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edit by: rmk

changes to: (VARS PDFSTREAMCOMS)

previous date: 9-Oct-2023 00:42:25 {WMEDLEY}<library>PDFSTREAM.;55

Read Table: INTERLISP

Package: INTERLISP

Format: XCCS

(RPAQQ **PDFSTREAMCOMS**

```
((FILES (SYSLOAD)
  POSTSCRIPTSTREAM)
 [COMS
  [ADDVARS [PRINTERTYPES ((PDF)
    (CANPRINT (PDF))
    (STATUS TRUE)
    (PROPERTIES NIL)
    (SEND POSTSCRIPTSEND)
    (BITMAPSCALE POSTSCRIPT.BITMAPSCALE)
    (BITMAPFILE (PDF.HARDCOPYW FILE BITMAP SCALEFACTOR REGION ROTATION TITLE])
  [PRINTFILETYPES (PDF (TEST PDFFILEP)
    (EXTENSION (PDF))
    (CONVERSION (TEXT PDF.TEXT TEDIT PDF.TEDIT])
  (IMAGESTREAMTYPES (PDF (OPENSTREAM OPEN-PDF-STREAM)
    (FONTCREATE POSTSCRIPT.FONTCREATE)
    (FONTSAVAILABLE POSTSCRIPT.FONTSAVAILABLE)
    (CREATECHARSET \CREATECHARSET.PSC]
  (VARS (DEFAULTPRINTERTYPE 'PDF))
  (FNS PDFFILEP PDF.HARDCOPYW PDF.TEXT PDF.TEDIT)
  (P (FONTPROFILE.ADDDEVICE 'PDF 'POSTSCRIPT])
  ;;
```

; Hook into hardcopy interface

;; Implementation of PDF streams

```
(INITVARS (PDFCONVERTER NIL))
```

; Mac with ghostscript?

```
(ALISTS (PDF-CONVERTER-TEMPLATES ps2pdf pstopdf))
(GLOBALVARS PDFCONVERTER PDF-CONVERTER-TEMPLATES)
(FNS OPEN-PDF-STREAM CLOSE-PDF-STREAM PS-TO-PDF)
(FNS SEE-PDF)
(ADDVARS (FB.SEE.METHODS (PDFFILEP SEE-PDF)))
(FNS PDFCONVERTER)))
```

```
(FILESLOAD (SYSLOAD)
  POSTSCRIPTSTREAM)
```

;; Hook into hardcopy interface

```
(ADDTOVAR PRINTERTYPES ((PDF)
  (CANPRINT (PDF))
  (STATUS TRUE)
  (PROPERTIES NIL)
  (SEND POSTSCRIPTSEND)
  (BITMAPSCALE POSTSCRIPT.BITMAPSCALE)
  (BITMAPFILE (PDF.HARDCOPYW FILE BITMAP SCALEFACTOR REGION ROTATION TITLE))))
```

```
(ADDTOVAR PRINTFILETYPES (PDF (TEST PDFFILEP)
  (EXTENSION (PDF))
  (CONVERSION (TEXT PDF.TEXT TEDIT PDF.TEDIT))))
```

```
(ADDTOVAR IMAGESTREAMTYPES (PDF (OPENSTREAM OPEN-PDF-STREAM)
  (FONTCREATE POSTSCRIPT.FONTCREATE)
  (FONTSAVAILABLE POSTSCRIPT.FONTSAVAILABLE)
  (CREATECHARSET \CREATECHARSET.PSC)))
```

```
(RPAQQ DEFAULTPRINTERTYPE PDF)
```

```
(DEFINEQ
```

(**PDFFILEP**

```
[LAMBDA (FILE)
```

; Edited 23-Jun-2023 14:43 by rmk
; Edited 5-Mar-93 21:40 by rmk:
; Edited 14-Jan-93 10:56 by jds

```
(OR (CL:MEMBER (UNPACKFILENAME.STRING FILE 'EXTENSION)
  ('("PDF"))
  :TEST
  (FUNCTION STRING-EQUAL))
 (CL:WHEN (STREAMP FILE)
  (SETFILEPTR FILE 0)
  (PROG1 (AND (EQ (BIN FILE)
    (CHARCODE %%))
    (EQ (BIN FILE)
    (CHARCODE P))
```

```

(EQ (BIN FILE)
  (CHARCODE D))
(EQ (BIN FILE)
  (CHARCODE F)))
(SETFILEPTR FILE 0))]]

```

(PDF.HARDCOPYW

```

[LAMBDA (PDFFILE BITMAP SCALEFACTOR REGION Landscape? TITLE) ; Edited 24-Jul-2023 10:37 by rmk
; Edited 23-Jun-2023 13:28 by rmk
; Edited 6-Mar-2023 22:43 by rmk
(LET ((PSTTMP (PACKFILENAME 'EXTENSION 'TMPPS 'BODY PDFFILE)))
  (PS-TO-PDF (POSTSCRIPT.HARDCOPYW PSTTMP BITMAP SCALEFACTOR REGION Landscape? TITLE)
    PDFFILE]))

