GeoPAD - Mobile GIS/GPS SDK

GeoPAD Version 2.1

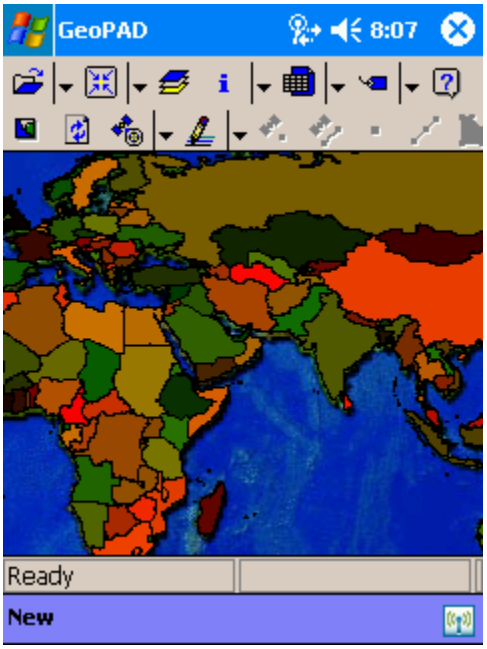
System requirements

Operating System:	Windows Mobile 2003, Windows Mobile 2003 Second edition, Windows Mobile 5.0
Hardware:	Pocket PC
Processor:	ARM-based processors
Free Space:	Minimum 2 MB
Synchronization Software:	Microsoft ActiveSync 3.8 or higher

GeoPAD SDK supports the following data formats:

- ESRI shape files (shp. shx, dbf)
- Windows® bit map
- JPEG

GeoPAD Version 2.1 SDK is useful in mobile mapping and GIS application. GeoPAD provides database access, mapping, GIS, and global positioning system (GPS) integration to users out in the field via mobile devices. GeoPAD supports a multi layer environment with vector map and raster image display that includes aerial photographs and satellite imagery. Images are stored as raster data, where each cell in the image has a row and column number. Shape files are stored in real-world coordinates. In order to display images with shape files, it is necessary to establish an image-to-world transformation that converts the image coordinates to real-world coordinates. Jpeg Image formats store this information in a separate ASCII file. This file is generally referred to as the world file, since it contains the real-world transformation information used by the image.



GeoPAD has a number of map navigation display and query tools, including

- Window zoom in
- Window zoom out
- Fixed zoom in
- Fixed zoom out
- Zoom active layer
- Zoom selected
- Pan
- Center Point (x, y)
- Measure distance
- Point selection
- Identify features by tapping on entity
- Edit shape object
- Delete shape object
- Create new shape object
- Find entity by keyword using match case and match whole word
- Label, arrow label
- Display Active layer table
- Query on Active layer

Development Requirement:
Pentium-III, 800 MHz or faster, 256 MB (512 MB recommended), 1 GB HDD, CD-ROM drive, Windows 2000; Windows XP, Microsoft eMbedded Visual C++ 4.0 Service Pack 4**,** Windows Mobile Pocket PC 2003 SDK, Visual C++. NET 2005, Visual Basic.NET 2005, Visual C#. NET 2005.

Mobile GIS/GPS SDK includes:

- Sample.exe- eMbedded Visual C++ 4.0 Sample Source code
- GeoPAD.h (For eMbedded Visual C++ 4.0 and Visual C++. NET 2005 application)
- GeoPAD.dll (For eMbedded Visual C++ 4.0 & Visual C++. NET 2005)
- GeoPADVC.NET.dll & GeoPADVB.NET.dll (For Visual Basic.NET & C#. NET 2005) **(**UNDER TESTING)

Supports: eMbedded Visual C++ 4.0, Visual Basic .NET, Visual C++. NET, C# .NET 2005(Mobile Device).
Operating Systems: Microsoft Windows Mobile 2003, 2003 Second Edition, Mobile window 5.0

Example: (eMbedded Visual C++ 4.0)

Start eMbedded Visual C++ 4.0.
Create new Project
Insert **GeoPAD.h** file in your eMbedded Visual C++ 4.0 application.
Make GeoPAD Control variable as below
CGeoPADCtrl geoPAD;

GeoPAD. AddLayer(_T“My Documents\\test.shp”));
GeoPAD.ZoomExt(0,0,240,320);

GeoPAD. DrawLayer(pDC->m_hDC);

Example: (Visual Basic.NET 2005)

Start Visual C++.NET 2005
File -> New Project -> Visual C++-> Smart Device -> Device Application -> Click OK.

