBoxProcs;                   //JCL
21211: 411 unit uPSI_urandom; (unit uranuvag;)     //DMath
21212: 412 unit uPSI_usimann; (unit ugenalg;)     //DMath
21213: 413 unit uPSI_JvHighlighter;                //JCL
21214: 414 unit uPSI_Diff;                         //mX4
21215: 415 unit uPSI_SpringWinAPI;                 //DSpring
21216: 416 unit uPSI_StBits;                       //SysTools
21217: 417 unit uPSI_TomDBQue;                     //mX4
21218: 418 unit uPSI_MultilangTranslator;          //mX4
21219: 419 unit uPSI_HyperLabel;                   //mX4
21220: 420 unit uPSI_Starter;                      //mX4
21221: 421 unit uPSI_FileAssocs;                   //devC
21222: 422 unit uPSI_devFileMonitorX;              //devC
21223: 423 unit uPSI_devrun;                       //devC
21224: 424 unit uPSI_devExec;                      //devC
21225: 425 unit uPSI_oysUtils;                     //devC
21226: 426 unit uPSI_DosCommand;                   //devC
21227: 427 unit uPSI_CppTokenizer;                 //devC
21228: 428 unit uPSI_JvHLParser;                   //devC
21229: 429 unit uPSI_JclMapi;                      //JCL
21230: 430 unit uPSI_JclShell;                     //JCL
21231: 431 unit uPSI_JclCOM;                       //JCL
21232: 432 unit uPSI_GR32_Math;                    //Graphics32
21233: 433 unit uPSI_GR32_LowLevel;                //Graphics32
21234: 434 unit uPSI_SimpleHl;                     //mX4
21235: 435 unit uPSI_GR32_Filters,                 //Graphics32
21236: 436 unit uPSI_GR32_VectorMaps;              //Graphics32
21237: 437 unit uPSI_cXMLFunctions;                //Fundamentals 4
21238: 438 unit uPSI_JvTimer;                      //JCL
21239: 439 unit uPSI_cHTTPUtils;                   //Fundamentals 4
21240: 440 unit uPSI_cTLSUtils;                    //Fundamentals 4
21241: 441 unit uPSI_JclGraphics;                  //JCL
```

```
21242: 442 unit uPSI_JclSynch;                    //JCL
21243: 443 unit uPSI_IdTelnet;                    //Indy
21244: 444 unit uPSI_IdTelnetServer,              //Indy
21245: 445 unit uPSI_IdEcho,                      //Indy
21246: 446 unit uPSI_IdEchoServer,                //Indy
21247: 447 unit uPSI_IdEchoUDP,                   //Indy
21248: 448 unit uPSI_IdEchoUDPServer,            //Indy
21249: 449 unit uPSI_IdSocks,                     //Indy
21250: 450 unit uPSI_IdAntiFreezeBase;           //Indy
21251: 451 unit uPSI_IdHostnameServer;           //Indy
21252: 452 unit uPSI_IdTunnelCommon,             //Indy
21253: 453 unit uPSI_IdTunnelMaster,             //Indy
21254: 454 unit uPSI_IdTunnelSlave,              //Indy
21255: 455 unit uPSI_IdRSH,                      //Indy
21256: 456 unit uPSI_IdRSHServer,                //Indy
21257: 457 unit uPSI_Spring_Cryptography_Utils;  //Spring4Delphi
21258: 458 unit uPSI_MapReader,                  //devC
21259: 459 unit uPSI_LibTar,                     //devC
21260: 460 unit uPSI_IdStack;                    //Indy
21261: 461 unit uPSI_IdBlockCipherIntercept;     //Indy
21262: 462 unit uPSI_IdChargenServer;            //Indy
21263: 463 unit uPSI_IdFTPServer,                //Indy
21264: 464 unit uPSI_IdException,                //Indy
21265: 465 unit uPSI_utexplot;                   //DMath
21266: 466 unit uPSI_uwinstr;                    //DMath
21267: 467 unit uPSI_VarRecUtils;                //devC
21268: 468 unit uPSI_JvStringListToHtml,         //JCL
21269: 469 unit uPSI_JvStringHolder,             //JCL
21270: 470 unit uPSI_IdCoder;                    //Indy
21271: 471 unit uPSI_SynHighlighterDfm;          //Synedit
21272: 472 unit uHighlighterProcs; in 471        //Synedit
21273: 473 unit uPSI_LazFileUtils,               //LCL
21274: 474 unit uPSI_IDECmdLine;                 //LCL
21275: 475 unit uPSI_lazMasks;                   //LCL
21276: 476 unit uPSI_ip_misc;                    //mX4
21277: 477 unit uPSI_Barcode;                    //LCL
21278: 478 unit uPSI_SimpleXML;                  //LCL
21279: 479 unit uPSI_JclIniFiles;                //JCL
21280: 480 unit uPSI_D2XXUnit;  {$X-}            //FTDI
21281: 481 unit uPSI_JclDateTime;                //JCL
21282: 482 unit uPSI_JclEDI;                     //JCL
21283: 483 unit uPSI_JclMiscel2;                 //JCL
21284: 484 unit uPSI_JclValidation;              //JCL
21285: 485 unit uPSI_JclAnsiStrings; {-PString}  //JCL
21286: 486 unit uPSI_SynEditMiscProcs2;          //Synedit
21287: 487 unit uPSI_JclStreams;                 //JCL
21288: 488 unit uPSI_QRCode;                     //mX4
21289: 489 unit uPSI_BlockSocket;                //ExtPascal
21290: 490 unit uPSI_Masks,Utils                 //VCL
21291: 491 unit uPSI_synautil;                   //Synapse!
21292: 492 unit uPSI_JclMath_Class;              //JCL RTL
21293: 493 unit ugamdist; //Gamma function      //DMath
21294: 494 unit uibeta, ucorrel; //IBeta        //DMath
21295: 495 unit uPSI_SRMgr;                      //mX4
21296: 496 unit uPSI_HotLog;                     //mX4
21297: 497 unit uPSI_DebugBox;                   //mX4
21298: 498 unit uPSI_ustrings;                   //DMath
21299: 499 unit uPSI_uregtest;                   //DMath
21300: 500 unit uPSI_usimplex;                   //DMath
21301: 501 unit uPSI_uhyper;                     //DMath
21302: 502 unit uPSI_IdHL7;                      //Indy
21303: 503 unit uPSI_IdIPMCastBase,              //Indy
21304: 504 unit uPSI_IdIPMCastServer;            //Indy
21305: 505 unit uPSI_IdIPMCastClient;            //Indy
21306: 506 unit uPSI_unlfit; //nlregression     //DMath
21307: 507 unit uPSI_IdRawHeaders;               //Indy
21308: 508 unit uPSI_IdRawClient;                //Indy
21309: 509 unit uPSI_IdRawFunctions;             //Indy
21310: 510 unit uPSI_IdTCPStream;                //Indy
21311: 511 unit uPSI_IdSNPP;                     //Indy
21312: 512 unit uPSI_St2DBarC;                   //SysTools
21313: 513 unit uPSI_ImageWin;  //FTL           //VCL
21314: 514 unit uPSI_CustomDrawTreeView; //FTL   //VCL
21315: 515 unit uPSI_GraphWin;  //FTL           //VCL
21316: 516 unit uPSI_actionMain;  //FTL          //VCL
21317: 517 unit uPSI_StSpawn;                    //SysTools
21318: 518 unit uPSI_CtlPanel;                   //VCL
21319: 519 unit uPSI_IdLPR;                      //Indy
21320: 520 unit uPSI_SockRequestInterpreter;     //Indy
21321: 521 unit uPSI_ulambert;                   //DMath
21322: 522 unit uPSI_ucholesk;                   //DMath
21323: 523 unit uPSI_SimpleDS;                   //VCL
21324: 524 unit uPSI_DBXSqlScanner;              //VCL
21325: 525 unit uPSI_DBXMetaDataUtil;            //VCL
21326: 526 unit uPSI_Chart;                      //TEE
21327: 527 unit uPSI_TeeProcs;                   //TEE
21328: 528 unit mXBDEUtils;                      //mX4
21329: 529 unit uPSI_MDIEdit;                    //VCL
21330: 530 unit uPSI_CopyPrsr;                   //VCL
```

```
21331: 531 unit uPSI_SockApp;                      //VCL
21332: 532 unit uPSI_AppEvnts;                     //VCL
21333: 533 unit uPSI_ExtActns;                     //VCL
21334: 534 unit uPSI_TeEngine;                     //TEE
21335: 535 unit uPSI_CoolMain; //browser           //VCL
21336: 536 unit uPSI_StCRC;                        //SysTools
21337: 537 unit uPSI_StDecMth2;                    //SysTools
21338: 538 unit uPSI_frmExportMain;                //Synedit
21339: 539 unit uPSI_SynDBEdit;                    //Synedit
21340: 540 unit uPSI_SynEditWildcardSearch;        //Synedit
21341: 541 unit uPSI_BoldComUtils;                 //BOLD
21342: 542 unit uPSI_BoldIsoDateTime;              //BOLD
21343: 543 unit uPSI_BoldGUIDUtils; //inCOMUtils  //BOLD
21344: 544 unit uPSI_BoldXMLRequests;              //BOLD
21345: 545 unit uPSI_BoldStringList;               //BOLD
21346: 546 unit uPSI_BoldFileHandler;              //BOLD
21347: 547 unit uPSI_BoldContainers;               //BOLD
21348: 548 unit uPSI_BoldQueryUserDlg;             //BOLD
21349: 549 unit uPSI_BoldWinINet;                  //BOLD