```

(PDF.TEXT

```

[LAMBDA (FILE PDFFILE FONTS HEADING TABS) ; Edited 1-Oct-2023 15:24 by rmk
; Edited 23-Jun-2023 13:23 by rmk
; Edited 7-Mar-2023 08:39 by rmk
(TEXTTOIMAGEFILE FILE PDFFILE 'PDF FONTS HEADING TABS '(REGION ,POSTSCRIPT.DEFAULT.PAGEREGION ROTATION
, (NOT (NOT POSTSCRIPT.TEXTFILE.LANDSCAPE))

```

(PDF.TEDIT

```

[LAMBDA (FILE PDFFILE) ; Edited 23-Jun-2023 13:22 by rmk
; Edited 7-Mar-2023 08:39 by rmk
(LET ((TSTREAM (OPENTEXTSTREAM FILE)))
  (TEDIT.FORMAT.HARDCOPY FILE PDFFILE T NIL NIL NIL 'PDF)
  (CLOSEF TSTREAM))
)

```

```

(FONTPROFILE.ADDDEVICE 'PDF 'POSTSCRIPT)

```

::
;; Implementation of PDF streams

```

(RPAQ? PDFCONVERTER NIL)

```

:: Mac with ghostscript?

```

(ADDTOVAR PDF-CONVERTER-TEMPLATES (ps2pdf " " PSFILE " " PDFFILE " 2> " ERRORFILE)
  (pstopdf " " PSFILE " -o " PDFFILE " 2> " ERRORFILE))

```

```

(DECLARE%: DOEVAL@COMPILE DONTCOPY

```

```

(GLOBALVARS PDFCONVERTER PDF-CONVERTER-TEMPLATES)
)

```

```

(DEFINEQ

```

(OPEN-PDF-STREAM

```

[LAMBDA (FILE OPTIONS) ; Edited 23-Sep-2023 15:38 by rmk
; Edited 22-Sep-2023 11:04 by rmk
; Edited 24-Jun-2023 14:49 by rmk

```

:: Open a temporary PS file, but set it up so that at closing it gets converted to PDF using an operating-system utility (if available), and then gets
;; renamed to the original intended filename.

:: We have to stash the original filename someplace. We could put it in the tmp filename and then parse it out, but then we would have to worry
;; about how unix filenames might parse against our {, }, etc.

:: Simplest thing for now is to just add an extra field at the end of the \POSTSCRIPTDATA record.

::
(if [AND NIL (EQ 'LPT (FILENAMEFIELD FILE 'HOST)]
 then ; If FILE is on the LPT device, we could just assume that it can be printed directly, no point in converting. But then we would also have to
 ;; lie and give it a PDF extension so it thinks that we are heading to a PDF printer.

```

  (OPENPOSTSCRIPTSTREAM FILE OPTIONS)
  else (CL:UNLESS (ASSOC (PDFCONVERTER
    PDF-CONVERTER-TEMPLATES)
    (ERROR "A specified POSTSCRIPT-to-PDF converter cannot be found"))
    (SETQ FILE (OR (AND (NEQ FILE T)
      (OUTFILEP FILE))
      (ERROR "PDF target file not found" FILE)))
    (LET ((PSTREAM (OPENPOSTSCRIPTSTREAM (CONCAT "{UNIX}/tmp/medley-pdf-" (IDATE)
      "-"
      (RAND)
      ".ps"
      OPTIONS)))
      (STREAMPROP PSTREAM 'AFTERCLOSE (CONS (FUNCTION CLOSE-PDF-STREAM)))
      (STREAMPROP PSTREAM 'PDFTARGETINFO FILE)
      PSTREAM]))

```

(CLOSE-PDF-STREAM

[LAMBDA (PSSTREAM)

; Edited 22-Sep-2023 11:18 by rmk
; Edited 24-Jul-2023 10:37 by rmk
; Edited 17-Jul-2023 22:32 by rmk
; Edited 24-Jun-2023 13:57 by rmk

;; PSSTREAM is a postscript (maybe in tmp) rendition of what is intended to end up as a pdf. If we are going directly to a printer, we can probably
;; just pass it along without worrying about conversion. In fact, in that case we probably should not have bothered even setting up the PDF stream.
;; But for a file we execute the PDFCONVERTER as a shell command to make a pdf, and then we rename it to the intended filename