Insert **GeoPAD.h** file in your Visual C++.NET 2005 application.
Make GeoPAD Control variable as below
CGeoPADCtrl geoPAD;

GeoPAD. AddLayer(_T“My Documents\\test.shp”));
GeoPAD.ZoomExt(0,0,240,320);

GeoPAD. DrawLayer(pDC->m_hDC);

Example: (Visual Basic.NET 2005)

Start Visual Basic.NET 2005
File -> New Project -> Visual Basic -> Smart Device -> Device Application -> Click OK.
Project -> Add Reference -> Browse - > **GeoPADVB.NET.dll** -> Click OK
Insert button on form from Toolbox
Open Form1.vb source code

```
Public Class Form1
    Dim geoPAD As New GeoPADVB.NET.GeoPADCtrl

    Private Sub Button1_Click(……
        geoPAD.AddLayer("\My Documents\Sample.shp")
        geoPAD.ZoomExt(0,0,240,320)
    End Sub

    Private Sub Form1_Paint(…..
        Dim hdc As Long
        hdc = e.Graphics.GetHdc
        geoPAD.DrawLayer(hdc)
```

```
            e.Graphics.ReleaseHdc(hdc)
        End Sub

    End Class
```

Connect Pocket PC and Desktop PC with Microsoft ActiveSync
Build - > Build Application
Build - > Deploy Application

Example: (Visual C#.NET 2005)

Start Visual C#.NET 2005
File -> New Project -> Visual C# -> Smart Device -> Device Application -> Click OK.
Project -> Add Reference -> Browse - > **GeoPADVB.NET.dll** -> Click OK
Insert button on form from Toolbox
Open Form1.cs source code

```
public partial class Form1 : Form
  {
        GeoPADVB.NET.GeoPADCtrl geo = new GeoPADVB.NET.GeoPADCtrl();

        private void button1_Click( ……
        {
            Graphics xGraph;
             Long hdc = (long)xGraph.GetHdc();
             geo.AddLayer("\\My Documents\\sample.shp");
             geo.ZoomExt(0,0,200,200);
             geo.DrawLayer(hdc);
             xGraph.ReleaseHdc(hdc); End Sub
        }
 }
```

Connect Pocket PC and Desktop PC with Microsoft ActiveSync
Build - > Build Application
Build - > Deploy Application

For Visual Basic.NET and C#.NET 2005

Copy GeoPAD.dll, GeoPADVC.NET.dll, GeoPADVB.NET.dll and Sample.exe are in same folder. Install CompactFramework 2.0 in Pocket PC.
Download CompactFramework 2.0 http://www.geopad.net/info.htm

GeoPAD SDK Functions

License

Function (Syntax): bool License(char *key)
Parameters: key – License key for GeoPAD SDK
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD.License (“ XYZ ”);      XYZ = License key (will be provided when you purchase SDK )
```

Add Layer

Function (Syntax): bool AddLayer (char *LayerPath)
Parameters: LayerPath - Shape or Image Layer path
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD.AddLayer (_T(“\\My Document\\xyz.shp”));
```

Open Project File

Function (Synta_): bool OpenProject(char *ProjectPath)
Parameters: ProjectPath - A string that is the path of project file(.gsp)
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD.OpenProject (_T(“\\My Document\\abc.gsp”));
```

Save Layers in Project File

Function (Syntax): bool SaveProject(char *ProjectPath)
Parameters: ProjectPath - A string that is the path of project file(.gsp)
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. SaveProject (_T(“\\My Document\\abc.gsp”));
```

Save Legend

Function (Syntax): bool SaveLegend ()
Parameters: none
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. SaveLegend ();
```

Close All Layers

Function (Syntax): bool RemoveAll()
Parameters: none
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. RemoveAll ();
```

Close Active layer

Function (Syntax): bool RemoveLayer()
Parameters: none
Returns: bool - Return true if successful else false
Example:

```
bool ret;
```

```
ret = geoPAD. RemoveLayer ();
```

