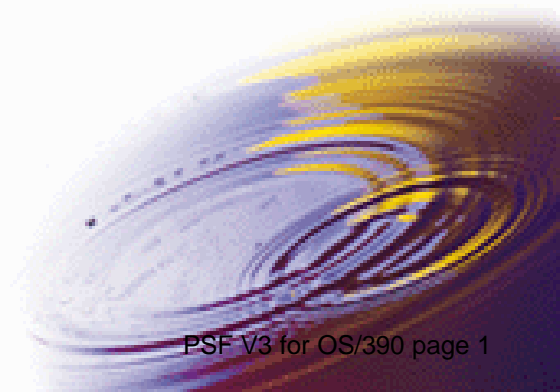# Using Fonts with AFP Workbench Viewer and AFP Windows Drivers

July, 1999
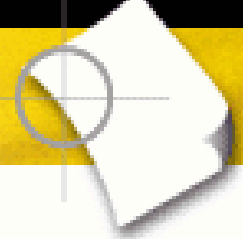
IBM Printing Systems
Technical Marketing Support
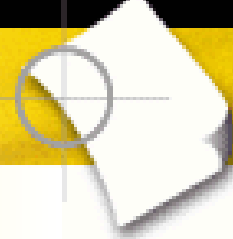
IBM **Printing Systems Company**

Topics
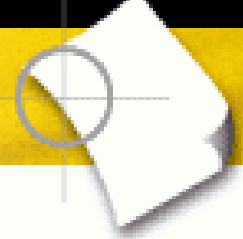
➢ Viewing AFP with Workbench

➢ Creating AFP with Windows Drivers

➢ Mapping AFP Fonts to Windows Fonts

  ▶ with Workbench

  ▶ with AFP Drivers

  ▶ with host products

IBM Printing Systems Company

AFP Workbench

AFP Workbench

➤ AFP Workbench Product:

- ► AFP Viewer which will display ASCII and AFPDS documents WYSIWYG (more or less)
- ► Print AFP documents on any Windows defined printer
- ► Retrieve pages and navigate documents based on indexing info
- ► Add annotations to documents
- ► View faxes and scanned data (TIFF, JPEG, bitmap, etc)
- ► Copy pages or portions of pages to other documents, or build overlays or page segments
- ► PRINTIT command to convert AFPDS to other data streams using Windows GDI calls, without viewing
- ► AFRREBLK reblocking program for sending AFP objects to MVS or VM systems to print

AFP Workbench for Windows[7] NT and 95
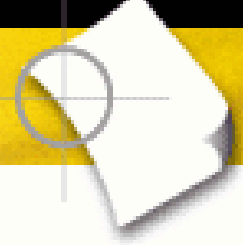
- Announced 6/23/98, GA planned 9/25/98
- Port of AFP Workbench for Windows V2.00 plus:
  - 32 bit print drivers
  - New color support (AFP process color)
  - Viewing of GOCA (graphics) lines, arcs, fill patterns, color, etc
  - more details on next page
- View all MODCA objects except bar codes
- Supports Microsoft Windows NT Version 4.0 or 95
- This is a separate product, not an upgrade
- Product number 5639-F14
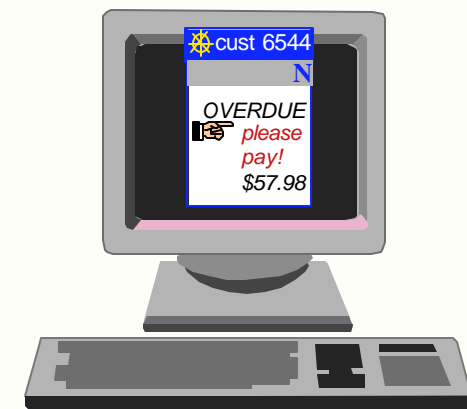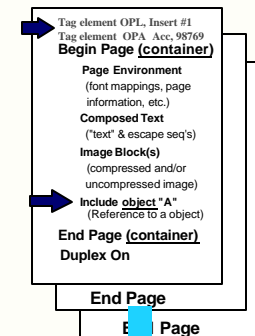
Data types supported

➢ AFP documents (MO:DCA-P format)

➢ ASCII data without graphics controls

➢ AFP overlay and page segment resources

➢ Line printer output formatted with a Page Definition, and converted using the ACIF

➢ Many TIFF (tag image file format) files

➢ Many PCX (picture exchange) files

➢ Many DCX (multiple page PCX) files

➢ Many DIB (device independent bitmap) files

Other Enhancements

➢ Support for form definitions using enhanced N-up

➢ Ability to create overlays and page segments in any resolution supported by the AFP Printer Driver.

➢ Support for rotated page overlays.