21350: 550 unit uPSI_BoldQueue;                    //BOLD
21351: 551 unit uPSI_JvPcx;                        //JCL
21352: 552 unit uPSI_IdWhois;                      //Indy
21353: 553 unit uPSI_IdWhoIsServer;                //Indy
21354: 554 unit uPSI_IdGopher;                     //Indy
21355: 555 unit uPSI_IdDateTimeStamp;              //Indy
21356: 556 unit uPSI_IdDayTimeServer;              //Indy
21357: 557 unit uPSI_IdDayTimeUDP;                 //Indy
21358: 558 unit uPSI_IdDayTimeUDPServer;           //Indy
21359: 559 unit uPSI_IdDICTServer;                 //Indy
21360: 560 unit uPSI_IdDiscardServer;              //Indy
21361: 561 unit uPSI_IdDiscardUDPServer;           //Indy
21362: 562 unit uPSI_IdMappedFTP;                  //Indy
21363: 563 unit uPSI_IdMappedPortTCP;              //Indy
21364: 564 unit uPSI_IdGopherServer;               //Indy
21365: 565 unit uPSI_IdQotdServer;                 //Indy
21366: 566 unit uPSI_JvRgbToHtml;                  //JCL
21367: 567 unit uPSI_JvRemLog,                     //JCL
21368: 568 unit uPSI_JvSysComp;                    //JCL
21369: 569 unit uPSI_JvTMTL;                       //JCL
21370: 570 unit uPSI_JvWinampAPI;                  //JCL
21371: 571 unit uPSI_MSysUtils;                    //mX4
21372: 572 unit uPSI_ESBMaths;                     //ESB
21373: 573 unit uPSI_ESBMaths2;                    //ESB
21374: 574 unit uPSI_uLkJSON;                      //Lk
21375: 575 unit uPSI_ZURL;  //Zeos                 //Zeos
21376: 576 unit uPSI_ZSysUtils;                    //Zeos
21377: 577 unit unaUtils internals                 //UNA
21378: 578 unit uPSI_ZMatchPattern;                //Zeos
21379: 579 unit uPSI_ZClasses;                     //Zeos
21380: 580 unit uPSI_ZCollections;                 //Zeos
21381: 581 unit uPSI_ZEncoding;                    //Zeos
21382: 582 unit uPSI_IdRawBase;                    //Indy
21383: 583 unit uPSI_IdNTLM;                       //Indy
21384: 584 unit uPSI_IdNNTP;                       //Indy
21385: 585 unit uPSI_usniffer; //PortScanForm     //mX4
21386: 586 unit uPSI_IdCoderMIME;                  //Indy
21387: 587 unit uPSI_IdCoderUUE;                   //Indy
21388: 588 unit uPSI_IdCoderXXE;                   //Indy
21389: 589 unit uPSI_IdCoder3to4;                  //Indy
21390: 590 unit uPSI_IdCookie;                     //Indy
21391: 591 unit uPSI_IdCookieManager;              //Indy
21392: 592 unit uPSI_WDosSocketUtils;              //WDos
21393: 593 unit uPSI_WDosPlcUtils;                 //WDos
21394: 594 unit uPSI_WDosPorts;                    //WDos
21395: 595 unit uPSI_WDosResolvers;                //WDos
21396: 596 unit uPSI_WDosTimers;                   //WDos
21397: 597 unit uPSI_WDosPlcs;                     //WDos
21398: 598 unit uPSI_WDosPneumatics;               //WDos
21399: 599 unit uPSI_IdFingerServer;               //Indy
21400: 600 unit uPSI_IdDNSResolver;                //Indy
21401: 601 unit uPSI_IdHTTPWebBrokerBridge;        //Indy
21402: 602 unit uPSI_IdIntercept;                  //Indy
21403: 603 unit uPSI_IdIPMCastBase;                //Indy
21404: 604 unit uPSI_IdLogBase;                    //Indy
21405: 605 unit uPSI_IdIOHandlerStream;            //Indy
21406: 606 unit uPSI_IdMappedPortUDP;              //Indy
21407: 607 unit uPSI_IdQOTDUDPServer;              //Indy
21408: 608 unit uPSI_IdQOTDUDP;                    //Indy
21409: 609 unit uPSI_IdSysLog;                     //Indy
21410: 610 unit uPSI_IdSysLogServer;               //Indy
21411: 611 unit uPSI_IdSysLogMessage;              //Indy
21412: 612 unit uPSI_IdTimeServer;                 //Indy
21413: 613 unit uPSI_IdTimeUDP;                    //Indy
21414: 614 unit uPSI_IdTimeUDPServer;              //Indy
21415: 615 unit uPSI_IdUserAccounts;               //Indy
21416: 616 unit uPSI_TextUtils;                    //mX4
21417: 617 unit uPSI_MandelbrotEngine;             //mX4
21418: 618 unit uPSI_delphi_arduino_Unit1;         //mX4
21419: 619 unit uPSI_DTDSchema2;                   //mX4
```

```
21420: 620 unit uPSI_fplotMain;                    //DMath
21421: 621 unit uPSI_FindFileIter;                 //mX4
21422: 622 unit uPSI_PppState;  (JclStrHashMap)    //PPP
21423: 623 unit uPSI_PppParser;                    //PPP
21424: 624 unit uPSI_PppLexer;                     //PPP
21425: 625 unit uPSI_PCharUtils;                   //PPP
21426: 626 unit uPSI_uJSON;                        //WU
21427: 627 unit uPSI_JclStrHashMap;                //JCL
21428: 628 unit uPSI_JclHookExcept;                //JCL
21429: 629 unit uPSI_EncdDecd;                     //VCL
21430: 630 unit uPSI_SockAppReg;                   //VCL
21431: 631 unit uPSI_PJFileHandle;                 //PJ
21432: 632 unit uPSI_PJEnvVars;                    //PJ
21433: 633 unit uPSI_PJPipe;                       //PJ
21434: 634 unit uPSI_PJPipeFilters;                //PJ
21435: 635 unit uPSI_PJConsoleApp;                 //PJ
21436: 636 unit uPSI_UConsoleAppEx;                //PJ
21437: 637 unit uPSI_DbxSocketChannelNative,       //VCL
21438: 638 unit uPSI_DbxDataGenerator,             //VCL
21439: 639 unit uPSI_DBXClient;                    //VCL
21440: 640 unit uPSI_IdLogEvent;                   //Indy
21441: 641 unit uPSI_Reversi;                      //mX4
21442: 642 unit uPSI_Geometry;                     //mX4
21443: 643 unit uPSI_IdSMTPServer;                 //Indy
21444: 644 unit uPSI_Textures;                     //mX4
21445: 645 unit uPSI_IBX;                          //VCL
21446: 646 unit uPSI_IWDBCommon;                   //VCL
21447: 647 unit uPSI_SortGrid;                     //mX4
21448: 648 unit uPSI_IB;                           //VCL
21449: 649 unit uPSI_IBScript;                     //VCL
21450: 650 unit uPSI_JvCSVBaseControls;            //JCL
21451: 651 unit uPSI_Jvg3DColors;                  //JCL
21452: 652 unit uPSI_JvHLEditor;  //beat           //JCL
21453: 653 unit uPSI_JvShellHook;                  //JCL
21454: 654 unit uPSI_DBCommon2                     //VCL
21455: 655 unit uPSI_JvSHFileOperation;            //JCL
21456: 656 unit uPSI_uFilexport;                   //mX4
21457: 657 unit uPSI_JvDialogs;                    //JCL
21458: 658 unit uPSI_JvDBTreeView;                 //JCL
21459: 659 unit uPSI_JvDBUltimGrid;                //JCL
21460: 660 unit uPSI_JvDBQueryParamsForm;          //JCL
21461: 661 unit uPSI_JvExControls;                 //JCL
21462: 662 unit uPSI_JvBDEMemTable;                //JCL
21463: 663 unit uPSI_JvCommStatus;                 //JCL
21464: 664 unit uPSI_JvMailSlots2;                 //JCL
21465: 665 unit uPSI_JvgWinMask;                   //JCL
21466: 666 unit uPSI_StEclpse;                     //SysTools
21467: 667 unit uPSI_StMime;                       //SysTools
21468: 668 unit uPSI_StList;                       //SysTools
21469: 669 unit uPSI_StMerge;                      //SysTools
21470: 670 unit uPSI_StStrS;                       //SysTools
21471: 671 unit uPSI_StTree,                       //SysTools
21472: 672 unit uPSI_StVArr;                       //SysTools
21473: 673 unit uPSI_StRegIni;                     //SysTools
21474: 674 unit uPSI_urkf;                         //DMath
21475: 675 unit uPSI_usvd;                         //DMath
21476: 676 unit uPSI_DepWalkUtils;                 //JCL
21477: 677 unit uPSI_OptionsFrm;                   //JCL
21478: 678 unit yuvconverts;                       //mX4
21479: 679 uPSI_JvPropAutoSave;                    //JCL
21480: 680 uPSI_AclAPI;                            //alcinoe
21481: 681 uPSI_AviCap;                            //alcinoe
21482: 682 uPSI_ALAVLBinaryTree;                   //alcinoe
21483: 683 uPSI_ALFcnMisc;                         //alcinoe
21484: 684 uPSI_ALStringList;                      //alcinoe
21485: 685 uPSI_ALQuickSortList;                   //alcinoe
21486: 686 uPSI_ALStaticText;                      //alcinoe
21487: 687 uPSI_ALJSONDoc;                         //alcinoe
