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Technical bulletin

Font Handling in Prinergy

Overview

The first step in the Prinergy workflow is refining the input file into a pre-press ready, PDF digital master. At this stage, fonts, images, and resources are embedded to eliminate the risk of errors during output.

In general, we recommend that you include all fonts when creating the PostScript or EPS. However, Prinergy can embed the missing fonts during refining. Embedding fonts eliminates the risk of a font being substituted by a different version or font from another vendor.

On a per-job basis, you can define “font search paths” to font libraries. This path is used by the normalize JTP to locate missing fonts. Fonts must be converted into Printer Font ASCII (PFA) before they can be used. Since the goal is to embed fonts in the digital master, you do not need to “install” fonts like traditional RIPs, except CJK (Chinese, Japanese, and Korean) fonts.

Prinergy Font Converters

Font converters are used to convert fonts into a format that can be used by the Adobe Extreme RIP. “Font format” refers to how the font is stored and represented, where “font type” is the content and structure of the font. The underlying idea is that the same font can be described as, for example, a PostScript Type 1 or a TrueType font, and either type can be represented in a Macintosh or Windows font format.

There are two font converters, the Global Font Converter and the Per-Job Font Converter. Functionally, they are the same, except where the converted fonts are stored.

Fonts converted by the Global Font Converter are stored in the **CreoAraxi\Data\Fonts** folder on the primary server. Once the files are converted, you must set the job’s font search path to use the Global location.

Fonts converted by the Per-Job Font Converter are stored in the **<Job Folder>\Font** folder. The job’s font search path is set automatically.

Both font converters support the following font types and font formats as source font input:

Source Font Types:

- PostScript Type 1
- PostScript Type 3
- PostScript Type 42
- PostScript Type 1 Multiple Master

- TrueType

Source Font Formats:

- Windows PFA font format
    - No file name extension expected with font file
    - Might contain all supported PostScript font types
- Windows PFB font format
    - File name extension "pfb" expected with font file
    - Might contain all supported PostScript font types
- Windows TrueType font format
    - File name extension "ttf" expected with font file
    - Contains TrueType font type only
- Macintosh PostScript font format in NTFS multi-stream file
    - No file name extension expected with font file, Finder Type "LWFN" expected, "POST" resource in resource fork evaluated
    - Might contain all supported PostScript font types
- Macintosh TrueType font format in NTFS multi-stream file
    - No file name extension expected with font file, Finder Type "tfil" expected, "sfnt" resource in resource fork evaluated
    - Contains TrueType font type only

For Postscript fonts, the Postscript type remains the same as the source; only the format is converted to PFA. TrueType fonts are converted to PostScript Type 42, also saved in PFA format.

The font converters and Prinergy do not currently support OpenType Fonts (OTF). However, native applications, when embedding fonts, convert OTF to Type 1. Macintosh font suitcases are not supported by the converters. For fonts that are difficult to convert, try using Macromedia Fontographer to convert to a supported format.

For more information on fonts and font types, see *http://partners.adobe.com/asn/developer/type/ftypes.html*.

For information on CID fonts, see the technical bulletin *CID Font Primer and FAQ* (78-0148A).

Base Fonts Included with Prinergy

By default, there are 138 base Adobe fonts installed in the RIP. They are used also used by the Prinergy Normalizer (see the Operation section, below).

For a complete list of fonts, see Appendix A.

Prinergy Font Operation

During normalization (conversion from PostScript to PDF), the Normalizer detects missing fonts and embeds fonts in the following search order:

a. Fonts in the PostScript

b. Fonts in Global font search path - same as user defined search path, in the order listed

c. Fonts in Per-Job font search path - since this is always defined for the job

d. Fonts loaded in the RIP, base + loaded CJK fonts

If **Fail on Missing Fonts** is enabled in the process plan, and the Normalizer fails to locate the fonts in the search paths, it will fail the task. If **Fail on Missing Fonts** is not enabled, it will report a warning and continue processing. The Normalizer only embeds missing fonts in PostScript input files; it does not embed missing fonts in PDF files. If you want to embed missing fonts in a PDF file, you must either:

- Save the file as PostScript from Adobe Acrobat and refine the file, or
- Manually embed the font using the text edit tool in Adobe Acrobat (see *Situation 2*, below), or
- Refine the file to a PDF/X-1a:2001 digital master (see *Refining to PDF/X-1* below)

After normalization, the Optimizer does another preflight check and, depending on whether **Fail on Missing Fonts** is enabled, either warns or fails the task. This is necessary because PDF files with missing fonts are not detected during normalization.

