
Using and modifying Font Emulation

Technical Note Hqn 065

April 2013

1 Introduction

When fonts requested by the job are unavailable to the RIP, some work flows benefit significantly from being able to produce acceptable, readable copy using another font. This is particularly true with rapid turnaround work flows typical of digital printing. To achieve this, emulated fonts are used to produce suitable facsimile text based on the characteristics of the font that is being emulated in terms of style, spacing, height and width. In this way, a suitable readable font with similar characteristics of the target font is used in the place of a missing font.

Font Emulation is often acceptable when digital printing, and can be preferable to the file not being produced at all.

Font Emulation is available from the Harlequin RIP Genesis Release™ and has the following characteristics:

- The ability to recognize the missing font by name
- A database of style, spacing, height and width for each font name
- The database currently contains over 1600 specified fonts
- Font Emulation only supports the standard Latin characters

Important note: Please be aware that when using Font Emulation you may not get exactly the output you expect. It is highly recommended that you proof any files containing emulated fonts before starting a print run.

2 What characters are emulated?

The following characters can be emulated in the Harlequin RIP Genesis Release™ version 7.0 and later:

space	asci	quot	dbl	humb	dollar	percent	ampersand	quot	asci	paren	right	asterisk	plus	comma	hyphen	period	slash	zero	one	two	three	four	five	six	seven	eight	nine	colon	semicolon	less	equal	greater	question
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[illegible]

Figure 2 Serif Italic glyphs in font emulation

[illegible]

Figure 4 Sans Serif Italic glyphs in font emulation

3 Using Font Emulation

Font Emulation is enabled by checking the **Enable font emulation** option in the Page Setup Options dialog.

Alternatively, to enable font emulation using a PostScript language file, issue the following before each job that requires font emulation:

```
/GGFontEmulation /ProcSet findresource /Emulate get exec
```

Note: When operated through the GUI, the Page setup file (which is parsed by `procset/HqnPageSetupConf`) can contain `/FontEmulation true` in the `/Options` dict which causes the above line to be called.

Once enabled, Font Emulation currently catches references to over 1600 fonts. The type of font that can be emulated is not important because fonts are matched by name. If the font

name is in the database the font can be emulated. See Section 5 on page 16 for information on how to modify the font database.

Note: Fonts are matched by name for all supported font types. CID Fonts are not supported by font emulation at this time.

If a request for a font returns an error, or anything other than the requested font, **Font Emulation** first looks up the font name in the **FontEmulation** dictionary, and then, if necessary, may go on to look up the font in the supplied database on disk.

If Font Emulation fails to emulate a font (for whatever reason), the RIP will behave as if Font Emulation had not been switched on. That is, if the RIP is configured to abort jobs when a font is missing, the job will abort; if the RIP is configured to substitute Courier for the missing font, Courier will be used.

There are two situations when fonts are emulated these are: when the font requested is not found or when a font error occurs. The following sections describe the two scenarios:

3.1 Font not found

Font Emulation will be used for PostScript language and PDF files if:

1. The required font is *not* embedded in the job and
2. The required font is *not* installed in the RIP and
3. The required font is not handled explicitly by font substitution.

Font Emulation will only regard font substitution as successful if the font name returned by any substitution is *exactly* the same name as the requested font. Therefore, in most cases Font Emulation will override font substitution. If however Font Emulation fails, the font previously selected for substitution will be used.

Currently there is not automatic way of excluding fonts selected for substitution from being emulated. If you want to use font substitution instead of the emulated font, that font will have to be explicitly disabled in the `/SW/Config/FontEmulation` file.

4. Font Emulation is enabled *and*
5. The required font is not disabled in `/SW/Config/FontEmulation` file *and*
6. The required font is defined or aliased in `/SW/Config/FontEmulation` or defined in the Font Emulation database, or the file is a PDF file.

3.2 Font error

Font Emulation will be used for PostScript language and PDF files if:

1. A font error is encountered attempting to use a font embedded in a job or installed in the RIP (this includes the error produced when selecting **Abort the job if any fonts are missing** in the Page Setup Options window) *and*
2. Font Emulation is enabled *and*
3. The required font is not disabled in /SW/Config/FontEmulation file *and*
4. The required font is defined or aliased in /SW/Config/FontEmulation or defined in the Font Emulation database, or the file is a PDF file.

Note: PDF files usually include a PDF `FontDescriptor` for each font required by the PDF file, even for fonts which are not embedded. If Font Emulation is employed for a PDF file, the `FontDescriptor` in that PDF file will be used in place of the emulation data in the RIP. Also, the `FontDescriptor` can be used even if the font is not defined in the Font Emulation database or /SW/Config/FontEmulation file.