Get Total layers

Function (Syntax): int GetTotalLayer()
Parameters: none
Returns: int - Return total layer if successful else zero.
Example:

```
int noLayer
noLayer = geoPAD. GetTotalLayer ();
```

Get total object in Active Layer

Function (Syntax): int GetTotalObj()
Parameters: none
Returns: int - Return total object in active layer if successful else zero.
Example:

```
int noObj;
noObj = geoPAD. GetTotalObj ();
```

Get Shape(Polygon) Object color(Active Layer)

Function (Syntax): long GetObjFillColor(int ShapeIndex)
Parameters: ShapeIndex – Shape index to get Object color
Returns: long - Return object color if successful else -1.
Example:

```
long shpIndexColor;
shpIndexColor  = geoPAD. GetObjFillColor (5);
```

Set Shape(Polygon) Object color(Active Layer)

Function (Syntax): bool SetObjFillColor(int ShapeIndex,long fColor)
Parameters: ShapeIndex – Shape index to set Object color
fColor – Object Color
Returns: long - Return object color if successful else -1.
Example:

```
bool ret;
ret = geoPAD. SetObjFillColor(5, RGB(255,0,0));
```

Get Shape(Point and Line) Object color(Active Layer)

Function (Syntax): long GetObjLineColor (int ShapeIndex)
Parameters: ShapeIndex – Shape index to get Object color
Returns: long - Return object color if successful else -1.
Example:

```
long shpIndexColor;
shpIndexColor  = geoPAD. GetObjLineColor (5);
```

Set Shape(Point and Line) Object color(Active Layer)

Function (Syntax): bool SetObjLineColor (int ShapeIndex,long fColor)
Parameters: ShapeIndex – Shape index to set Object color
fColor – Object Color
Returns: long - Return object color if successful else -1.
Example:

```
bool ret;
ret = geoPAD. SetObjLineColor (5, RGB(255,0,0));
```

Delete selected Shape index

Function (Syntax): bool DeleteShpIndex()
Parameters: none
Returns: bool – return true if successful else false
Example:

```
bool  ret;
ret = geoPAD. DeleteShpIndex ();
```

Set layer Order (Sequence)

Function (Syntax): bool SetLayerOrder(int num,int seq)
Parameters: num – layer number
seq – layer sequence
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. SetLayerOrder (2,1);
```

Get layer Order (Sequence)

Function (Syntax): int GetLayerOrder(int num)
Parameters: num – layer number
Returns: long - Return layer sequence if successful else -1.
Example:

```
int lseq;
lseq = geoPAD. GetLayerOrder (0);
```

Get Active layer Path

Function (Syntax): char * GetLayerPath()
Parameters: none
Returns: char * - Return layer path if successful else NULL.
Example:

```
Char *lPath;
lPath = geoPAD. GetLayerPath ();
```

Get Active layer Type(Image, Point, Line, Polygon)

Function (Syntax): int GetLayerType()
Parameters: none
Returns: int - Return layer type if successful else -1
Example:

```
int lType;
lType = geoPAD. GetLayerType ();
```

Get Active Polygon layer Fill Type

Function (Syntax): bool GetLayerFill()
Parameters: none
Returns: bool - Return true if Polygon layer is filled else false
Example:

```
bool  lFill;
lFill = geoPAD. GetLayerFill ();
```

Set Active Polygon layer Fill Type

Function (Syntax): bool SetLayerFill(bool onoff)
Parameters: bool – true for Active polygon layer fill on and false for fill off
Returns: bool - Return true if successful else false
Example:

```
bool  ret;
ret = geoPAD. SetLayerFill (true);
```

Get Layer On-Off

Function (Syntax): bool GetLayerOnOff()
Parameters: None
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. GetLayerOnOff ();
```

Set Layer On-Off

Function (Syntax): bool SetLayerOnOff(bool onoff)
Parameters: onoff- true for Active Layer on and false for off
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. SetLayerOnOff (false);
```

Draw Layers

Function (Syntax): bool DrawLayer(HDC hDC)
Parameters: hDC - Handle of the device context
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. DrawLayer (hDC);
```