Missing Fonts on Output

There are three situations where missing fonts are not detected that could lead to missing fonts on output (substituted with Courier):

1. **Fail on Missing Fonts** is not enabled in the Refine process plan, and warnings are ignored during refining.
2. The PDF file is edited after refining, and the fonts are not embedded.
3. Certain applications do no embed subset fonts properly.

For more information about Prinergy Normalizer, see the technical bulletin *Prinergy Normalizer* (75-0413A).

Situation 1

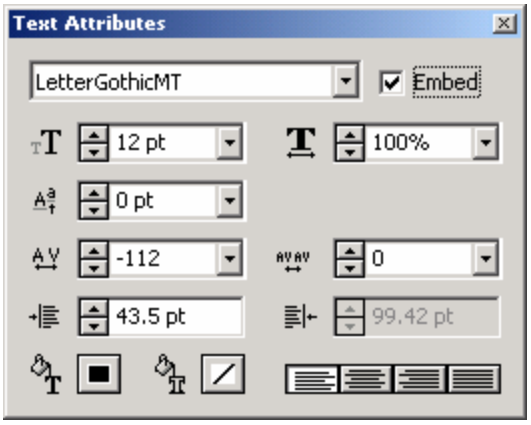
To avoid missing fonts on output due to **Fail on Missing Fonts** not being enabled, we recommend that you enable **Fail on Missing Fonts** in the Refine process plan. Disable this feature only if you know the missing font is not in the printed area.

When generating PostScript, embed all fonts whenever possible. If you are creating PDF, use the Prinergy Pages distiller job option, Prinergy Distiller Assistant, or Synapse Prepare.

The Prinergy Distiller Assistant is available for free at *http://www.prinergy.com/*.

Situation 2

To avoid missing fonts on output due to the PDF being edited after refining, when editing the PDF, ensure that **Embed** is selected in the Text Attributes dialog box.



When you are finished editing the file, we recommended that you re-refine the file. In all likelihood, you will need to re-trap the file unless you have a TrapEditor license and can trap from within Adobe Acrobat.

Situation 3

There are a number of applications reported by Adobe that are known not to embed fonts properly when generating PDF files with subset fonts. For example, fonts may look okay on screen in Adobe, Acrobat, but print as Courier. These problems are not detected with Prinergy and Enfocus Pitstop's preflight checks because the fonts are embedded, but the reference is incorrect.

Known applications:

- Adobe Acrobat 4.0.0 & 4.0.5 Mac & PC
- Adobe Illustrator 8.0 & 8.0.1 Mac & PC
- Adobe InDesign 1.5 beta

This is not a definitive list; there may be other applications that also behave this way.

Currently the recommended workaround is to save the PDF in Adobe Acrobat 5.0.x as an EPS or PostScript file and normalize in Prinergy. To catch the problem during normalization, we recommend that

you enable thumbnails in the process plan. This is a more comprehensive preflight check because it also RIPs the file and a warning is produced.

We are also working on a solution to fix these problems in Prinergy during normalization. It will be released as a minor update as soon as it is available.

For other suggested solutions, see the Adobe Knowledgebase article *http://www.adobe.com/support/techdocs/1a55a.htm*.

Refining to PDF/X-1

In normal operation, although Prinergy does not embed fonts in PDFs, it does not fail the file if the font is available to the system. However, the PDF/X-1 specification asks that fonts be embedded in the PDF/X file.

Therefore, if Prinergy is asked to “Refine to PDF/X1a-2001” in the Refine Process Plan, Prinergy will embed the font even if the referenced source file is a PDF file with no font resources embedded. The system will search for the font as described under *Prinergy Font Operation*, and if the font is not found, Prinergy will fail the job.

