

File created: 13-Oct-87 16:32:42 {**ABLAG2:49/89/636/13:SIEMENS AG**}<DVSLISP>TOOLS<CANVASCONVERTE
R.;4

previous date: 7-Sep-87 11:16:38 {**ABLAG2:49/89/636/13:SIEMENS AG**}<DVSLISP>TOOLS<CANVASCONVERTER.;2

Read Table: XCL

Package: INTERLISP

Format: XCCS

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```
(RPAQQ CANVASCONVERTERCOMS ((FNS FETCHCANVAS VECLNGTH CALCULATEBYTES CALCULATEWIDTHBYTES CANVAS-FROM-WINDOW
                                CALCULATEHEIGHTFACTOR1 CALCULATEHEIGHTFACTOR2 CALCULATEWIDTHFACTOR1
                                CALCULATEWIDTHFACTOR2 WRITECANVAS SNAPBM)
                                (VARS BYTESPERWORD)
                                (FILES BITMAPFNS)))
```

(DEFINEQ

(**FETCHCANVAS**

(LAMBDA (|file|)

(* |edited:| " 9-Dec-86 17:59")
(* |created| |by:| |Giselbert| |Schramm|)
(* |Departement:| ZT ZTI SOF 232)
(* |Creation| |Date:| "20-Jun-86 20:16")

(* * |Reads| |the| |width| |and| |height| |of| |the| |bitmap| |in| |a| |given| |Canvas-file,| |extracts| |the| |bitmap| |using| |the|
READBINARYBITMAP |function| |and| |returns| |the| |bitmap| |as| |a| |result|)

```
(PROG (|saveinput| |bmwidth| |bmhigh| |result|)
      (SETQ |saveinput| (INFILE |file|))
      (SETFILEPTR |file| 56)
      (PRINT (CONCAT "FILEPTR > " (GETFILEPTR |file|))
              PROMPTWINDOW)
      (SETQ |bmwidth| (IDIFFERENCE (IPLUS (ITIMES (BIN)
                                                256)
                                      (BIN))
                                   4000))
      (PRINT (CONCAT "FILEPTR > " (GETFILEPTR |file|))
              PROMPTWINDOW)
      (SETQ |bmhigh| (IDIFFERENCE (IPLUS (ITIMES (BIN)
                                                256)
                                      (BIN))
                                   4000))
      (PRINT (CONCAT "FILEPTR > " (GETFILEPTR |file|))
              PROMPTWINDOW)
      (PRINT (CONCAT "width: " |bmwidth| " height: " |bmhigh|)
              PROMPTWINDOW)
      (SETFILEPTR |file| (IPLUS (GETFILEPTR |file|)
                                32))
      (PRINT (CONCAT "FILEPTR > " (GETFILEPTR |file|))
              PROMPTWINDOW)
      (SETQ |result| (READBINARYBITMAP |bmwidth| |bmhigh|))
      (INPUT |saveinput|)
      (CLOSEF |file|)
      (RETURN |result|)))
```

(**VECLNGTH**

(LAMBDA (WIDTH HEIGHT)

(* "edited by Steve Knowles, Siemens AG:" " 7-Sep-87 10:38")
(* (VECLNGTH 192 174) |edited:| "13-Aug-87 14:28")

```
(IPLUS 4 (IQUOTIENT (ITIMES HEIGHT (ITIMES (IQUOTIENT (IPLUS WIDTH 31)
                                                         32))
                    8))))
```

(**CALCULATEBYTES**

(LAMBDA (N)

(* "edited by Steve Knowles, Siemens AG:" " 7-Sep-87 10:38")

```
(SETQ FIRSTBYTE (IQUOTIENT N 65536))
(SETQ SECONDBYTE (IQUOTIENT (IMOD N 65536)
                             256))
(SETQ THIRDBYTE (IMOD N 256)))
```

(**CALCULATEWIDTHBYTES**

(LAMBDA NIL

(* "edited by Steve Knowles, Siemens AG:" " 7-Sep-87 10:38")

```
(SETQ FIRSTWIDTHBYTE (IQUOTIENT BMWIDTH 256))
(SETQ SECONDWIDTHBYTE (IMOD BMWIDTH 256)))
```

(**CANVAS-FROM-WINDOW**

(LAMBDA (WINDOW FILE)

(* |edited:| "26-Aug-87 12:02")

```
(LET* ((WINDOWREGION (WINDOWPROP WINDOW 'REGION))
        (HEIGHT (CADDR WINDOWREGION))
        (WIDTH (CADDR WINDOWREGION))
        (COPYBITMAP (BITMAPCREATE WIDTH HEIGHT)))
```

```
(BITBLT WINDOW 0 0 COPYBITMAP)
(WRITECANVAS COPYBITMAP FILE)))
```

(CALCULATEHEIGHTFACTOR1

```
(LAMBDA NIL
  (QUOTIENT (PLUS BMHEIGHT 4000)
    256)))
```

(* "edited by Steve Knowles, Siemens AG:" " 7-Sep-87 10:37")

(CALCULATEHEIGHTFACTOR2

```
(LAMBDA NIL
  (DIFFERENCE (PLUS BMHEIGHT 4000)
    (TIMES (QUOTIENT (PLUS BMHEIGHT 4000)
      256)
    256))))
```

(* "edited by Steve Knowles, Siemens AG:" " 7-Sep-87 10:37")

(CALCULATEWIDTHFACTOR1

```
(LAMBDA NIL
  (QUOTIENT (PLUS BMWIDTH 4000)
    256)))
```

(* "edited by Steve Knowles, Siemens AG:" " 7-Sep-87 10:37")

(CALCULATEWIDTHFACTOR2