21488: 688 uPSI_ALGSMComm;                         //alcinoe
21489: 689 uPSI_ALWindows;                         //alcinoe
21490: 690 uPSI_ALMultiPartFormDataParser;         //alcinoe
21491: 691 uPSI_ALHttpCommon;                      //alcinoe
21492: 692 uPSI_ALWebSpider,                       //alcinoe
21493: 693 uPSI_ALHttpClient;                      //alcinoe
21494: 694 uPSI_ALFcnHTML;                         //alcinoe
21495: 695 uPSI_ALFTPClient;                       //alcinoe
21496: 696 uPSI_ALInternetMessageCommon;           //alcinoe
21497: 697 uPSI_ALWininetHttpClient;               //alcinoe
21498: 698 uPSI_ALWinInetFTPClient;                //alcinoe
21499: 699 uPSI_ALWinHttpWrapper;                  //alcinoe
21500: 700 uPSI_ALWinHttpClient;                   //alcinoe
21501: 701 uPSI_ALFcnWinSock;                      //alcinoe
21502: 702 uPSI_ALFcnSQL;                          //alcinoe
21503: 703 uPSI_ALFcnCGI;                          //alcinoe
21504: 704 uPSI_ALFcnExecute;                      //alcinoe
21505: 705 uPSI_ALFcnFile;                         //alcinoe
21506: 706 uPSI_ALFcnMime;                         //alcinoe
21507: 707 uPSI_ALPhpRunner;                       //alcinoe
21508: 708 uPSI_ALGraphic;                         //alcinoe
```

```
21509: 709 uPSI_ALIniFiles;                          //alcinoe
21510: 710 uPSI_ALMemCachedClient;                   //alcinoe
21511: 711 unit uPSI_MyGrids;                        //mX4
21512: 712 uPSI_ALMultiPartMixedParser               //alcinoe
21513: 713 uPSI_ALSMTPClient                         //alcinoe
21514: 714 uPSI_ALNNTPClient;                        //alcinoe
21515: 715 uPSI_ALHintBalloon;                       //alcinoe
21516: 716 unit uPSI_ALXmlDoc;                       //alcinoe
21517: 717 unit uPSI_IPCThrd;                        //VCL
21518: 718 unit uPSI_MonForm;                        //VCL
21519: 719 unit uPSI_TeCanvas;                       //Orpheus
21520: 720 unit uPSI_Ovcmisc;                        //Orpheus
21521: 721 unit uPSI_ovcfiler;                       //Orpheus
21522: 722 unit uPSI_ovcstate;                       //Orpheus
21523: 723 unit uPSI_ovccoco;                        //Orpheus
21524: 724 unit uPSI_ovcrvexp;                       //Orpheus
21525: 725 unit uPSI_OvcFormatSettings;              //Orpheus
21526: 726 unit uPSI_OvcUtils;                       //Orpheus
21527: 727 unit uPSI_ovcstore;                       //Orpheus
21528: 728 unit uPSI_ovcstr;                         //Orpheus
21529: 729 unit uPSI_ovcmru;                         //Orpheus
21530: 730 unit uPSI_ovccmd;                         //Orpheus
21531: 731 unit uPSI_ovctimer;                       //Orpheus
21532: 732 unit uPSI_ovcintl;                        //Orpheus
21533: 733 uPSI_AfCircularBuffer;                    //AsyncFree
21534: 734 uPSI_AfUtils;                             //AsyncFree
21535: 735 uPSI_AfSafeSync;                          //AsyncFree
21536: 736 uPSI_AfComPortCore;                       //AsyncFree
21537: 737 uPSI_AfComPort;                           //AsyncFree
21538: 738 uPSI_AfPortControls;                      //AsyncFree
21539: 739 uPSI_AfDataDispatcher;                    //AsyncFree
21540: 740 uPSI_AfViewers;                           //AsyncFree
21541: 741 uPSI_AfDataTerminal;                      //AsyncFree
21542: 742 uPSI_SimplePortMain;                      //AsyncFree
21543: 743 unit uPSI_ovcclock;                       //Orpheus
21544: 744 unit uPSI_o32intlst;                      //Orpheus
21545: 745 unit uPSI_o32ledlabel;                    //Orpheus
21546: 746 unit uPSI_AlMySqlClient;                  //alcinoe
21547: 747 unit uPSI_ALFBXClient;                    //alcinoe
21548: 748 unit uPSI_ALFcnSQL;                       //alcinoe
21549: 749 unit uPSI_AsyncTimer;                     //mX4
21550: 750 unit uPSI_ApplicationFileIO;              //mX4
21551: 751 unit uPSI_PsAPI;                          //VCLé
21552: 752 uPSI_ovcuser;                             //Orpheus
21553: 753 uPSI_ovcurl;                              //Orpheus
21554: 754 uPSI_ovcvlb;                              //Orpheus
21555: 755 uPSI_ovccolor;                            //Orpheus
21556: 756 uPSI_ALFBXLib,                            //alcinoe
21557: 757 uPSI_ovcmeter;                            //Orpheus
21558: 758 uPSI_ovcpeakm;                            //Orpheus
21559: 759 uPSI_O32BGSty;                            //Orpheus
21560: 760 uPSI_ovcBidi;                             //Orpheus
21561: 761 uPSI_ovctcary;                            //Orpheus
21562: 762 uPSI_DXPUtils;                            //mX4
21563: 763 uPSI_ALMultiPartBaseParser;               //alcinoe
21564: 764 uPSI_ALMultiPartAlternativeParser;        //alcinoe
21565: 765 uPSI_ALPOP3Client;                        //alcinoe
21566: 766 uPSI_SmallUtils;                          //mX4
21567: 767 uPSI_MakeApp;                             //mX4
21568: 768 uPSI_O32MouseMon;                         //Orpheus
21569: 769 uPSI_OvcCache;                            //Orpheus
21570: 770 uPSI_ovccalc;                             //Orpheus
21571: 771 uPSI_Joystick,                            //OpenGL
21572: 772 uPSI_ScreenSaver;                         //OpenGL
21573: 773 uPSI_XCollection,                         //OpenGL
21574: 774 uPSI_Polynomials,                         //OpenGL
21575: 775 uPSI_PersistentClasses, //9.86           //OpenGL
21576: 776 uPSI_VectorLists;                         //OpenGL
21577: 777 uPSI_XOpenGL,                            //OpenGL
21578: 778 uPSI_MeshUtils;                           //OpenGL
21579: 779 unit uPSI_JclSysUtils;                    //JCL
21580: 780 unit uPSI_JclBorlandTools;                //JCL
21581: 781 unit JclFileUtils_max;                    //JCL
21582: 782 uPSI_AfDataControls,                      //AsyncFree
21583: 783 uPSI_GLSilhouette;                        //OpenGL
21584: 784 uPSI_JclSysUtils_class;                   //JCL
21585: 785 uPSI_JclFileUtils_class;                  //JCL
21586: 786 uPSI_FileUtil;                            //JCL
21587: 787 uPSI_changefind;                          //mX4
21588: 788 uPSI_cmdIntf;                             //mX4
21589: 789 uPSI_fservice;                            //mX4
21590: 790 uPSI_Keyboard;                            //OpenGL
21591: 791 uPSI_VRMLParser,                          //OpenGL
21592: 792 uPSI_GLFileVRML,                          //OpenGL
21593: 793 uPSI_Octree;                              //OpenGL
21594: 794 uPSI_GLPolyhedron,                        //OpenGL
21595: 795 uPSI_GLCrossPlatform;                     //OpenGL
21596: 796 uPSI_GLParticles;                         //OpenGL
21597: 797 uPSI_GLNavigator;                         //OpenGL
```

```
21598: 798 uPSI_GLStarRecord;                    //OpenGL
21599: 799 uPSI_GLTextureCombiners;              //OpenGL
21600: 800 uPSI_GLCanvas;                        //OpenGL
21601: 801 uPSI_GeometryBB;                      //OpenGL
21602: 802 uPSI_GeometryCoordinates;             //OpenGL
21603: 803 uPSI_VectorGeometry;                  //OpenGL
21604: 804 uPSI_BumpMapping;                     //OpenGL
21605: 805 uPSI_TGA;                             //OpenGL
21606: 806 uPSI_GLVectorFileObjects;             //OpenGL
21607: 807 uPSI_IMM;                             //VCL
21608: 808 uPSI_CategoryButtons;                 //VCL
21609: 809 uPSI_ButtonGroup;                     //VCL
21610: 810 uPSI_DbExcept;                        //VCL
21611: 811 uPSI_AxCtrls;                         //VCL
21612: 812 uPSI_GL_actorUnit1;                   //OpenGL
21613: 813 uPSI_StdVCL;                          //VCL
21614: 814 unit CurvesAndSurfaces;               //OpenGL
21615: 815 uPSI_DataAwareMain;                   //AsyncFree
21616: 816 uPSI_TabNotBk;                        //VCL
21617: 817 uPSI_udwsfiler;                       //mX4
21618: 818 uPSI_synaip;                          //Synapse!