➢ Support for highlight color, such as that produced for the IBM InfoPrint 4005 Hi-Lite Color Printer Model HC2

➢ Registry support. AFP Workbench for Windows NT and 95 can use the registry to store its program information.

➢ Support for 8-bit grayscale JFIF images.

➢ Support for coded fonts in MCF2 structured fields.

AFP Viewer plug-in

➢ Free plug-in for 32-bit Windows only

➢ Runs in Netscape Navigator,
  Microsoft Internet Explorer

➢ Displays documents that are in AFP format

➢ Available with:

  ▸ OS/390 Print Server

  ▸ EDMSuite on Demand

  ▸ InfoPrint Manager

  ▸ AFP Workbench

➢ Or download from PSC web page

  ▸ http://www.printers.ibm.com

Tag element OPL, Insert #1
Tag element OPA Acc, 98769
Begin Page (container)

Page Environment
(font mappings, page
information, etc.)
Composed Text
("text" & escape seq's)
Image Block(s)
(compressed and/or
uncompressed image)
Include object "A"
(Reference to a object)
End Page (container)
Duplex On

End Page

End Page

✿cust 6544
N

OVERDUE
please
pay!
$57.98

Installation Considerations

➢ Workbench can be installed on individual workstation or as a client/server on a LAN

➢ ATM or TrueType fonts must be installed on each client

➢ Installation will prompt you for directory names to contain:
  ► font definition files
  ► data files
  ► AFP resources
  ► outline fonts

➢ FLDPORT2.INI or FTDPORT2.INI file created to contain directory names and other settings

➢ c:/fld/data directory contains two useful documents:
  ► afpview.doc (AFP file)
  ► read.me (flat ASCII file)

AFP Resources

- ➢ Overlays, page segments, and form definitions can be inline or can be stored in PC files
- ➢ Override the directory paths by selecting Options, then Preferences, and "more" button
- ➢ Inline resources are only processed at the beginning of the AFP document
- ➢ Fonts are referenced in the AFP document using the MCF structured field
- ➢ Viewer ignores AFP fonts and maps to workstation fonts (Adobe or TrueType format)
- ➢ There is no need to download fonts from your host system or to include them inline in AFP documents for viewing

Mapping Fonts and Improving Fidelity

➤ To approximate a printed page, viewer converts EBCDIC to ASCII and translates locations to logical display units

➤ Maps AFP fonts to Adobe Type 1 or True Type fonts for display

➤ Font metrics are not the same, so text fidelity will not be exact

➤ Best results will be achieved when using IBM Core Interchange fonts, especially outline fonts:

  ► metrics are based on Adobe Type 1 metrics

  ► fonts should be available for printing at any IBM location

➤ Changing your ATM settings (recommended by Adobe)

  ► deselect "Use Prebuilt or Resident fonts"

  ► change [Aliases] section of ATM.INI to specify
       Helv=Helvetica

Sonoran Font Support

➤ Viewing documents created with Sonoran Serif or Sonoran Sans Serif (such as SCRIPT LIST3820 files) will show text fidelity or alignment problems

➤ Sonoran metric fonts provided with viewer will simulate Sonoran fonts with TNR and Helvetica

➤ Must be installed with ATM in order to be used with viewer

➤ Available in point sizes 6 through 12, 14, 16, 18, 20, 24, 30, and 36

➤ Request a copy via PMR

Mapping AFP Fonts for Viewer

➤ IBM-supplied font definition files installed with Viewer

➤ Loaded into FONT directory you specified at install

➤ Shipped version maps IBM Core Interchange, compatibility, coordinated, Sonoran, and Data1 fonts

➤ You will need to modify the font mapping if

► you are using fonts not defined to the viewer

► you have modified the IBM AFP fonts

► you have created your own AFP fonts using Type Transformer or some other font editor

➤ There are font definition files supplied for:

► coded fonts

► character sets

► code pages

► alias

IBM Printing Systems Company

Viewer Files Supplied for Mapping Fonts

File	File Name	Subdirectory	Description
Coded fonts	ICODED.FNT (IBM supplied fonts), CODED.FNT (your fonts)	\FONT	Specifies which AFP codepage and font character sets make up the coded font
Char Set definition	CSDEF.FNT	\FONT	Defines AFP char set attributes, such as pt size, and maps to FGID
Codepage definition	CPDEF.FNT	\FONT	Map AFP code page to Windows char set and select Code Page Map file
Code Page Map	cpgid.CP	\FONT\MAPS	Defines char ID mappings based on hex code points
Alias	ALIAS.FNT	\FONT	Maps AFP font type names to Type 1 or TrueType outline font names