```
(LAMBDA NIL
  (DIFFERENCE (PLUS BMWIDTH 4000)
    (TIMES (QUOTIENT (PLUS BMWIDTH 4000)
      256)
    256))))
```

(* "edited by Steve Knowles, Siemens AG:" " 7-Sep-87 10:37")

(WRITECANVAS

```
(LAMBDA (BITMAP FILE)
```

(* "edited by Steve Knowles, Siemens AG:" " 7-Sep-87 11:13")

(* "edited by Steve Knowles, Siemens AG:" " 7-Sep-87 10:35")

```
(PROG (COPYBITMAP BMHEIGHT BMWIDTH HEIGHTFACTOR1 HEIGHTFACTOR2 WIDTHFACTOR1 WIDTHFACTOR2 OUTFILE FIRSTBYTE
  SECONDBYTE THIRDBYTE FIRSTWIDTHBYTE SECONDWIDTHBYTE)
  (SETQ BMHEIGHT (BITMAPHEIGHT BITMAP))
  (SETQ BMWIDTH (BITMAPWIDTH BITMAP))
  (SETQ COPYBITMAP (BITMAPCREATE (ITIMES (IQUOTIENT (IPLUS BMWIDTH 31)
    32)
    BMHEIGHT)))
  (BITBLT BITMAP 0 0 COPYBITMAP)
  (SETQ HEIGHTFACTOR1 (CALCULATEHEIGHTFACTOR1))
  (SETQ HEIGHTFACTOR2 (CALCULATEHEIGHTFACTOR2))
  (SETQ WIDTHFACTOR1 (CALCULATEWIDTHFACTOR1))
  (SETQ WIDTHFACTOR2 (CALCULATEWIDTHFACTOR2))
  (CALCULATEBYTES (VECLENGTH BMWIDTH BMHEIGHT))
  (CALCULATEWIDTHBYTES)
  (SETQ OUTFILE (OPENSTREAM FILE 'OUTPUT))
  (|for| I
    (|in| ' (73 110 116 101 114 112 114 101 115 115 47 88 101 114 111 120 47 50 46 49 47 82 97 115 116 101
      114 69 110 99 111 100 105 110 103 47 49 46 48 32 160 102 196 6 0 0 254 10 252 128 160 181
      15 162 161 27)
    (|do| (BOUT OUTFILE I))
    (BOUT OUTFILE WIDTHFACTOR1)
    (BOUT OUTFILE WIDTHFACTOR2)
    (BOUT OUTFILE HEIGHTFACTOR1)
    (BOUT OUTFILE HEIGHTFACTOR2)
    (BOUT OUTFILE 15)
    (BOUT OUTFILE 160)
    (BOUT OUTFILE HEIGHTFACTOR1)
    (BOUT OUTFILE HEIGHTFACTOR2)
    (BOUT OUTFILE WIDTHFACTOR1)
    (BOUT OUTFILE WIDTHFACTOR2)
    (|for| I (|in| ' (15 161 15 161 15 160 15 70 160 163 15 160) |do| (BOUT OUTFILE I))
    (BOUT OUTFILE HEIGHTFACTOR1)
    (BOUT OUTFILE HEIGHTFACTOR2)
    (|for| I (|in| ' (160 162 160 165 233) |do| (BOUT OUTFILE I))
    (BOUT OUTFILE FIRSTBYTE)
    (BOUT OUTFILE SECONDBYTE)
    (BOUT OUTFILE THIRDBYTE)
    (BOUT OUTFILE 0)
    (BOUT OUTFILE 1)
    (BOUT OUTFILE FIRSTWIDTHBYTE)
    (BOUT OUTFILE SECONDWIDTHBYTE)
    (WRITEBINARYBITMAP COPYBITMAP OUTFILE)
    (|for| I
      (|in| ' (161 194 15 160 15 161 15 160 15 163 161 27 197 5 120 101 114 111 120 197 10 71 114 97 121 76
        105 110 101 97 114 15 162 161 27 161 166 160 231 197 4 110 97 109 101 193 10 66 105 103 65
        80 83 73 99 111 110 197 12 99 114 101 97 116 105 111 110 84 105 109 101 193 25 49 57 56 55
        32 48 56 32 48 51 32 49 53 58 52 55 58 50 51 45 48 53 58 48 48 15 164 161 27 66 190 160
        103)
      (|do| (BOUT OUTFILE I))
    (CLOSEF OUTFILE)
    (SETFILEINFO FILE 'TYPE 4428)
```

```
{MEDLEY}<lispusers>canvasconverter.;1 (WRITECANVAS cont.)
```

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```
(RETURN "Canvas has been written.")))))
```

(SNAPBM

(* "edited by Steve Knowles, Siemens AG:" " 7-Sep-87 10:36")

```
(LAMBDA NIL
  (PROG (BM REG)
    (SETQ REG (GETREGION))
    (SETQ BM (BITMAPCREATE (|fetch| WIDTH |of| REG)
                          (|fetch| HEIGHT |of| REG)))
    (BITBLT (SCREENBITMAP)
            (|fetch| LEFT |of| REG)
            (|fetch| BOTTOM |of| REG)
            BM)
    (RETURN BM) ) ) )
)
```

```
(RPAQQ BYTESPERWORD 2)
```

```
(FILESLOAD BITMAPFNS)
```

```
(PUTPROPS CANVASCONVERTER COPYRIGHT ("Steve Knowles" 1987))
```

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