Auto Redraw Layers

Function (Syntax): bool AutoRedraw (HDC hDC)
Parameters: hDC - Handle of the device context
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. AutoRedraw (hDC);
```

GeoPAD Tools

Function (Syntax): bool GSTools(HDC hDC,int buttonNum,int type,int x,int y)
Parameters: hDC - Handle of the device context
buttonNum and type *
x -Specifies the x-coordinate of window.
y - Specifies the y-coordinate of window
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. GSTools (hDC, 1, 1, x, y);
```

*buttonNum
1: Mouse(style) down
2: Mouse(style) move (Is not required in pocket PC)
3: Mouse(style) down+move
4: Mouse(style) up
type
1: Pan
2: Zoom window in
3: Zoom window out
4: Center x, y
5: Entity data
6: Shape properties
7: Enter Text - will be available next version
8: Arrow Text
9: Arrow Label
10:Edit Text and Label
11:Select Text and Label
12:Select by point
13:Length
14:Freehand Distance

15:Select object for edit
16:Edit vertex by manual, GPS or Delete vertex - popup menu
17: Move Shape Object
18: Move Vertex

Zoom Layers to Screen Extent

Function (Syntax): bool ZoomExt(int xMin,int yMin,int xMax,int yMax)
Parameters: xMin -Specifies the x-coordinate of the upper-left corner of the destination window.
yMin - Specifies the y-coordinate of the upper-left corner of the destination window
xMax - Specifies the width of the destination window.
yMax - Specifies the height of the destination window.
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. ZoomExt (10,10,200,300);
```

Zoom Layers

Function (Syntax): bool ZoomDraw(float zoom)
Parameters: zoom – 0.5 for zoom out by half & 2 for zoom in by double
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = GeoPAD. ZoomDraw (2);  //- zoom in by 2(double)
ret = GeoPAD. ZoomDraw (0.5);  //- zoom out by 0.5(half)
```

Zoom Layers In

Function (Syntax): bool ZoomWindowIn(int xMin,int yMin,int xMax,int yMax)
Parameters: xMin -Specifies the x-coordinate of the upper-left corner of the destination window.
yMin - Specifies the y-coordinate of the upper-left corner of the destination window
xMax - Specifies the width of the destination window.
yMax - Specifies the height of the destination window.
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. ZoomWindowIn (100,100,150,200);
```

Zoom Layers Out

Function (Syntax): bool ZoomWindowOut (int xMin,int yMin,int xMax,int yMax)
Parameters: xMin -Specifies the x-coordinate of the upper-left corner of the destination window.
yMin - Specifies the y-coordinate of the upper-left corner of the destination window
xMax - Specifies the width of the destination window.
yMax - Specifies the height of the destination window.
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. ZoomWindowOut (5,10,100,150);
```