Syntax Rules for Font Definition Files

➢ A semicolon (;) in the first column is treated as a comment

➢ Section headers within files are enclosed in square brackets [] and MUST NOT be removed or changed

➢ All values ARE case sensitive

➢ If a parameter value is invalid and a default value exists, it will be substituted

➢ All parameters are positional

➢ Blanks are allowed between parameters

For detailed syntax and descriptions of these files, see the IBM AFP Workbench for Windows: Technical Reference manual (AFPTECH.DOC file in /fld/data)

Sample Font Definition Files

➤ Character Set Definition
  [CHARSET]
  ;charset = fgid, height, width, strikeover, underline
  C?H2000A0=2304,110,73,0,0

  ...
  [FGID]
  ;fgid = familyname, style, weight, italic
  2308=TimesNewRoman,ROMAN,MED,0

➤ Code Page Definition
  [CODEPG]
  ;codepage = cpgid,wincp
  T1V10037=2079,ANSI

➤ Code Page Map
  ;T1000395 to ANSI
  SP010000 40 SP010000 20

Alias File

➤ Contains 2 sections, one for font family names [FONT] and one for character identifier aliases [CHARID]

➤ Font family name aliases allow you to change all of the requested instances of a font (as defined in the Character Set Definition file) to another font name. For example, change all requests for SonoranSerif to TimesNewRoman

➤ Character ID aliases allow you to change all requested instances of a character to another character. For example, the Windows ANSI character set does not contain the "ff" ligature, so you might want to map this character to a single character "f" rather than using the default NOMATCH which will display as a NULL character (x'00')

➤ NOTE: specifying a large number of alias character IDs will affect program performance

Sample Alias File

➤ Font family name alias
[FONT]
; **** Requested font = Type 1 font, TrueType font *****
SonoranSerif=TimesNewRoman,Times New Roman
SonoranSansSerif=Helvetica,Arial

➤ Character identifier alias
[CHARID]
LF510000=LF010000
SA000000=SP320000,SP100000

➤ Up to 4 character ID substitutions can be specified, the first one that exists in the Windows font will be used.

➤ Contents of Windows character sets can be found in the .WCP files in the FONT/SAMPLES subdirectory

Steps for Mapping Your Fonts to Viewer

1. Make backup copies of any font files you plan to modify!
2. Install any new outline fonts (Adobe or TrueType) you plan to use with the viewer
3. If you have created or modified a code page, run BLDCPMAP REXX program to build a code page map file
   a. Decide which Windows character set to use, ANSI or SYMBOL.
   b. Subsitute any characters in the Code Page Map file that indicate NOMATCH
   c. Edit CPDEF.FNT and add your code page name, code page ID, and best matching Windows character set.
4. For new AFP character sets, edit the CSDEF.FNT file and add your names in the [CHARSET] section and the [FGID] section (if needed)
5. For new coded fonts, edit CODED.FNT to add your coded font

AFP Windows Drivers

Font mapping with AFP Drivers

➤ Install the AFP drivers following instructions in README

➤ Select printer for output, e.g. IBM 240

➤ Select Printer Setup from the print dialog window from your application

➤ Click on the "Options" tab and then select Advanced Options and "Fonts" from the list of options, then "Modify"

➤ Substitution mapping table is displayed showing font typeface names and the IBM character set to use in the output AFP data stream

Additional parameters for font mapping
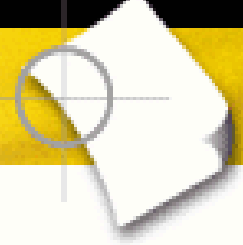
➤ Use Substitution Table

  ► click this if you want the driver to generate text strings (as opposed to image) wherever possible

 ► default substitution table supplied in IBMAFP.INI maps several common windows fonts to AFP character sets

➤ Use Outline Fonts

  ► specifies that the driver should generate MCF requests for outline fonts.

  ► make sure your printer can handle this before selecting

➤ Use Text Rules

  ► specifies that rules should be drawn as text (DIR, DBR) instead of image

  ► files will print faster but rules may not look as good when using text

IBM Printing Systems Company

Additional parameters for font mapping
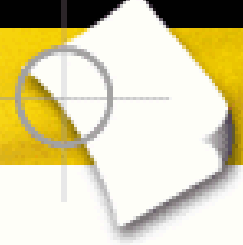
➤ Output Fidelity: options to trade off between speed, file size and amount of fidelity

➤ Character fidelity: printer driver will place each character individually according to the metrics of the Windows font. Highest fidelty, lowest performance, larger size

➤ Word fidelity: Choose this option for most cases.
A good compromise between speed, size and fidelity.

➤ Line fidelity: Choose this option if you want the smallest file that prints the fastest. This option may cause words to overlap in some cases.