21619: 819 uPSI_synacode;                        //Synapse
21620: 820 uPSI_synachar;                        //Synapse
21621: 821 uPSI_synamisc;                        //Synapse
21622: 822 uPSI_synaser;                         //Synapse
21623: 823 uPSI_synaicnv;                        //Synapse
21624: 824 uPSI_tlntsend;                        //Synapse
21625: 825 uPSI_pingsend;                        //Synapse
21626: 826 uPSI_blcksock;                        //Synapse
21627: 827 uPSI_asn1util;                        //Synapse
21628: 828 uPSI_dnssend;                         //Synapse
21629: 829 uPSI_clamsend;                        //Synapse
21630: 830 uPSI_ldapsend;                        //Synapse
21631: 831 uPSI_mimemess;                        //Synapse
21632: 832 uPSI_slogsend;                        //Synapse
21633: 833 uPSI_mimepart;                        //Synapse
21634: 834 uPSI_mimeinln;                        //Synapse
21635: 835 uPSI_ftpsend,                         //Synapse
21636: 836 uPSI_ftptsend;                        //Synapse
21637: 837 uPSI_httpsend;                        //Synapse
21638: 838 uPSI_sntpsend;                        //Synapse
21639: 839 uPSI_smtpsend;                        //Synapse
21640: 840 uPSI_snmpsend;                        //Synapse
21641: 841 uPSI_imapsend;                        //Synapse
21642: 842 uPSI_pop3send;                        //Synapse
21643: 843 uPSI_nntpsend;                        //Synapse
21644: 844 uPSI_ssl_cryptlib;                    //Synapse
21645: 845 uPSI_ssl_openssl;                     //Synapse
21646: 846 uPSI_synhttp_daemon;                  //Synapse
21647: 847 uPSI_NetWork;                         //mX4
21648: 848 uPSI_PingThread;                      //Synapse
21649: 849 uPSI_JvThreadTimer;                   //JCL
21650: 850 unit uPSI_wwSystem;                   //InfoPower
21651: 851 unit uPSI_IdComponent;                //Indy
21652: 852 unit uPSI_IdIOHandlerThrottle;        //Indy
21653: 853 unit uPSI_Themes;                     //VCL
21654: 854 unit uPSI_StdStyleActnCtrls;          //VCL
21655: 855 unit uPSI_UDDIHelper;                 //VCL
21656: 856 unit uPSI_IdIMAP4Server;              //Indy
21657: 857 uPSI_VariantSymbolTable,              //VCL //3.9.9.92
21658: 858 uPSI_udf_glob,                        //mX4
21659: 859 uPSI_TabGrid,                         //VCL
21660: 860 uPSI_JsDBTreeView,                    //mX4
21661: 861 uPSI_JsSendMail,                      //mX4
21662: 862 uPSI_dbTvRecordList,                  //mX4
21663: 863 uPSI_TreeVwEx,                        //mX4
21664: 864 uPSI_ECDataLink,                      //mX4
21665: 865 uPSI_dbTree,                          //mX4
21666: 866 uPSI_dbTreeCBox,                      //mX4
21667: 867 unit uPSI_Debug; //TfrmDebug         //mX4
21668: 868 uPSI_TimeFncs;                        //mX4
21669: 869 uPSI_FileIntf,                       //VCL
21670: 870 uPSI_SockTransport,                  //RTL
21671: 871 unit uPSI_WinInet;                   //RTL
21672: 872 unit uPSI_Wwstr;                     //mX4
21673: 873 uPSI_DBLookup,                       //VCL
21674: 874 uPSI_Hotspot,                        //mX4
21675: 875 uPSI_HList; //History List           //mX4
21676: 876 unit uPSI_DrTable;                   //VCL
21677: 877 uPSI_TConnect,                       //VCL
21678: 878 uPSI_DataBkr,                        //VCL
21679: 879 uPSI_HTTPIntr;                       //VCL
21680: 880 unit uPSI_Mathbox;                   //mX4
21681: 881 uPSI_cyIndy,                         //cY
21682: 882 uPSI_cySysUtils,                     //cY
21683: 883 uPSI_cyWinUtils,                     //cY
21684: 884 uPSI_cyStrUtils,                     //cY
21685: 885 uPSI_cyObjUtils,                     //cY
21686: 886 uPSI_cyDateUtils,                    //cY
```

```
21687: 887 uPSI_cyBDE,                              //cY
21688: 888 uPSI_cyClasses,                          //cY
21689: 889 uPSI_cyGraphics,  //3.9.9.94_2           //cY
21690: 890 unit uPSI_cyTypes;                       //cY
21691: 891 uPSI_JvDateTimePicker,                   //JCL
21692: 892 uPSI_JvCreateProcess,                    //JCL
21693: 893 uPSI_JvEasterEgg,                        //JCL
21694: 894 uPSI_WinSvc,  //3.9.9.94_3              //VCL
21695: 895 uPSI_SvcMgr                             //VCL
21696: 896 unit uPSI_JvPickDate;                    //JCL
21697: 897 unit uPSI_JvNotify;                     //JCL
21698: 898 uPSI_JvStrHlder                         //JCL
21699: 899 unit uPSI_JclNTFS2;                     //JCL
21700: 900 uPSI_Jcl8087 //math coprocessor         //JCL
21701: 901 uPSI_JvAddPrinter                       //JCL
21702: 902 uPSI_JvCabFile                          //JCL
21703: 903 uPSI_JvDataEmbedded;                    //JCL
21704: 904 unit uPSI_U_HexView;                    //mX4
21705: 905 uPSI_UWavein4,                          //mX4
21706: 906 uPSI_AMixer,                            //mX4
21707: 907 uPSI_JvaScrollText,                     //mX4
21708: 908 uPSI_JvArrow,                           //mX4
21709: 909 unit uPSI_UrlMon;                       //mX4
21710: 910 U_Oscilloscope4 in 'U_Oscilloscope4.pas'  //mX4
21711: 911 unit uPSI_U_Oscilloscope4; //TOscfrmMain;  //DFF
21712: 912 unit uPSI_DFFUtils;                     //DFF
21713: 913 unit uPSI_MathsLib;                     //DFF
21714: 914 uPSI_UIntList;                          //DFF
21715: 915 uPSI_UGetParens;                        //DFF
21716: 916 unit uPSI_UGeometry;                    //DFF
21717: 917 unit uPSI_UAstronomy;                   //DFF
21718: 918 unit uPSI_UCardComponentV2;             //DFF
21719: 919 unit uPSI_UTGraphSearch;                //DFF
21720: 920 unit uPSI_UParser10;                    //DFF
21721: 921 unit uPSI_cyIEUtils;                    //cY
21722: 922 unit uPSI_UcomboV2;                     //DFF
21723: 923 uPSI_cyBaseComm,                        //cY
21724: 924 uPSI_cyAppInstances,                    //cY
21725: 925 uPSI_cyAttract,                         //cY
21726: 926 uPSI_cyDERUtils                         //cY
21727: 927 unit uPSI_cyDocER;                      //cY
21728: 928 unit uPSI_ODBC;                         //mX
21729: 929 unit uPSI_AssocExec;                    //mX
21730: 930 uPSI_cyBaseCommRoomConnector,           //cY
21731: 931 uPSI_cyCommRoomConnector,               //cY
21732: 932 uPSI_cyCommunicate,                     //cY
21733: 933 uPSI_cyImage;                           //cY
21734: 934 uPSI_cyBaseContainer                    //cY
21735: 935 uPSI_cyModalContainer,                  //cY
21736: 936 uPSI_cyFlyingContainer;                 //cY
21737: 937 uPSI_RegStr,                            //VCL
21738: 938 uPSI_HtmlHelpViewer;                    //VCL
21739: 939 unit uPSI_cyIniForm                     //cY
21740: 940 unit uPSI_cyVirtualGrid;                //cY
21741: 941 uPSI_Profiler,                          //DA
21742: 942 uPSI_BackgroundWorker,                  //DA
21743: 943 uPSI_WavePlay,                          //DA
21744: 944 uPSI_WaveTimer,                         //DA
21745: 945 uPSI_WaveUtils;                         //DA
21746: 946 uPSI_NamedPipes,                        //TB
21747: 947 uPSI_NamedPipeServer,                   //TB
21748: 948 unit uPSI_process,                      //TB
21749: 949 unit uPSI_DPUtils;                      //TB
21750: 950 unit uPSI_CommonTools;                  //TB
21751: 951 uPSI_DataSendToWeb,                     //TB
21752: 952 uPSI_StarCalc,                          //TB
21753: 953 uPSI_D2_XPVistaHelperU                  //TB
21754: 954 unit uPSI_NetTools                      //TB
21755: 955 unit uPSI_Pipes                         //TB
21756: 956 uPSI_ProcessUnit,                       //mX
21757: 957 uPSI_adGSM,                             //mX
21758: 958 unit uPSI_BetterADODataSet;             //mX
21759: 959 unit uPSI_AdSelCom; //FTT               //mX
