Working with Infoprint Fonts

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This topic describes the fonts required for printing different data formats. It also describes what you must do so that Infoprint can use them. This material covers the following font topics:

- "Fonts for printing transformed PostScript and PDF data"
- "Fonts for printing DBCS ASCII and EUC" on page 4
- "Fonts for printing line data" on page 5

Fonts for printing transformed PostScript and PDF data

The Infoprint PostScript transform program uses Type 1 outline fonts when transforming PostScript and PDF files. Infoprint includes the IBM Type 1 outline fonts and these fonts are installed in the *install_path* **ps****fonts** path during installation. If you have other Type 1 outline fonts, you can also use them with the transform program.

install_path indicates the path where you have installed Infoprint Manager. You can view that path from the **Management Console for Infoprint Manager Server** by clicking on the **Edit** -> **Service Configuration** path and checking the **Install path** field.

Note: When Infoprint runs the PostScript transform program during job submission, it can search other directories for fonts.

The following section contains the following topics:

- "Font mapping files"
- "Specifying font substitution through initialization files" on page 3

Font mapping files

A font-mapping file identifies the file names of the Type 1 outline fonts on the Windows NT or Windows 2000 operating system. The Infoprint PostScript transform program requires at least one font-mapping file. Infoprint installs the default font-mapping file, **fonts.map** in the *install_path***ps** path during installation. If you have other Type 1 outline fonts installed on your system, you can create additional font-mapping files to define their names.

Creating a PostScript font mapping file
When you create your own font-mapping files, consider that:

- You can create more than one font-mapping file.
- At least one font-mapping file must contain the Courier font. The PostScript transform program substitutes Courier for any missing fonts.

Use the Infoprint **mkfntmap** command to create a font-mapping file for use with the Infoprint PostScript transform program. You specify one or more input files containing Type 1 outline fonts and a name for the font-mapping file.

For example, to use the input file FontFile and create a font-mapping file named **font.map**, enter:

1

```
mkfntmap FontFile >font.map
```

Using font-mapping files with the ps2afp or pdf2afp command

By default, Infoprint uses the **fonts.map** font-mapping file when you issue the **ps2afp** or the **pdf2afp** command; you do not have to specify the name of the default font-mapping file with the command.

To use font-mapping files that you have created when you issue the **ps2afp** command, you must do the following:

- Enter the path and name of the font-mapping file as the value of the **ps_font_map_files** keyword in the transform daemon configuration file, which is named **ps2afpd.cfg** and located in the *install_path***ps2afp**\\ folder (for more information on this topic, see *Customizing the PCL, PostScript, and PDF Transforms* in the Working with Transforms administrator topic). For performance reasons, this is the recommended method. You can specify more than one font-mapping file, if necessary. Separate the font-mapping files with colons.

  For example, to specify the font-mapping files **font1.map** and **font2.map**, enter the following:

  ```
  ps_font_map_files=c:\path\font1.map; c:\path\font2.map
  ```

- Enter the path and name of the font-mapping file as the value of the **ps_font_map_files** transform command configuration file. Use the same syntax as described for entering the value in the transform daemon configuration file. Using this method can result in significant performance degradation.

- Specify the font-mapping file, including its path name, from the command line using the -**F** flag of the **ps2afp** or the **pdf2afp** command. You can specify multiple files using multiple -**F** flags; Infoprint concatenates them from left-to-right (first entered to last entered) in that order:

  ```
  ps2afp -F c:\path\font.map -F C:\path2\font2.map
  ```

  This method can also result in degraded performance.

- If the path to the font mapping file contains blanks, you must surround the qualified pathname in double-quotes:

  ```
  ps2afp -F"D:\Program Files\IBM Printing Systems\ps\fonts.map"
  ```

  Do not enclose a path that contains spaces in quotes(""); the transform will fail with invalid font mapping file errors.

- If you want to specify two mapping files in a command, you must ensure that each file's full pathname is specified, as in the following examples:

  ```
  ps2afp -F"D:\Program Files\IBM Printing Systems\ps\font1.map; D:\Program
  Files\IBM Printing Systems\ps\font2.map"
  ```

  ```
  ps2afp -F"D:\Program Files\IBM Printing Systems\ps\font1.map"
  -F"D:\Program Files\IBM Printing Systems\ps\font2.map"
  ```

- If you do not specify a drive letter, but expect the transform to find a mapping file using a relative path, the default drive is based on the *install_path* because that is where the **ps2afp** executables reside.