Vector Output Considerations

Prinergy is capable of various vector output formats. Some level 2 RIPs have difficulty handling embedded CID fonts. CID fonts can, in the following instances, be inserted into the input files without the user knowing:

- When outputting Adobe InDesign PostScript of "symbol" fonts such as Wingdings, Dingbats, and Symbol
- When using Adobe Acrobat Distiller to embed "symbol" fonts such as Wingdings, Dingbats, and Symbol (as opposed to creating PostScript that has fonts already embedded)
- When outputting Adobe InDesign PDF (Export as PDF from within InDesign) of all fonts
- When dealing with pages with Oriental fonts

Depending on input characteristics, the likelihood of encountering CID fonts is low. When encountering a page with CID fonts, an alternate method of dealing with these pages can be taken, such as outputting DCS Raster ("copydot-like") versions of the page, or in Prinergy 2.1, use the Font Outlining feature.

Appendix A

Base Fonts

The following 138 base Adobe fonts are installed in the RIP by default.

AdobeSansMM	Geneva	MonaLisa-Recut
AdobeSerifMM	GillSans	NewCenturySchlbk-Bold
AlbertusMT	GillSans-Bold	NewCenturySchlbk-BoldItalic
AlbertusMT-Italic	GillSans-BoldCondensed	NewCenturySchlbk-Italic
AlbertusMT-Light	GillSans-BoldItalic	NewCenturySchlbk-Roman
AntiqueOlive-Bold	GillSans-Condensed	NewYork
AntiqueOlive-Compact	GillSans-ExtraBold	Optima
AntiqueOlive-Italic	GillSans-Italic	Optima-Bold
AntiqueOlive-Roman	GillSans-Light	Optima-BoldItalic
Apple-Chancery	GillSans-LightItalic	Optima-Italic
Arial-BoldItalicMT	Goudy	Oxford
Arial-BoldMT	Goudy-Bold	Palatino-Bold
Arial-ItalicMT	Goudy-BoldItalic	Palatino-BoldItalic
ArialMT	Goudy-ExtraBold	Palatino-Italic
AvantGarde-Book	Goudy-Italic	Palatino-Roman
AvantGarde-BookOblique	Helvetica	StempelGaramond-Bold
AvantGarde-Demi	Helvetica-Bold	StempelGaramond-BoldItalic
AvantGarde-DemiOblique	Helvetica-BoldOblique	StempelGaramond-Italic
Bodoni	Helvetica-Condensed	StempelGaramond-Roman
Bodoni-Bold	Helvetica-Condensed-Bold	Symbol
Bodoni-BoldItalic	Helvetica-Condensed-BoldObl	Tekton
Bodoni-Italic	Helvetica-Condensed-Oblique	Times-Bold

Bodoni-Poster	Helvetica-Narrow	Times-BoldItalic
Bodoni-PosterCompressed	Helvetica-Narrow-Bold	Times-Italic
Bookman-Demi	Helvetica-Narrow-BoldOblique	Times-Roman
Bookman-DemiItalic	Helvetica-Narrow-Oblique	TimesNewRomanPS-BoldItalicMT
Bookman-Light	Helvetica-Oblique	TimesNewRomanPS-BoldMT
Bookman-LightItalic	HoeflerText-Black	TimesNewRomanPS-ItalicMT
Carta	HoeflerText-BlackItalic	TimesNewRomanPSMT
Chicago	HoeflerText-Italic	Univers
Clarendon	HoeflerText-Ornaments	Univers-Bold
Clarendon-Bold	HoeflerText-Regular	Univers-BoldExt
Clarendon-Light	JoannaMT	Univers-BoldExtObl
CooperBlack	JoannaMT-Bold	Univers-BoldOblique
CooperBlack-Italic	JoannaMT-BoldItalic	Univers-Condensed
Copperplate-ThirtyThreeBC	JoannaMT-Italic	Univers-CondensedBold
Copperplate-ThirtyTwoBC	LetterGothic	Univers-CondensedBoldOblique
Coronet-Regular	LetterGothic-Bold	Univers-CondensedOblique
Courier	LetterGothic-BoldSlanted	Univers-Extended
Courier-Bold	LetterGothic-Slanted	Univers-ExtendedObl
Courier-BoldOblique	LubalinGraph-Book	Univers-Light
Courier-Oblique	LubalinGraph-BookOblique	Univers-LightOblique
Eurostile	LubalinGraph-Demi	Univers-Oblique
Eurostile-Bold	LubalinGraph-DemiOblique	Wingdings-Regular
Eurostile-BoldExtendedTwo	Marigold	ZapfChancery-MediumItalic
Eurostile-ExtendedTwo	Monaco	ZapfDingbats

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