21760: 960 unit unit uPSI_dwsXPlatform;            //DWS
21761: 961 uPSI_AdSocket;                          //mX Turbo Power
21762: 962 uPSI_AdPacket;                          //mX
21763: 963 uPSI_AdPort;                            //mX
21764: 964 uPSI_PathFunc;                          //Inno
21765: 965 uPSI_CmnFunc;                           //Inno
21766: 966 uPSI_CmnFunc2; //Inno Setup             //Inno
21767: 967 unit uPSI_BitmapImage;                  //mX4
21768: 968 unit uPSI_ImageGrabber;                 //mX4
21769: 969 uPSI_SecurityFunc,                      //Inno
21770: 970 uPSI_RedirFunc,                         //Inno
21771: 971 uPSI_FIFO, (MemoryStream)               //mX4
21772: 972 uPSI_Int64Em,                           //Inno
21773: 973 unit uPSI_InstFunc;                     //Inno
21774: 974 unit uPSI_LibFusion;                    //Inno
21775: 975 uPSI_SimpleExpression;                  //Inno
```

```
21776: 976 uPSI_unitResourceDetails,                //XN
21777: 977 uPSI_unitResFile,                        //XN
21778: 978 unit uPSI_simpleComport;                 //mX4
21779: 979 unit uPSI_AfViewershelpers;              //Async
21780: 980 unit uPSI_Console;                       //mX4
21781: 981 unit uPSI_AnalogMeter;                   //TB
21782: 982 unit uPSI_XPrinter,                      //TB
21783: 983 unit uPSI_IniFiles;                      //VCL
21784: 984 unit uPSI_lazIniFiles;                   //FP
21785: 985 uPSI_testutils;                          //FP
21786: 986 uPSI_ToolsUnit; (DBTests)                //FP
21787: 987 uPSI_fpcunit                             //FP
21788: 988 uPSI_testdecorator;                      //FP
21789: 989 unit uPSI_fpcunittests;                  //FP
21790: 990 unit uPSI_cTCPBuffer;                    //Fundamentals 4
21791:
21792:
21793:
21794:
21795:
21796:
21797: ////////////////////////////////////////////////////////////////////////////
21798: //Form Template Library FTL
21799: ////////////////////////////////////////////////////////////////////////////
21800:
21801: 32 FTL For Form Building out of the Script, eg. 399_form_templates.txt
21802:
21803: 045 unit uPSI_VListView                      TFormListView;
21804: 263 unit uPSI_JvProfiler32;                  TProfReport
21805: 270 unit uPSI_ImgList;                       TCustomImageList
21806: 278 unit uPSI_JvImageWindow;                 TJvImageWindow
21807: 317 unit uPSI_JvParserForm;                  TJvHTMLParserForm
21808: 497 unit uPSI_DebugBox;                      TDebugBox
21809: 513 unit uPSI_ImageWin;                      TImageForm, TImageForm2
21810: 514 unit uPSI_CustomDrawTreeView;           TCustomDrawForm
21811: 515 unit uPSI_GraphWin;                     TGraphWinForm
21812: 516 unit uPSI_actionMain;                   TActionForm
21813: 518 unit uPSI_CtlPanel;                     TAppletApplication
21814: 529 unit uPSI_MDIEdit;                      TEditForm
21815: 535 unit uPSI_CoolMain; {browser}          TWebMainForm
21816: 538 unit uPSI_frmExportMain;               TSynexportForm
21817: 585 unit uPSI_usniffer; {//PortScanForm}   TSniffForm
21818: 600 unit uPSI_ThreadForm;                  TThreadSortForm;
21819: 618 unit uPSI_delphi_arduino_Unit1;        TLEDForm
21820: 620 unit uPSI_fplotMain;                   TfplotForm1
21821: 660 unit uPSI_JvDBQueryParamsForm;         TJvQueryParamsDialog
21822: 677 unit uPSI_OptionsFrm;                  TfrmOptions;
21823: 718 unit uPSI_MonForm;                     TMonitorForm
21824: 742 unit uPSI_SimplePortMain;              TPortForm1
21825: 770 unit uPSI_ovccalc;                     TOvcCalculator  //widget
21826: 810 unit uPSI_DbExcept;                    TDbEngineErrorDlg
21827: 812 unit uPSI_GL_actorUnit1;              TglActorForm1  //OpenGL Robot
21828: 846 unit uPSI_synhttp_daemon;              TTCPHttpDaemon, TTCPHttpThrd, TPingThread
21829: 867 unit uPSI_Debug;                       TfrmDebug
21830: 904 unit uPSI_U_HexView;                   THexForm2
21831: 911 unit uPSI_U_Oscilloscope4; (OscfrmMain)  TOscfrmMain
21832: 959 unit uPSI_AdSelCom;                    TComSelectForm
21833:
21834:
21835: ex.:with TEditForm.create(self) do begin
21836:       caption:= 'Template Form Tester';
21837:       FormStyle:= fsStayOnTop;
21838:       with editor do begin
21839:         Lines.LoadFromFile(Exepath+'\docs\Readme_rus_mX2.rtf
21840:         SelStart:= 0;
21841:         Modified:= False;
21842:       end;
21843:     end;
21844:   with TWebMainForm.create(self) do begin
21845:     URLs.Text:= 'http://www.kleiner.ch';
21846:     URLsClick(self); Show;
21847:   end;
21848:   with TSynexportForm.create(self) do begin
21849:     Caption:= 'Synexport HTML RTF tester';
21850:     Show;
21851:   end;
21852:   with TThreadSortForm.create(self) do begin
21853:      showmodal; free;
21854:   end;
21855:   with TCustomDrawForm.create(self) do begin
21856:        width:=820; height:=820;
21857:        image1.height:= 600; //add properties
21858:        image1.picture.bitmap:= image2.picture.bitmap;
21859:        //SelectionBackground1Click(self) CustomDraw1Click(self);
21860:        Background1.click;
21861:        bitmap1.click;
21862:        Tile1.click;
21863:        Showmodal;
21864:        Free;
```

```
21865:      end;
21866:    with TfplotForm1.Create(self) do begin
21867:      BtnPlotClick(self);
21868:      Showmodal; Free;
21869:    end;
21870:   with TOvcCalculator.create(self) do begin
21871:     parent:= aForm;
21872:    //free;
21873:     setbounds(550,510,200,150);
21874:     displaystr:= 'maXcalc';
21875:   end;
21876:   with THexForm2.Create(self) do begin
21877:      ShowModal;
21878:      Free;
21879:   end;
21880:
21881: function CheckBox: string;
21882: var idHTTP: TIDHTTP;
21883:  begin
21884:    result:= 'version not found';
21885:    if IsInternet then begin
21886:      idHTTP:= TIdHTTP.Create(NIL);
21887:      try
21888:        result:= idHTTP.Get(MXVERSIONFILE2);
21889:        result:= result[1]+result[2]+result[3]+result[4]+result[5];
21890:        if result = MBVER2 then begin
21891:          //output.Font.Style:= [fsbold];
21892:          //Speak(' A new Version '+vstr+' of max box is available! ');
21893:          result:= ('!!! OK. You have latest Version: '+result+' available at '+MXSITE);
21894:        end;
21895:       //idhttp.get2('http://www.softwareschule.ch/maxbox.htm')
21896:      finally
21897:        idHTTP.Free
21898:    end;
21899:  end;
21900: end;
21901:
21902:
21903: ////////////////////////////////////////////////////////////////////////////
21904: All maXbox Tutorials Table of Content 2014
21905: ////////////////////////////////////////////////////////////////////////////
21906:     Tutorial 00 Function-Coding  (Blix the Programmer)
21907:     Tutorial 01 Procedural-Coding
21908:     Tutorial 02 OO-Programming
21909:     Tutorial 03 Modular Coding
21910:     Tutorial 04 UML Use Case Coding
21911:     Tutorial 05 Internet Coding
21912:     Tutorial 06 Network Coding
21913:     Tutorial 07 Game Graphics Coding
21914:     Tutorial 08 Operating System Coding
21915:     Tutorial 09 Database Coding
21916:     Tutorial 10 Statistic Coding
21917:     Tutorial 11 Forms Coding
21918:     Tutorial 12 SQL DB Coding
21919:     Tutorial 13 Crypto Coding
21920:     Tutorial 14 Parallel Coding
21921:     Tutorial 15 Serial RS232 Coding
21922:     Tutorial 16 Event Driven Coding
21923:     Tutorial 17 Web Server Coding
21924:     Tutorial 18 Arduino System Coding
21925:     Tutorial 18_3 RGB LED System Coding
21926:     Tutorial 19 WinCOM /Arduino Coding
21927:     Tutorial 20 Regular Expressions RegEx
21928:     Tutorial 21 Android Coding (coming 2013)
21929:     Tutorial 22 Services Programming
21930:     Tutorial 23 Real Time Systems
21931:     Tutorial 24 Clean Code
21932:     Tutorial 25 maXbox Configuration I+II
21933:     Tutorial 26 Socket Programming with TCP
21934:     Tutorial 27 XML & TreeView
21935:     Tutorial 28 DLL Coding (available)