Zoom Active Layer

Function (Syntax): bool ZoomCurrentLayer()
Parameters: none
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. ZoomCurrentLayer ();
```

Zoom layer

Function (Syntax): bool ZoomLayer(int layerNo)

Parameters: layerNo – layer number
Returns: bool - Return true if successful else false
Example:
bool ret;
ret = GeoPAD. ZoomLayer (1); // – zoom layer 1 to fit to screen

---

Zoom Shape Object (Index)

Function (Syntax): bool ZoomShapeId(int shpId)
Parameters: shpId – zoom index fit to screen
Returns: bool - Return true if successful else false
Example:
bool ret;
ret = geoPAD. ZoomShapeId (16);

Zoom selected

Function (Syntax): bool ZoomSelected()
Parameters: none
Returns: bool - Return true if successful else false
Example:
bool ret;
ret = geoPAD. ZoomSelected ();

Remove Selection

Function (Syntax): bool RemoveSelection()
Parameters: none
Returns: bool - Return true if successful else false
Example:
bool ret;
ret = geoPAD. RemoveSelection ();

Move Selected Feature to Center

Function (Syntax): bool CenterSelected ()
Parameters: none
Returns: bool - Return true if successful else false
Example:
bool ret;
ret = geoPAD. CenterSelected ();

Move (Pan) Layer to X and Y

Function (Syntax): bool Pan(int x,int y)
Parameters: x – pan in horizontal direction
Y - pan in vertical direction
Returns: bool - Return true if successful else false
Example:
bool ret;
ret = geoPAD. Pan (25,64);

Move X and Y to Center of screen

Function (Syntax): bool Recenter(int x,int y)
Parameters: x –horizontal value
Y - vertical value
Returns: bool - Return true if successful else false
Example:
bool ret;
ret = geoPAD. Recenter (25,64);

Move GPS to Center of screen

Function (Syntax): bool RecenterGPS(double x,double y)
Parameters: x –horizontal value
Y - Vertical value
Returns: bool - Return true if successful else false
Example:
bool ret;
ret = geoPAD. Recenter (74.354,25.623);

Get screen X co-ordinate from Map X co-ordinate

Function (Syntax): int GetX(double x)
Parameters: x –horizontal Map value
Returns: int - Return screen X Value if successful else 0
Example:
int xSc;
xSc = geoPAD. GetX (0.23354);

Get screen Y co-ordinate from Map Y co-ordinate

Function (Syntax): int GetY(double y)
Parameters: y –horizontal Map value
Returns: int - Return screen Y Value if successful else 0
Example:
int ySc;
ySc = geoPAD. GetY (2.37567);

Get Map X co-ordinate from Screen X co-ordinate

Function (Syntax): double GetMapX(int x)
Parameters: x –horizontal Screen value
Returns: double - Return Map X Value if successful else screen x value
Example:
double xMap;
xMap = geoPAD. GetMapX (23);

Get Map Y co-ordinate from Screen Y co-ordinate

Function (Syntax): double GetMapY(int y)
Parameters: y –horizontal Screen value
Returns: double - Return Map Y Value if successful else screen y value
Example:
int ySc;
ySc = geoPAD. GetMapY (37);

Get Latitude

Function (Syntax): char* GetLatitude(int x)
Parameters: x - x-coordinate of window
Returns: char * - Return latitude of map if successful else null
Example:
Char * lat;
lat = geoPAD. GetLatitude (26);

Get Longitude

Function (Syntax): char* GetLongitude(int y)
Parameters: y - y-coordinate of window
Returns: char * - Return longitude of map if successful else null
Example:
char * lon;
lon = geoPAD. GetLongitude (21);

Set Layer as Active(Current) Layer

Function (Syntax): int SetCurrentLayer(int curLayer)
Parameters: curLayer –layer number to set active (current)
Returns: bool - Return true if successful else false
Example:
bool ret;
ret = geoPAD. SetCurrentLayer (1);

Get Active(Current) Layer

Function (Syntax): int GetCurrentLayer()
Parameters: none
Returns: int - Return Active (Current) layer if successful else -1
Example:
int curLayer;
curLayer = geoPAD. GetCurrentLayer ();

Get Shape Index

Function (Syntax): int GetShpIdx(int x,int y)
Parameters: x – x coordinate of window
y – y coordinate of window
Returns: int - Return shape index if successful else -1
Example:
int shpIndex;
shpIndex = geoPAD. GetShpIdx (12,43);

Get Distance

Function (Syntax): double GetDistance(int x1, int y1, int x2, int y2)
Parameters: x1 - x1-coordinate of the window
Y1 – y1-coordinate of the window
X2 – x2-coordinate of the window
Y2 – y2-coordinate of the window
Returns: double - Return Distance if successful else 0.0
Example:
double dist;
dist = geoPAD. GetDistance (5,10,100,150);

Database Functions

Get Total Field in Active Layer

Function (Syntax): int GetFieldCount()
Parameters: None
Returns: int – return number of fields in active layer
Example:
int no;
no = geoPAD. GetFieldCount ();

Get Field Name

Function (Syntax): char* GetFieldName(int field)
Parameters: field – Field number (index)
Returns: char * – return field name
Example:
char * fName;
fName = geoPAD. GetFieldName (0);

Get Field Type

Function (Syntax): int GetFieldType(int field)
Parameters: field – Field number (index)

Returns: char * – return field type
Example:
```
int  fType;
fType = geoPAD. GetFieldType (0);
```

Get Total Records in Active Layer

Function (Syntax): int GetRecordCount()
Parameters: None
Returns: int – return number of records in active layer
Example:
```
int  no;
no = geoPAD. GetRecordCount ();
```

Get Field Value using field name

Function (Syntax): char* GetFieldValue(char* field)
Parameters: field – Field name
Returns: char * – return field Value
Example:
```
char *  fVal;
fVal = geoPAD. GetFieldValue ("CITY_NAME");
```

Get Field Value using field number

Function (Syntax): char* GetFieldNoValue(int field)
Parameters: field – Field number
Returns: char * – Return field Value
Example:
```
char *  fVal;
fVal = geoPAD. GetFieldValue (0);
```

Move Record Cursor to given number

Function (Syntax): bool Move(int rec)
Parameters: int rec – record number
Returns: bool – return true if successful else false
Example:
```
bool  ret;
ret = GeoPAD. Move (5);
```

Move Record cursor to First record

Function (Syntax): bool MoveFirst()
Parameters: none
Returns: bool – return true if successful else false
Example:
```
bool  ret;
ret = geoPAD. MoveFirst ();
```

Move Record cursor to Next record

Function (Syntax): bool MoveNext ()
Parameters: none
Returns: bool – return true if successful else false
Example:
```
bool  ret;
ret = geoPAD. MoveNext ();
```

Move Record cursor to Previous record

Function (Syntax): bool MovePrev ()
Parameters: none
Returns: bool – return true if successful else false

Example:
bool ret;
ret = geoPAD. MovePrev ();

Move Record cursor to Last record

Function (Syntax): bool MoveLast ()
Parameters: none
Returns: bool – return true if successful else false
Example:
bool ret;
ret = geoPAD. MoveLast ();

Query on Active Layer

Function (Syntax): bool Query(char* Qstr)
Parameters: Qstr – Query string *for detail
Returns: bool – return true if successful else false
Example:
bool ret;
ret = geoPAD. Query ("HOUSE_TYPE='RESIDENTIAL' AND TAX = 'PAID'");

---

*User can make query on active layer

- =
- <>
- >
- >=
- <
- <=
- AND
- OR
- AREA < 12635667 AND POPULATION > 35477
- POPULATION < 3506 AND DIST_NAME <> 'XYZ'
- DIST_NAME = 'XYZ'

Get Total Query Records

Function (Syntax): int GetQRecordCount()
Parameters: None
Returns: int – return number of query records
Example:
int no;
no = geoPAD. GetQRecordCount ();

Get Query Field Value using field name

Function (Syntax): char* GetQFieldValue(char* field)
Parameters: field – Field name
Returns: char * – return query field Value
Example:
char * fVal;