(STREAMPROP PSSTREAM 'AFTERCLOSE NIL) ; Maybe just remove only CLOSE-PDF-STREAM from the list?
(LET ((TARGETINFO (STREAMPROP PSSTREAM 'PDFTARGETINFO NIL)))
 (CL:IF TARGETINFO
 (RENAMEFILE (PS-TO-PDF PSSTREAM)
 TARGETINFO)
 PSSTREAM))

(PS-TO-PDF

[LAMBDA (PSFILE PDFFILE DONTDELETE)

; Edited 1-Oct-2023 15:18 by rmk
; Edited 23-Sep-2023 22:54 by rmk
; Edited 23-Jul-2023 22:30 by rmk
; Edited 24-Jun-2023 15:01 by rmk
; Edited 16-Jul-2022 13:06 by rmk
; Edited 8-Jul-2022 10:20 by rmk
; Edited 7-May-2022 22:40 by rmk
; Edited 7-Oct-2021 11:15 by rmk:

;; PSFILE is the name of a closed PS file on a DSK/UNIX device. This function uses the PDFCONVERTER utility to convert that to a parallel pdf
;; file, which is then renamed to PDFFILE.

;; DONTDELETE is just for debugging, keeps the /tmp/ files

(SETQ PSFILE (FULLNAME (TRUEFILENAME PSFILE)))
(CL:UNLESS (INFILEP PSFILE)
 (ERROR "NO PS FILE TO CONVERT"))
(CL:UNLESS (ASSOC (**PDFCONVERTER**)
 PDF-CONVERTER-TEMPLATES)
 (ERROR "A specified POSTSCRIPT-to-PDF converter cannot be found"))
(SETQ PDFFILE (if PDFFILE
 then (TRUEFILENAME PDFFILE)
 else (PACKFILENAME 'EXTENSION 'pdf 'BODY PSFILE)))
(LET ((ERRORFILE (PACKFILENAME 'EXTENSION 'error 'BODY PSFILE))
 COMPLETIONCODE)

;; PROCESS-COMMAND is currently from GITFNS. Not sure whether ShellCommand in UNIXUTILS is appropriate.

;; We have to map the filenames down to Unix conventions: (not pseudohost or host, slashes, etc.

[SETQ COMPLETIONCODE (PROCESS-COMMAND (CONCATLIST (SUBLIS `((PSFILE \, (SLASHIT (TRUEFILENAME PSFILE)
 NIL T))
 (PDFFILE \, (SLASHIT (TRUEFILENAME PDFFILE)
 NIL T))
 (ERRORFILE \, (SLASHIT (TRUEFILENAME
 ERRORFILE)
 NIL T)))
 (ASSOC (**PDFCONVERTER**)
 PDF-CONVERTER-TEMPLATES]

;; Now use Medley names

(CLOSEF? PSFILE)
(CL:UNLESS DONTDELETE (DELFILE PSFILE))
(CLOSEF? ERRORFILE)
(CL:WHEN (INFILEP ERRORFILE)
 (CL:WHEN (IGREATERP (PROG1 (GETFILEINFO ERRORFILE 'LENGTH)
 (CL:UNLESS DONTDELETE (DELFILE ERRORFILE)))
 0)
 (ERROR "Cannot create PDF file for " PDFFILE)))
(CL:WHEN (IGREATERP COMPLETIONCODE 0)
 (ERROR "Cannot create PDF file for " PDFFILE))
PDFFILE])

)

(DEFINEQ

(SEE-PDF

[LAMBDA (PDFFILE)

; Edited 1-Oct-2023 20:47 by rmk
; Edited 26-Sep-2023 16:52 by rmk

;; Use the ShellOpener for this machine to open the PDF file outside of Medley

(ShellOpen (PACKFILENAME 'BODY PDFFILE 'EXTENSION 'PDF))

)

(ADDTOVAR **FB.SEE.METHODS** (PDFFILEP SEE-PDF))

(DEFINEQ

(PDFCONVERTER

[LAMBDA NIL

```
(SETQ PDFCONVERTER (OR PDFCONVERTER (MKATOM (UNIX-GETENV "MEDLEY-PDFCONVERTER"))
(CAR (for TEMPLATE in PDF-CONVERTER-TEMPLATES thereis (ShellWhich (CAR TEMPLATE]))
)
```

FUNCTION INDEX

CLOSE-PDF-STREAM ..3 PDF.HARDCOPYW2 PDF.TEXT2 PDFFILEP1 SEE-PDF3
OPEN-PDF-STREAM ...2 PDF.TEDIT2 PDFCONVERTER3 PS-TO-PDF3

VARIABLE INDEX

DEFAULTPRINTERTYPE1 IMAGESTREAMTYPES1 PDFCONVERTER2 PRINTFILETYPES1
FB.SEE.METHODS3 PDF-CONVERTER-TEMPLATES .2 PRINTERTYPES1