  If your file is on the **D:** drive, the command line is on the **C:** drive, and the product is installed on the **E:** drive, Infoprint attempts to use the **E:\\samp1.map** font mapping file:

  ```
  C:\> ps2afp -oout.afp -F\samp1.map d:\incoming.ps
  ```

  However, if your specify the following command, Infoprint attempts to use the **C:\ps\files\samp1.map** font mapping file:

  ```
  C:\ps\files> ps2afp -oout.afp -F\samp1.map d:\incoming.ps
  ```

If you create your own font mapping file -- either by using the **mkfntmap** command or manually -- and the path to the fonts contains blanks, the font mapping file needs to double-quote the paths as well. For example, if your fonts reside in **E:\Program Files\IBM Printing Systems\ps\fonts** , the font-mapping file could have any of the following variations:

PATH:

```
"E:\Program Files\IBM Printing Systems\ps\fonts"
```

FONT:

```
AvantGarde-Book AvantGarde-Book
```

FONT

```
AvantGarde-Book "E:\Program Files\IBM Printing Systems\ps\fonts\AvantGarde-
Book"
```

Note: You can use either the **ps2afp** -**F** or the **pdf2afp** -**F** command flag or the **ps_font_map_files** keyword in the transform command configuration file to specify a font-mapping file. If the value from those three sources is different than that specified in the transform daemon configuration file, the transform daemon restarts the PostScript interpreter so that the new value for the font-mapping file takes effect for that one job. However, restarting the PostScript interpreter decreases performance, because the interpreter is restarted again with the font-mapping file in the configuration file for the very next PostScript job.

Specifying font substitution through initialization files

You can issue specific PostScript commands to specify whether printers substitute fonts for those defined in job tickets that are neither inline with the job nor resident on the printer. To perform this task, modify the **UserInit** file that is located in the \ *install_path***ps** file system.

To ensure that fonts not inline with the job or resident on your printer substitute Courier fonts to allow the job to print, specify the following in the **UserInit** file:

```
%!
```

```
turnFontSubstitutionOn
```

To ensure that fonts not inline with the job or resident on your printer do not print, specify the following in the **UserInit** file:

```
%!
```

```
turnFontSubstitutionOff
```

Note: For your convenience, IBM has provided a sample **UserInit** file in the \ *install_path***ps path** (used by the IBM Infoprint 4000 PostScript transform) and in the \ *install_path***ps** path (used by the IBM Infoprint 60 PostScript transform): `UserInit.turnFontSubstitutionOn.sample`.

You can use Notepad or your text editor of choice to rename and use this **UserInit** file at your installation.

Fonts for printing DBCS ASCII and EUC

In ideographic languages, like Japanese, Chinese, and Korean, there are thousands of characters. A single byte of information cannot represent all of these characters because a single byte only accommodates 256 characters. Therefore, at least one more byte of information is required.

For DBCS ASCII files, each ideographic character is either one byte or two bytes for each character. For Extended UNIX Code (EUC) files, each ideographic character may be two, three, or four bytes, depending on the EUC implementation and language. Single-byte ASCII characters may be mixed in with DBCS ASCII and EUC characters.

Infoprint supports printing DBCS ASCII and EUC files in the following formats:
- DBCS ASCII files in the Japanese and Traditional Chinese languages, which can contain formatting controls for the IBM 5577 or 5587 printers.
- EUC files in the Japanese, Traditional Chinese, and Korean languages. EUC files cannot contain any formatting control characters.

The following section contains the following topics on printing with DBCS Fonts::
- Fonts required to print a double-byte transformed file
- Installing DBCS Fonts on Windows NT and Windows 2000
- Setting up font resources for DBCS ASCII and EUC Printing
- Printing Japanese DBCS Messages at the End of a Job

Fonts required to print a double-byte transformed file

You can use the db2afp transform command to transform input files that use the following code pages:
- Japanese PC (code page IBM-932)
- Japanese EUC (code page IBM-eucJP)
- Traditional Chinese PC (code page IBM-950)
- Traditional Chinese EUC (code page IBM-eucTW)
- Korean EUC (code page IBM-eucKR)

The transformed files contain font references to the double-byte character set. You set the character set and code page you want by either setting the **PSFDBLANG** environment variable or using the **default-character-mapping** default document attribute defined in the *Infoprint Manager: Reference.* When using the **default-character-mapping** default document attribute, you must also specify document-format=debs-ascii for each applicable document or default document.

To set the **PSFDBLANG** environment variable, refer to the **Determining what code page your print jobs use and setting the correct environment variable** section in Working with Transforms.

After you have used the **db2afp** command to transform DBCS ASCII and EUC files into AFP data stream files, you must have access to DBCS fonts when you print the transformed files. The DBCS fonts for Japanese, Traditional Chinese, and Korean are available as separate features on the *AFP Font Collection* CD-ROM that is provided with Infoprint Manager.