21936:     Tutorial 29 UML Scripting (2014)
21937:     Tutorial 30 Web of Things (2014)
21938:     Tutorial 31 Closures (coming 2014)
21939:     Tutorial 32 SQL Firebird (coming 2014)
21940:     Tutorial 33 Oscilloscope (coming 2015)
21941:     Tutorial 34 GPS Navigation (coming 2015)
21942:     Tutorial 35 Web Box (available)
21943:
21944: Doc ref Docu for all Type Class and Const in maXbox_types.pdf
21945: using Docu for this file is maxbox_functions_all.pdf
21946: PEP - Pascal Education Program  Lib Lab ShellHell
21947:
21948: http://stackoverflow.com/tags/pascalscript/hot
21949: http://www.jrsoftware.org/ishelp/index.php?topic=scriptfunctions
21950: http://sourceforge.net/projects/maXbox   #locs:51620
21951: http://sourceforge.net/apps/mediawiki/maXbox
21952: http://www.blaisepascal.eu/
21953: https://github.com/maxkleiner/maXbox3.git
```

http://www.heise.de/download/maxbox-1176464.html
http://www.softpedia.com/get/Programming/Other-Programming-Files/maXbox.shtml
https://www.facebook.com/pages/Programming-maXbox/166844836691703
http://www.softwareschule.ch/arduino_training.pdf
http://www.delphiarea.com

All **maXbox** Examples List
https://github.com/maxkleiner/maXbox3/releases
****

000_pas_baseconvert.txt
000_pas_baseconvert.txt_encrypt
000_pas_baseconvert.txt_decrypt
001_1_pas_functest - Kopie.txt
001_1_pas_functest.txt
001_1_pas_functest2.txt
001_1_pas_functest_clx2.txt
001_1_pas_functest_clx2_2.txt
001_1_pas_functest_openarray.txt
001_pas_lottogen.txt
001_pas_lottogen_template.txt
001_pas_lottogen.txtcopy
002_pas_russianroulette.txt
002_pas_russianroulette.txtcopy
002_pas_russianroulette.txtcopy_decrypt
002_pas_russianroulette.txtcopy_encrypt
003_pas_motion.txt
003_pas_motion.txtcopy
004_pas_search.txt
004_pas_search_replace.txt
004_search_replace_allfunctionlist.txt
005_pas_oodesign.txt
005_pas_shelllink.txt
006_pas_oobatch.txt
007_pas_streamcopy.txt
008_EINMALEINS_FUNC.TXT
008_explanation.txt
008_pas_verwechselt.txt
008_pas_verwechselt_ibz_bern_func.txt
008_stack_ibz.TXT
009_pas_umlrunner.txt
009_pas_umlrunner_all.txt
009_pas_umlrunner_componenttest.txt
009_pas_umlrunner_solution.txt
009_pas_umlrunner_solution_2step.txt
010_pas_oodesign_solution.txt
011_pas_puzzlepas_defect.txt
012_pas_umlrunner_solution.txt
012_pas_umlrunner_solution2.txt
013_pas_linenumber.txt
014_pas_primetest.txt
014_pas_primetest_first.txt
014_pas_primetest_sync.txt
015_pas_designbycontract.txt
015_pas_designbycontract_solution.txt
016_pas_searchrec.txt
017_chartgen.txt
018_data_simulator.txt
019_dez_to_bin.txt
019_dez_to_bin_grenzwert_ibz.txt
020_proc_feedback.txt
021_pas_symkey.txt
021_pas_symkey_solution.txt
022_pas_filestreams.txt
023_pas_find_searchrec.txt
023_pas_pathfind.txt
024_pas_TFileStream_records.txt
025_prime_direct.txt
026_pas_memorystream.txt
027_pas_shellexecute_beta.txt
027_pas_shellexecute_solution.txt
028_pas_dataset.txt
029_pas_assignfile.txt
029_pas_assignfile_dragndropexe.txt
030_palindrome_2.txt
030_palindrome_tester.txt
030_pas_recursion.txt
030_pas_recursion2.txt
031_pas_hashcode.txt
032_pas_crc_const.txt
033_pas_cipher.txt
033_pas_cipher_def.txt
033_pas_cipher_file_2_solution.txt
034_pas_soundbox.txt
035_pas_crcscript.txt
035_pas_CRCscript_modbus.txt
036_pas_includetest.txt
036_pas_includetest_basta.txt
037_pas_define_demo32.txt
038_pas_box_demonstrator.txt
282_fadengraphik.txt
283_SQL_API_messagetimeout.txt
284_SysTools4.txt
285_MineForm_GR32.TXT
285_MineForm_GR32main.TXT
285_MineForm_GR32mainsolution.TXT
285_MineForm_propas.TXT
285_MineForm_propas2.TXT
285_minesweeper2.TXT
285_Patterns_process.txt
286_colormixer_jpeg_charcounter.txt
286_colormixer_jpeg_charcounter2.txt
287_eventhandling.txt
287_eventhandling2.txt
287_eventhandling2_negpower.txt
288_bitblt.txt
288_bitblt_resize.txt
289_regression.txt
289_regression2.txt
290_bestofbox.txt
290_bestofbox2.txt
290_bestofbox3.txt
291_3sort_visual_thread.txt
292_refactoring2.txt
293_bold_utils.txt
293_ib_utils.txt
293_ib_utils_timetest.txt
294_maxcalc_demo.txt
294_maxcalc_demo2.txt
295_easter_calendar.txt
295_easter_calendar2.txt
295_easter_combobox.txt
297_atomimage.txt
297_atomimage2.txt
297_atomimage3.txt
297_atomimage4.txt
297_maxonmotor.TXT
297_maxon_atomimage9.txt
298_bitblt_animation.txt
298_bitblt_animation2.txt
298_bitblt_animation3.txt
298_bitblt_animation4.txt
298_bitblt_animation4_screensaver.txt
298_bitblt_animation5_screensaver.txt
299_animation.txt
299_animationmotor_arduino.txt
299_animation_formprototype.txt
299_realtimeclock_arduino.txt
299_realtimeclock_arduino2.txt
300_treeview.txt
300_treeview_test.txt
300_treeview_test2.txt
300_treeview_test3.txt
301_LED_Arduino3.txt
301_led_arduino3_simple.txt
301_led_arduino3_simplecode.txt
301_log_arduino.txt
301_log_arduino2.txt
301_SQL_DBfirebird3.txt
301_SQL_DBfirebird4.txt
302_LCLActivity_java.txt
302_LED_DataLogger.txt
303_Android_LCLActivity_java.txt
303_webserver.txt
303_webserver2.txt
303_webserver_alldocs2.txt
303_webserver_alldocs2_tester.txt
303_webserver_minimal.txt
303_webserver_simple.txt
304_st_system.txt
305_indy_elizahttpserver.TXT
305_indy_elizahttpserver2.TXT
305_indy_elizahttpserver3.TXT
305_indy_elizahttpserver4file.TXT
305_webserver_arduino.txt
305_webserver_arduino2.txt
305_webserver_arduino3.txt
305_webserver_arduino3ibz.txt
305_webserver_arduino3ibz_rgb_led.txt
305_webserver_arduino3test.txt

22043: 039_pas_dllcall.txt
22044: 040_paspointer.txt
22045: 040_paspointer_old.txt
22046: 041_pasplotter.txt
22047: 041_pasplotter_plus.txt
22048: 042_pas_kgv_ggt.txt
22049: 043_pas_proceduretype.txt
22050: 044_pas_14queens_solwith14.txt
22051: 044_pas_8queens.txt
22052: 044_pas_8queens_sol2.txt
22053: 044_pas_8queens_solutions.txt
22054: 044_queens_performer.txt
22055: 044_queens_performer2.txt
22056: 044_queens_performer2tester.txt
22057: 045_pas_listhandling.txt
22058: 046_pas_records.txt
22059: 047_pas_modula10.txt
22060: 048_pas_romans.txt
22061: 049_pas_ifdemo.txt
22062: 049_pas_ifdemo_BROKER.txt
22063: 050_pas_primetest2.txt
22064: 050_pas_primetester_thieves.txt
22065: 050_program_starter.txt
22066: 050_program_starter_performance.txt
22067: 051_pas_findtext_solution.txt
22068: 052_pas_text_as_stream.txt
22069: 052_pas_text_as_stream_include.txt
22070: 053_pas_singleton.txt
22071: 054_pas_speakpassword.txt
22072: 054_pas_speakpassword2.txt
22073: 054_pas_speakpassword_searchtest.txt
22074: 055_pas_factorylist.txt
22075: 056_pas_demeter.txt
22076: 057_pas_dirfinder.txt
22077: 058_pas_filefinder.txt
22078: 058_pas_filefinder_pdf.txt
22079: 058_pas_filefinder_screview.txt
22080: 058_pas_filefinder_screview2.txt
22081: 058_pas_filefinder_screview3.txt
22082: 059_pas_timertest.txt
22083: 059_pas_timertest_2.txt
22084: 059_pas_timertest_time_solution.txt
22085: 059_timerobject_starter2.txt
22086: 059_timerobject_starter2_ibz2_async.txt
22087: 059_timerobject_starter2_uml.txt
22088: 059_timerobject_starter2_uml_main.txt
22089: 059_timerobject_starter4_ibz.txt
22090: 060_pas_datefind.txt
22091: 060_pas_datefind_exceptions2.txt
22092: 060_pas_datefind_exceptions_CHECKTEST.txt
22093: 060_pas_datefind_fulltext.txt
22094: 060_pas_datefind_plus.txt
22095: 060_pas_datefind_plus_mydate.txt
22096: 061_pas_randomwalk.txt
22097: 061_pas_randomwalk_plus.txt
22098: 062_paskorrelation.txt
22099: 063_pas_calculateform.txt
22100: 063_pas_calculateform_2list.txt
22101: 064_pas_timetest.txt
22102: 065_pas_bitcounter.txt
22103: 066_pas_eliza.txt
22104: 066_pas_eliza_include_sol.txt
22105: 067_pas_morse.txt
22106: 068_pas_piezo_sound.txt
22107: 069_LED_Matrix_R1_3_6_NV_PSchaer.TXT
22108: 069_my_LEDBOX.TXT
22109: 069_pas_ledmatrix.txt
22110: 069_pas_LEDMATRIX_Alphabet.txt
22111: 069_pas_LEDMATRIX_Alphabet_run.txt
22112: 069_pas_LEDMATRIX_Alphabet_tester.txt
22113: 069_PAS_LEDMATRIX_COLOR.TXT
22114: 069_pas_ledmatrix_fixedit.txt
22115: 069_pas_LEDMATRIX_soundbox.txt
22116: 069_pas_LEDMATRIX_soundbox2.txt
22117: 069_Richter_MATRIX.TXT
22118: 070_pas_functionplot.txt
22119: 070_pas_functionplotter2.txt
22120: 070_pas_functionplotter2_mx4.txt