```
fVal = geoPAD. GetFieldValue ("CITY_NAME");
```

Get Query Field Value using field number

Function (Syntax): char* GetQFieldNoValue(int field)
Parameters: field – Field number
Returns: char * – Return query field Value
Example:

```
char *  fVal;
fVal = geoPAD. GetQFieldNoValue (0);
```

Move Query Record cursor to First record

Function (Syntax): int QMoveFirst()
Parameters: none
Returns: bool – return record number if successful else -1
Example:

```
int  rNo;
rNo = geoPAD. QMoveFirst ();
```

Move Query Record cursor to Next record

Function (Syntax): bool QMoveNext ()
Parameters: none
Returns: bool – return record number if successful else -1
Example:

```
int  rNo;
rNo = geoPAD. QMoveNext ();
```

Move Query Record cursor to Previous record

Function (Syntax): bool QMovePrev ()
Parameters: none
Returns: bool – return record number if successful else -1
Example:

```
int  rNo;
rNo = geoPAD. QMovePrev ();
```

Move Query Record cursor to Last record

Function (Syntax): bool QMoveLast ()
Parameters: none
Returns: bool – return record number if successful else -1
Example:

```
int  rNo;
rNo = geoPAD. QMoveLast ();
```

Find Object by database field value

Function (Syntax): bool Find(char* findStr,bool mw,bool mc)
Parameters: none
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. Find ("TORONTO",false,false);
```

Label Functions

Set Label Properties

Function (Syntax): bool LabelProp(char* fontType,long color,int size,int bold,bool ul,bool italic,bool scale)
Parameters: fontType – Label Font Type

Color – Label color
size – Label size
bold – Label bold
ul – Label underline
italic – Label italic
scale – Label scale