Installing DBCS fonts on Windows NT and Windows 2000

To make the fonts available to Infoprint on your system once you have the licensed programs, you can either use the Windows NT or Windows 2000 licensed programs to install the fonts, or copy the fonts to a particular directory on your Windows NT or Windows 2000 system.

Setting up font resources for DBCS ASCII and EUC printing

To print the transformed files that contain font references to the double-byte character set, you must make the double-byte fonts known to Infoprint through one of the following methods:

- Create a **resource-context** object that identifies the location of the double-byte fonts and associate the **resource-context** object with a default-document object and an Infoprint logical destination. Using this method makes the fonts known to Infoprint for any job submitted to the logical destination associated with the default-document object. For this procedure, see Creating a New Resource-Context Object.
- Add the drives and specific folders to the search path for actual destinations using the following procedure from the **Infoprint Administration GUI**:

1. From the **Infoprint Administration GUI** main window, highlight the actual destination.
2. From the main menu, select the **Printer**-->**Properties** path to open the selected printers' **Printer Properties** window.
3. From the **Printer Properties** window, select the **Document PSF Resources** tab.
4. From the **Document PSF Resources** tab, you can specify the fully-qualified path where the double-byte fonts reside in the **Location of Resources** field.

This makes the fonts known to Infoprint for any job processed by this actual destination.

Printing Japanese DBCS fonts at the end of a job

If you apply service Program Temporary Fix (PTF) UR52620, you can have DBCS messages print in Japanese at the end of each DBCS print job. As with printing any DBCS jobs, you must have already installed the appropriate DBCS fonts on your system, as described in Installing DBCS Fonts on Windows NT and Windows 2000, and your printer must be DBCS-enabled. Also, you must have installed the *AFP Font Collection – Japanese Fonts, Version 2.1.0* CD-ROM to support printing the Japanese DBCS message page.If you have installed these prerequisites and can print DBCS output in Japanese, this support is enabled and messages print in Japanese automatically.

Please note that if you do not install the appropriate fonts, Infoprint Manager defaults to printing the appropriate message in English.

Fonts for printing line data

When you specify a coded font name with the **chars** keyword of the **line2afp** command or with the **chars** document attribute, the font name is limited to four characters, excluding the two-character prefix.

The following table provides a list of the IBM Expanded Core Fonts for use with unformatted ASCII input data. Infoprint stores these coded fonts in the *install_path***fontlib** path. There are copies of the eight-character names that correspond to the six-character names that reside in the same location.

For the names of other coded fonts, refer to *IBM AFP Fonts: Font Summary.*

Table 1. IBM Expanded Core Fonts

Type Family	Point Size	Coded Font Name	Short Name (for chars keyword)
Courier	7	X0423072	X04272
Courier	8	X0423082	X04282
Courier	10	X0423002	X04202
Courier	12	X04230B2	X042B2
Courier	14	X04230D2	X042D2
Courier	20	X04230J2	X042J2
Helvetica	6	X0H23062	X0H262
Helvetica	7	X0H23072	X0H272
Helvetica	8	X0H23082	X0H282
Helvetica	10	X0H23002	X0H202
Helvetica	11	X0H230A2	X0H2A2
Helvetica	12	X0H230B2	X0H2B2
Helvetica	14	X0H230D2	X0H2D2
Helvetica	16	X0H230F2	X0H2F2
Helvetica	18	X0H230H2	X0H2H2
Helvetica	20	X0N230J2	X0N2J2
Helvetica	24	X0N230N2	X0N2N2
Helvetica	30	X0H230T2	X0H2T2
Helvetica	36	X0H230Z2	X0H2Z2
Times New Roman	6	X0N23062	X0N262
Times New Roman	7	X0N23072	X0N272
Times New Roman	8	X0N23082	X0N282
Times New Roman	9	X0N23092	X0N292
Times New Roman	10	X0N23002	X0N202
Times New Roman	11	X0N230A2	X0N2A2
Times New Roman	12	X0N230B2	X0N2B2
Times New Roman	14	X0N230D2	X0N2D2
Times New Roman	16	X0N230F2	X0N2F2
Times New Roman	18	X0N230H2	X0N2H2
Times New Roman	20	X0N230J2	X0N2J2
Times New Roman	24	X0N230N2	X0N2N2
Times New Roman	30	X0N230T2	X0N2T2
Times New Roman	36	X0N230Z2	X0N2Z2

The following table provides a list of additional fonts that are available through the *AFP Font Collection* CD-ROM that is provided with Infoprint Manager.

Table 2. Additional fonts from the AFP Font Collection

Type Family	Point Size	Coded Font Name	Short Name (for chars keyword)
Letter Gothic Latin1	10	X0523002	X05350
Gothic Text Latin1	10	X0623002	X06350
Prestige Latin1	10	X0723002	X07350
Boldface Latin1	12	X08430B2	X0895B

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