22121: 070_pas_functionplotter2_tester.txt
22122: 070_pas_functionplotter3.txt
22123: 070_pas_functionplotter4.txt
22124: 070_pas_functionplotter_digital.txt
22125: 070_pas_functionplotter_elliptic.txt
22126: 070_pas_function_helmholtz.txt
22127: 070_pas_textcheck_experimental.txt
22128: 071_pas_graphics.txt
22129: 071_pas_graphics_drawsym.txt
22130: 071_pas_graphics_drawsym_save.txt
22131: 071_pas_graphics_random.txt

306_SPS_http_command.txt
307_all_booleanlogic.txt
308_bitbox3.txt
308_bitbox3_exec.txt
308_boolean_animation.txt
308_boolean_animation2.txt
309_regex_power.txt
309_regex_powertester2.txt
309_regex_powertester3.txt
310_regex_decorator.TXT
312_ListView.txt
313_dmath_dll.txt
314_fundamentals4_tester.TXT
315_funcplot_dmath.TXT
316_cfileutils_cdatetime_tester.TXT
317_excel_export_tester.TXT
318_excel_export.TXT
318_excel_export2.TXT
318_excel_export3.TXT
318_excel_export3_tester.TXT
319_superfunctions_math.TXT
319_superfunctions_mathdefect.TXT
320_superfunctions.TXT
320_superfunctions2.TXT
321_SQL_Excel.txt
321_SQL_Excel2.txt
321_SQL_Excel_Export.txt
321_SQL_ExportExec.txt
321_SQL_ExportTest.txt
321_SQL_SAS_tester3.txt
321_SQL_SAS_tester3_selfcompile.txt
321_SQL_SAS_tester3_selfcompile2.txt
321_SQL_SAS_tester4.txt
321_SQL_SAS_updater.txt
322_timezones.TXT
323_datefind_fulltext_search.txt
323_datefind_fulltext_searchtester.txt
324_interfacenavi.TXT
325_ampelsteuerung.txt
325_analogclock.txt
326_world_analogclock.txt
326_world_analogclock2.txt
327_atomimage_clock.txt
328_starfield.txt
329_starfield2.txt
330_myclock.txt
330_myclock2.txt
331_SQL_DBfirebird4.txt
332_jprofiler.txt
332_jprofiler_form.txt
332_jprofiler_form2.txt
333_querybyexample.txt
333_querybyexample2.txt
334_jvutils_u.txt
335_atomimage5.txt
335_atomimage6.txt
335_atomimage7.txt
336_digiclock.txt
336_digiclock2.txt
336_digiclock2test.txt
336_digiclock3.txt
337_4games.txt
337_4games_inone.txt
338_compress.txt
338_compress2.txt
339_ntfs.txt
340_docutype.txt
340_logsimulation.txt
340_logsimulation2.txt
340_soundControltype.txt
341_blix_clock.txt
341_blix_clock2.txt
341_blix_clock_tester.txt
342_set_enumerator.txt
343_dice2.txt
344_pe_header.txt
344_pe_header2.txt
345_velocity.txt
346_conversions.txt
347_pictureview.txt
348_duallistview.txt
349_biginteger.txt
350_parserform.txt
351_chartform.txt
351_chartform2.txt
351_chartform3.txt
352_array_unittest.txt
353_smtp_email.txt
353_smtp_email2.txt

22132: 072_pas_fractals.txt
22133: 072_pas_fractals_2.txt
22134: 072_pas_fractals_blackhole.txt
22135: 072_pas_fractals_perfomance.txt
22136: 072_pas_fractals_perfomance_new.txt
22137: 072_pas_fractals_perfomance_sharp.txt
22138: 072_pas_fractals_performance.txt
22139: 072_pas_fractals_performance_mX4.txt
22140: 073_pas_forms.txt
22141: 074_pas_chartgenerator.txt
22142: 074_pas_chartgenerator_solution.txt
22143: 074_pas_chartgenerator_solution_back.txt
22144: 074_pas_charts.txt
22145: 075_bitmap_Artwork2.txt
22146: 075_pas_bitmappuzzle.txt
22147: 075_pas_bitmappuzzle24.prod.txt
22148: 075_pas_bitmappuzzle2_prod.txt
22149: 075_pas_bitmappuzzle3.txt
22150: 075_pas_bitmapsolve.txt
22151: 075_pas_bitmap_Artwork.txt
22152: 075_pas_puzzlepas_solution.txt
22153: 076_pas_3dcube.txt
22154: 076_pas_circle.txt
22155: 077_pas_mmshow.txt
22156: 078_pas_pi.txt
22157: 079_pas_3dcube_animation.txt
22158: 079_pas_3dcube_animation4.txt
22159: 079_pas_3dcube_plus.txt
22160: 080_pas_hanoi.txt
22161: 080_pas_hanoi2.txt
22162: 080_pas_hanoi2_file.txt
22163: 080_pas_hanoi2_sol.txt
22164: 080_pas_hanoi2_tester.txt
22165: 080_pas_hanoi2_tester_fast.txt
22166: 080_pas_hanoi3.txt
22167: 081_pas_chartist2.txt
22168: 082_pas_biorythmus.txt
22169: 082_pas_biorythmus_solution.txt
22170: 082_pas_biorythmus_solution_3.txt
22171: 082_pas_biorythmus_test.txt
22172: 083_pas_GITARRE.txt
22173: 083_pas_soundbox_tones.txt
22174: 084_pas_waves.txt
22175: 085_mxsinus_logo.txt
22176: 085_sinus_plot_waves.txt
22177: 086_pas_graph_arrow_heart.txt
22178: 087_bitmap_loader.txt
22179: 087_pas_bitmap_solution.txt
22180: 087_pas_bitmap_solution2.txt
22181: 087_pas_bitmap_subimage.txt
22182: 087_pas_bitmap_test.txt
22183: 088_pas_soundbox2_mp3.txt
22184: 088_pas_soundbox_mp3.txt
22185: 088_pas_sphere_2.txt
22186: 089_pas_gradient.txt
22187: 089_pas_maxland2.txt
22188: 090_pas_sudoku4.txt
22189: 090_pas_sudoku4_2.txt
22190: 091_pas_cube4.txt
22191: 092_pas_statistics4.txt
22192: 093_variance.txt
22193: 093_variance_debug.txt
22194: 094_pas_daysold.txt
22195: 094_pas_stat_date.txt
22196: 095_pas_ki_simulation.txt
22197: 096_pas_geisen_problem.txt
22198: 096_pas_montyhall_problem.txt
22199: 097_lotto_proofofconcept.txt
22200: 097_pas_lottocombinations_beat_plus.txt
22201: 097_pas_lottocombinations_beat_plus2.txt
22202: 097_pas_lottocombinations_universal.txt
22203: 097_pas_lottosimulation.txt
22204: 098_pas_chartgenerator_plus.txt
22205: 099_pas_3D_show.txt
22206: 200_big_numbers.txt
22207: 200_big_numbers2.txt
22208: 201_streamload_xml.txt
22209: 202_systemcheck.txt
22210: 203_webservice_simple_intftester.txt
22211: 204_webservice_simple.txt
22212: 205_future_value_service.txt
22213: 206_DTD_string_functions.txt
22214: 207_ibz2_async_process.txt
22215: 208_crc32_hash.txt
22216: 209_cryptohash.txt
22217: 210_public_private.txt
22218: 210_public_private_cryptosystem.txt
22219: 211_wipe_pattern.txt
22220: 211_wipe_pattern2.txt

354_josephus.txt
355_life_of_PI.txt
356_3D_printer.txt
357_fplot.TXT
358_makesound.txt
359_charsetrules.TXT
360_allobjects.TXT
360_JvPaintFX.TXT
361_heartbeat_wave.TXT
362_maxonmotor2.TXT
363_compress_services.txt
363_compress_services2.txt
364_pdf_services.txt
365_memorystream.txt
365_memorystream2.txt
365_memorystream_test.txt
365_U_HexView.txt
366_mp3player.txt
366_mp3player2.txt
366_mp3player2_themestest.txt
367_silvi_player_widgets.txt
367_silvi_player_widgets2.txt
367_widgets.txt
368_configuration_demo.txt
369_macro_demo.txt
370_callback2grid.TXT
370_richedit.txt
370_richedit_highlight.txt
370_synedit.txt
370_synedit2.txt
370_synedit2_mxtester.txt
370_synedit2_mxtester2.txt
371_maXbook_v4tester.txt
372stackibz2_memoryalloc.TXT
372_synedit_export.txt
373_batman.txt
373_fractals_tvout.txt
374_realtime_random.txt
374_realtime_random2.txt
374_realtime_randomtest.txt
374_realtime_randomtest2.txt
375_G9_musicbox.txt
376_collections_list.txt
377_simpleXML.txt
377_smartXML.txt
377_smartXMLWorkshop.txt
377_smartXMLWorkshop2.txt
378_queryperformance3.txt
378_REST1.txt
378_REST2.txt
379_timefunc.txt
379_timefunctesterfilemon.txt
380_coolfunc.txt
380_coolfunc2.txt
380_coolfunc_tester.txt
381_bitcoin_simulation.txt
382_GRMath.TXT
382_GRMath_PI_Proof.TXT
382_GRMath_Riemann.TXT
383_MDAC_DCOM.txt
384_TeamViewerID.TXT
386_InternetRadio.TXT
387_fulltextfinder.txt
387_fulltextfinder_cleancode.txt
387_fulltextfinder_fast.txt
387_fulltext_getscripttest.txt
388_TCPServerSock.TXT
388_TCPServerSock2.TXT
388_TCPServerSockClient.TXT
389_TAR_Archive.TXT
389_TAR_Archive_test.TXT
389_TAR_Archive_test2.TXT
390_Callback3.TXT
390_Callback3Rec.TXT
390_CallbackClean.TXT
390_StringlistHTML.TXT
391_ToDo_List.TXT
392_Barcode.TXT
392_Barcode2.TXT
392_Barcode23.TXT
392_Barcode2scholz.TXT
392_Barcode3scholz.TXT
393_QRCode.TXT
393_QRCode2.TXT
393_QRCode2Direct.TXT
393_QRCode2DirectIndy.TXT
393_QRCode2Direct_detlef.TXT
393_QRCode3.TXT
394_networkgraph.TXT

22221: 211_wipe_pattern_solution.txt
22222: 212_pas_statisticmodule4.TXT
22223: 212_pas_statisticmoduletxt.TXT
22224: 212_statisticmodule4.txt
22225: 213_pas_BBP_Algo.txt
22226: 214_mxdocudemo.txt
22227: 214_mxdocudemo2.txt
22228: 214_mxdocudemo3.txt
22229: 215_hints_test.TXT
22230: 216_warnings_test.TXT
22231: 217_pas_heartbeat.txt
22232: 218_biorythmus_studio.txt
22233: 219_cipherbox.txt
22234: 219_crypt_source_comtest_solution.TXT
22235: 220_cipherbox_form.txt
22236: 220_cipherbox_form2.txt
22237: 221_bcd_explain.txt
22238: 222_memoform.txt
22239: 223_directorybox.txt
22240: 224_dialogs.txt
22241: 225_sprite_animation.txt
22242: 226_ASCII_Grid2.TXT
22243: 227_animation.txt
22244: 227_animation2.txt