Returns: bool - Return true if successful else false
Example:
bool ret;
ret = geoPAD. LabelProp (“Arial”,RGB(255,0,0),15,false,false,false,false);

Remove Label

Function (Syntax): bool RemoveLabel()
Parameters: None
Returns: bool - Return true if successful else false
Example:
bool ret;
ret = geoPAD. RemoveLabel ();

Scale Label

Function (Syntax): bool SetLabelScale(bool scaleLabel)
Parameters: scaleLabel – true to scale label with Layer zoom in-out
Returns: bool - Return true if successful else false
Example:
bool ret;
ret = geoPAD. SetLabelScale ();

Remove All Label

Function (Syntax): bool RemoveAllLabel()
Parameters: None
Returns: bool - Return true if successful else false
Example:
bool ret;
ret = geoPAD. RemoveAllLabel ();

Set All Label on off

Function (Syntax): bool SetAllLabelOnOff(bool onoff)
Parameters: onoff- true for label on and false for label off
Returns: bool - Return true if successful else false
Example:
bool ret;
ret = geoPAD. SetAllLabelOnOff (true);

Get All Label on off

Function (Syntax): bool GetAllLabelOnOff()
Parameters: None
Returns: bool - Return true if successful else false
Example:
bool ret;
ret = geoPAD. GetAllLabelOnOff ();

Set Label on off

Function (Syntax): bool SetLabelOnOff(bool onoff)
Parameters: onoff – true to set label on and false to set label off
Returns: bool - Return true if successful else false
Example:
bool ret;

```
ret = geoPAD. SetLabelOnOff (true);
```

Get Label on off

Function (Syntax): bool GetLabelOnOff()
Parameters: None
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. GetLabelOnOff ();
```

Set Arrow Label on off

Function (Syntax): bool SetArrLabelOnOff(bool onoff)
Parameters: onoff – true to set Arrow label on and false to set Arrow label off
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. SetArrLabelOnOff (true);
```

Get Arrow Label on off

Function (Syntax): bool GetArrLabelOnOff()
Parameters: None
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. GetArrLabelOnOff ();
```

Delete Label

Function (Syntax): bool DeleteTextLabel()
Parameters: None
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. DeleteTextLabel ();
```

Remove Selected Text and Label

Function (Syntax): bool RemoveSelTextLabel()
Parameters: None
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. RemoveSelTextLabel ();
```

GPS functions

GPS Setting Dialog

Function (Syntax): bool SettingGPS()
Parameters: None
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. SettingGPS ();
```

Active GPS Device for data collection

Function (Syntax): bool ActiveGPS()
Parameters: None
Returns: bool - Return true if successful else false

Example:
```
bool ret;
ret = geoPAD. ActiveGPS ();
```

Active GPS Device (Open GPS communication port)

Function (Syntax): bool DeActiveGPS()
Parameters: None
Returns: bool - Return true if successful else false
Example:
```
bool ret;
ret = geoPAD. DeActiveGPS ();
```

Read GPS Data

Function (Syntax): int ReadGPSData()
Parameters: None
Returns: int – if 2 then Fix GPS position is available
Example:
```
bool ret;
ret = geoPAD. ReadGPSData ();
```

Draw GPS data String

Function (Syntax): bool DrawGPSString(HDC hDC)
Parameters: hDC – Handle of device context
Returns: bool - Return true if successful else false
Example:
```
bool ret;
ret = geoPAD. DrawGPSString (hDC);
```

Return GPS X Value

Function (Syntax): double GetGpsX()
Parameters: none
Returns: double - Return GPS x if successful else 0
Example:
```
double x;
x = geoPAD. GetGpsX ();
```

Return GPS Y Value

Function (Syntax): double GetGpsY()
Parameters: none
Returns: double - Return GPS y if successful else 0
Example:
```
double y;
y = geoPAD. GetGpsY ();
```

Select Object at GPS position from Active Layer

Function (Syntax): bool SelectAtGPS()
Parameters: none
Returns: bool - Return true if successful else false
Example:
```
bool ret;
ret = geoPAD. SelectAtGPS ();
```

Edit vertex for selected Object

Function (Syntax): bool SelectVertex(bool edit)
Parameters: edit – true for edit vertex else false
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. SelectVertex (true);
```

Check point on Vertex for selected Object

Function (Syntax): bool PointInVertex()
Parameters: None
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. PointInVertex ();
```

Move Vertex to GPS point for selected Object

Function (Syntax): bool MoveVertexToGPS()
Parameters: None
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. MoveVertexToGPS ();
```

Move Vertex to GPS point for selected Object

Function (Syntax): bool MoveVertexToGPS()
Parameters: None
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. MoveVertexToGPS ();
```

Move Vertex to X Y point for selected Object

Function (Syntax): bool MoveVertexTo()
Parameters: None
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. MoveVertexTo ();
```

Delete selected Vertex from selected Object

Function (Syntax): bool DeleteVertex()
Parameters: None
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. DeleteVertex ();
```

Start Vertex capturing

Function (Syntax): bool GPSCaptureStart()
Parameters: None
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. GPSCaptureStart ();
```

End Vertex capturing

Function (Syntax): bool GPSCaptureEnd()
Parameters: None
Returns: bool - Return true if successful else false
Example:

```
bool ret;
```

```
ret = geoPAD. GPSCaptureEnd ();
```

Capturing GPS Point

Function (Syntax): bool GPSPoint(HDC hDC)
Parameters: hDC – Handle of device context
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. GPSPoint (hDC);
```

Capturing Point

Function (Syntax): bool Point(HDC hDC,int x,int y)
Parameters: hDC – Handle of device context
X - x co-ordinate
Y – y co-ordinate
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. Point (hDC, 10, 20);
```

Dialog Functions

About Dialog Box

Function (Syntax): bool AboutDialog()
Parameters: None
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. AboutDialog ();
```

Layer Dialog Box

Function (Syntax): bool LayerDialog()
Parameters: None
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. LayerDialog ();
```

Edit Database field Dialog Box

Function (Syntax): bool EditFieldDialog()
Parameters: None
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. EditFieldDialog ();
```

Shape Index Dialog Box

Function (Syntax): bool ShpIndexDialog(int x,int y)
Parameters: None
Returns: bool - Return true if successful else false
Example:

```
bool ret;
ret = geoPAD. ShpIndexDialog ();
```

Shape Index Dialog Box for Editing

Function (Syntax): bool FetureIndexDialog()

Parameters: None
Returns: bool - Return true if successful else false
Example:
```
bool ret;
ret = geoPAD. FetureIndexDialog ();
```

Query Dialog Box

Function (Syntax): bool QueryDialog()
Parameters: None
Returns: bool - Return true if successful else false
Example:
```
bool ret;
ret = geoPAD. QueryDialog ();
```

New Layer Dialog Box

Function (Syntax): bool NewLayerDialog()
Parameters: None
Returns: bool - Return true if successful else false
Example:
```
bool ret;
ret = geoPAD. NewLayerDialog ();
```

Distance Dialog Box

Function (Syntax): bool DistDialog()
Parameters: None
Returns: bool - Return true if successful else false
Example:
```
bool ret;
ret = geoPAD. DistDialog ();
```

Label Dialog Box

Function (Syntax): bool LabelDialog()
Parameters: None
Returns: bool - Return true if successful else false
Example:
```
bool ret;
ret = geoPAD. LabelDialog ();
```

Arrow Label Dialog Box

Function (Syntax): bool GeoLabelDlg(bool arr)
Parameters: arr - true for arrow label doalog
Returns: bool - Return true if successful else false
Example:
```
bool ret;
ret = geoPAD. GeoLabelDlg ();
```

Find Dialog Box

Function (Syntax): bool FindDialog()
Parameters: None
Returns: bool - Return true if successful else false
Example:
```
bool ret;
ret = geoPAD. FindDialog ();
```

Active Layer database (DBF) Dialog Box

Function (Syntax): bool TableDialog()

Parameters: None
Returns: bool - Return true if successful else false
Example:
bool ret;
ret = geoPAD. TableDialog ();

Query result Dialog Box

Function (Syntax): bool QueryresultDialog()
Parameters: None
Returns: bool - Return true if successful else false
Example:
bool ret;
ret = geoPAD. QueryresultDialog ();

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