22245: 228_android_calendar.txt
22246: 229_android_game.txt
22247: 229_android_game_tester.txt
22248: 230_DataProvider.txt
22249: 230_DataSetProvider.txt
22250: 230_DataSetXMLBackupScholz.txt
22251: 231_DBGrid_access.txt
22252: 231_DBGrid_XMLaccess.txt
22253: 231_DBGrid_XMLaccess2.txt
22254: 231_DBGrid_XMLaccess_locatetester.txt
22255: 231_DBGrid_XML_CDS_local.txt
22256: 232_outline.txt
22257: 232_outline_2.txt
22258: 233_modular_form.txt
22259: 234_debugoutform.txt
22260: 235_fastform.TXT
22261: 236_componentpower.txt
22262: 236_componentpower_back.txt
22263: 237_pas_4forms.txt
22264: 238_lottogen_form.txt
22265: 239_pas_sierpinski.txt
22266: 239_pas_sierpinski2.txt
22267: 240_unitGlobal_tester.txt
22268: 241_db3_sql_tutorial.txt
22269: 241_db3_sql_tutorial2.txt
22270: 241_db3_sql_tutorial2fix.txt
22271: 241_db3_sql_tutorial3.txt
22272: 241_db3_sql_tutorial3connect.txt
22273: 241_db3_sql_tutorial3_fptest.txt
22274: 241_RTL_SET2.txt
22275: 241_RTL_SET2_tester.txt
22276: 242_Component_Control.txt
22277: 243_tutorial_loader.txt
22278: 244_script_loader_loop.txt
22279: 245_formapp2.txt
22280: 245_formapp2_tester.txt
22281: 245_formapp2_testerX.txt
22282: 246_httpapp.txt
22283: 247_datecalendar.txt
22284: 248_ASCII_Grid2_sorted.TXT
22285: 249_picture_grid.TXT
22286: 250_tipsandtricks2.txt
22287: 250_tipsandtricks3.txt
22288: 250_tipsandtricks3api.txt
22289: 250_tipsandtricks3_admin_elevation.txt
22290: 250_tipsandtricks3_tester.txt
22291: 250_tipsandtricks4_tester.txt
22292: 250_tipsandtricks4_tester2.txt
22293: 251_compare_noise_gauss.txt
22294: 251_whitenoise.txt
22295: 251_whitenoise2.txt
22296: 252_hilbert_turtle.txt
22297: 252_pas_hilbert.txt
22298: 253_opearatingsystem3.txt
22299: 254_dynarrays.txt
22300: 255_einstein.txt
22301: 256_findconsts_of_EXE.txt
22302: 256_findfunctions2_of_EXE.txt
22303: 256_findfunctions2_of_EXEaverp.txt
22304: 256_findfunctions2_of_EXEspec.txt
22305: 256_findfunctions3.txt
22306: 256_findfunctions_of_EXE.txt
22307: 257_AES_Cipher.txt
22308: 258_AES_cryptobox.txt
22309: 258_AES_cryptobox2.txt
394_networkgraph_depwalkutilstest.TXT
394_networkgraph_depwalkutilstest2.TXT
395_USBController.TXT
396_Sort.TXT
397_Hotlog.TXT
397_Hotlog2.TXT
398_ustrings.txt
399_form_templates.txt
400_fplottchart.TXT
400_fplottchart2.TXT
400_fplottchart2teetest.TXT
400_QRCodeMarket.TXT
401_tfilerun.txt
402_richedit2.txt
403_outlookspy.txt
404_simplebrowser.txt
405_datefinder_today.txt
406_portscan.txt
407_indydemo.txt
408_testroboter.txt
409_excel_control.txt
410_keyboardevent.txt
411_json_test.txt
412_Zeosutils.txt
413_listview2.txt
414_avrdude_flash.txt
415_avrdude_writehex.txt
416_sonar_startscriptEKON.TXT
416_sonar_startscriptEKON_reporting.TXT
417_GRMath_PI_Proof2.TXT
418_functional_paradigm.txt
419_archimedes_spiral.txt
419_archimedes_spiral2.txt
420_archimedes_arduino.txt
420_Lissajous.txt
421_PI_Power.TXT
421_PI_Power2.TXT
422_world_bitboxx.txt
423_game_of_life.TXT
423_game_of_life2.TXT
423_game_of_life3.TXT
423_game_of_life3_test.TXT
423_game_of_life4.TXT
423_game_of_life4_kryptum.TXT
424_opengl_tester.txt
425_reversi_game.txt
426_IBUtils.TXT
427_IBDatabase.TXT
428_SortGrid.TXT
429_fileclass.txt
430_fileoperation.txt
430_fileoperation_tester.txt
431_performance_index.txt
432_shortstring_routines.txt
433_video_avicap.txt
433_video_avicap2.txt
434_GSM_module.TXT
435_httpcommon.txt
436_GraphicSplitter.txt
436_GraphicSplitter_form.txt
436_GraphicSplitter_form2.txt
436_teetest_screen.TXT
436_teetest_screen2.TXT
437_WinAPItop.txt
437_WinAPItop_Firebirdtester.txt
438_OvcInternational.txt
439_AsyncFreeDemo.txt
439_AsyncFreeDemoForm.txt
440_DLL_Tutor.txt
440_DLL_Tutor2.txt
440_XML_Tutor.txt
440_XML_Tutor2.txt
441_make_app.txt
442_arduino_rgb_led.txt
443_webserver_arduino_rgb_light.txt
443_webserver_arduino_rgb_light4.txt
444_webserver_arduino3ibz_rgb_led_basta.txt
445_datagrid.txt
445_datagrid2.txt
445_datagrid_android_arduino.txt
446_arduino_timer.txt
447_patternFrm_mx3.txt
448_Synapse.txt
448_Synapse2.txt
449_dweb_start_tester.txt
450_Synapse_HTTPS.txt
450_Synapse_Mime.txt
450_Synapse_ScanPing.txt
451_ocx_player.txt

```
22310: 258_AES_cryptobox2_passdlg.txt
22311: 259_AES_crypt_directory.txt
22312: 260_sendmessage_2.TXT
22313: 260_sendmessage_beta.TXT
22314: 261_probability.txt
22315: 262_mxoutputdemo4.txt
22316: 263_async_sound.txt
22317: 264_vclutils.txt
22318: 264_VCL_utils2.txt
22319: 265_timer_API.txt
22320: 266_serial_interface.txt
22321: 266_serial_interface2.txt
22322: 266_serial_interface3.txt
22323: 267_ackermann_rec.txt
22324: 267_ackermann_variants.txt
22325: 268_DBGrid_tree.txt
22326: 269_record_grid.TXT
22327: 270_Jedi_FunctionPower.txt
22328: 270_Jedi_FunctionPowertester.txt
22329: 271_closures_study.txt
22330: 271_closures_study_workingset2.txt
22331: 272_pas_function_show.txt
22332: 273_pas_function_show2.txt
22333: 274_library_functions.txt
22334: 275_turtle_language.txt
22335: 275_turtle_language_save.txt
22336: 276_save_algo.txt
22337: 276_save_algo2.txt
22338: 277_functionsfor39.txt
22339: 278_DB_Dialogs.TXT
22340: 279_hexer2.TXT
22341: 279_hexer2macro.TXT
22342: 279_hexer2macroback.TXT
22343: 280_UML_process.txt
22344: 280_UML_process_knabe2.txt
22345: 280_UML_process_knabe3.txt
22346: 280_UML_process_TIM_Botzenhardt.txt
22347: 280_UML_TIM_Seitz.txt
22348: 281_picturepuzzle.txt
22349: 281_picturepuzzle2.txt
22350: 281_picturepuzzle3.txt
22351: 281_picturepuzzle4.txt
22352: 479_inputquery.txt
22353: 480_regex_pathfinder2.txt
22354: 482 processPipe.txt
22355: 483_PathFuncTest_mX.txt
22356: 485_InnoFunc.txt
22357: 487_asyncKeyState.txt
22358: 489_simpleComport.txt
22359: 491_analogmeter.txt
22360: 493_gadgets.txt
22361: 496_InstallX.txt
22362: 498_UnitTesting.txt
22363: 500_diceoflifes.txt
22364:
22365:
22366:
22367: Web Script Examples:
22368:
22369: http://www.softwareschule.ch/examples/performer.txt';
22370: http://www.softwareschule.ch/examples/turtle.txt';
22371: http://www.softwareschule.ch/examples/SQLExport.txt';
22372: http://www.softwareschule.ch/examples/Richter.txt';
22373: http://www.softwareschule.ch/examples/checker.txt';
22374: http://www.softwareschule.ch/examples/demoscript.txt';
22375: http://www.softwareschule.ch/examples/ibzresult.txt';
22376: http://www.softwareschule.ch/examples/performindex.txt
22377: http://www.softwareschule.ch/examples/processlist.txt
22378: http://www.softwareschule.ch/examples/game.txt
22379:
22380: SHA1:  maXbox3.exe 9332386628C609D8DAE419C5D76F010C89380BD7
22381: CRC32: maXbox3.exe CBF39DA2
22382: Ref:
22383:     1. writeln(SHA1(Exepath+'\maxbox3.exe'))
22384:     2. shdig: TSHA1Digest;
22385:        shdig:= GetSHA1OfFile(false,exepath+'\maxbox3.exe');
22386:                for i:= 0 to 19 do write(BytetoHex(shdig[i]));
22387:
22388:     3. writeln(IntToHex(CRC32OfFile(exepath+'\maxbox3.exe'),4));
22389:
22390:   ---- bigbitbox code_cleared_checked----
```

```
451_OCX_WinPlayer2.txt
452_dbtreeview.txt
452_dbtreeview2.txt
453_stdfuncs.txt
454_fileStream.txt
455_functionfun.txt
455_functionfun2.txt
455_functionfun2_test.txt
457_ressource_grid.txt
458_atomimageX.txt
459_cindyfunc.txt
459_cindyfunc2.txt
460_TopTenFunctions.txt
461_sqlform_calwin.txt
462_caesarcipher.txt
463_global_exception.txt
464_function_procedure.txt
464_function_procedure2.txt
464_function_procedure3.txt
465_U_HexView.txt
466_moon.txt
466_moon_inputquery.txt
4671_cardmagic.txt
467_helmholtz_graphic.txt
468_URLMon.txt
468_URLMon2.txt
469_formarrow.txt
469_formarrow_datepicker.txt
469_formarrow_datepicker_ibz_result.txt
469_ibzresult.txt
470_DFFUtils_compiled.txt
470_DFFUtils_ScrollingLED.txt
470_Oscilloscope.txt
470_Oscilloscope_code.txt
471_cardmagic.txt
471_cardmagic2.txt
472_allcards.TXT
473_comboset.txt
474_wakeonlan.txt
474_wakeonlan2.txt
476_getscripttest.txt
477_filenameonly.txt
480_regex_pathfinder.txt
481_processList.txt
482 processPipeGCC.txt
484_filefinder3.txt
486_VideoGrabber.txt
488_asyncTerminal.txt
490_webCamproc.txt
492_snowflake2.txt
495_fourierfreq.txt
497_LED.txt
499_mulu42.txt
```