3.3 Messages

When a missing font is successfully emulated the following message appears:

```
%%[ Warning: Font <...> emulated. ]%%
```

Note: <...> is the name of the missing font.

If Font Emulation's attempt to get the required font returned an error, and the font is unable to be emulated, the following error is generated:

```
%%[ Error: Font <...> not found. (Emulation unknown) ]%%
```

However, if the font returned is not what was asked for (for example, Courier), and the font cannot be emulated, the following warning is output but the RIP will continue to use whatever font was returned:

```
%%[ Warning: Font <...> not found. (Emulation unknown) ]%%
```

That is, if a font is missing and it cannot be emulated, an error is only generated with emulation switched on if there would have been an error with it switched off.

If the missing font cannot be found in FontEmulation or the database, the following message appears:

```
%%[ Error: Font <...> not found. (Emulation not known)]%%
```

If emulation is switched off for a particular font, the following message appears:

```
%%[ Error: Font <...> not found. (Emulation disabled)]%%
```

If there is an error in the Font Emulation dictionary the following message appears:

```
%%[ Error: FontEmulation syntax /<...> invalid value. ]%%
```

In the unlikely event of an internal emulation font being replaced by a normal font, the following message appears:

```
%%[ Error: Font <...> not found. (FontEmulation installation)]%%
```

4 Which fonts are emulated?

Table 1 lists the fonts that can be emulated with Harlequin RIP Genesis Release™ v7.0 and later. Please note that this list relates only to PostScript language files. Emulation is attempted on all fonts requiring emulation within PDF files.

The number at the end of the name is the emulation font number:

- 0—Serif
- 1—Serif-Italic
- 2—Sans
- 3—Sans-Oblique
- 4—Type
- 5—Type-Oblique
- 6—Script

Please note that only the first four are supported, so Sans is substituted for Type and Serif-Italic for Script

Aachen-Bold 4 ACaslon-AltBold 0 ACaslon-AltBoldItalic 1 ACaslon-AltItalic 1 ACaslon-AltRegular 0 ACaslon-AltSemibold 0 ACaslon-AltSemiboldItalic 1 ACaslon-Bold 0 ACaslon-BoldItalic 1 ACaslon-BoldItalicOsF 1 ACaslon-BoldOsF 0 ACaslon-Italic 1 ACaslon-ItalicOsF 1 ACaslon-Regular 0 ACaslon-RegularSC 0 ACaslon-Semibold 0 ACaslon-SemiboldItalic 1 ACaslon-SemiboldItalicOsF 1 ACaslon-SemiboldSC 0 ACaslon-SwashBoldItalic 1 ACaslon-SwashItalic 1 ACaslon-SwashSemiboldItalic 1 ACaslonExp-Bold 0 ACaslonExp-BoldItalic 1 ACaslonExp-Italic 1 ACaslonExp-Regular 0 ACaslonExp-Semibold 0 ACaslonExp-SemiboldItalic 1 AGaramond-Bold 0 AGaramond-BoldItalic 1 AGaramond-BoldItalicOsF 1 AGaramond-BoldOsF 0	AGaramond-Italic 1 AGaramond-ItalicOsF 1 AGaramond-Regular 0 AGaramond-RegularSC 0 AGaramond-Semibold 0 AGaramond-SemiboldItalic 1 AGaramond-SemiboldItalicOsF 1 AGaramond-SemiboldSC 0 AGaramond-Titling 0 AGaramondExp-Bold 0 AGaramondExp-BoldItalic 1 AGaramondExp-Italic 1 AGaramondExp-Regular 0 AGaramondExp-Semibold 0 AGaramondExp-SemiboldItalic 1 AlbertusMT-Italic 3 AlbertusMT-Light 2 AlbertusMT 2 Aldus-Italic 1 Aldus-ItalicOsF 1 Aldus-Roman 0 Aldus-RomanSC 0 Alexa 2 Americana-Bold 0 Americana-ExtraBold 0 Americana-Italic 1 Americana 0 AmericanTypewriter-Bold 4 AmericanTypewriter-BoldA 4 AmericanTypewriter-BoldCond 4 AmericanTypewriter-BoldCondA 4 AmericanTypewriter-Cond 4	AmericanTypewriter-CondA 4 AmericanTypewriter-Light 4 AmericanTypewriter-LightA 4 AmericanTypewriter-LightCond 4 AmericanTypewriter-LightCondA 4 AmericanTypewriter-Medium 4 AmericanTypewriter-MediumA 4 Amigo 0 Anna 2 AntiqueOlive-Black 2 AntiqueOlive-Bold 2 AntiqueOlive-BoldCond 2 AntiqueOlive-Compact 2 AntiqueOlive-Italic 3 AntiqueOlive-Light 2 AntiqueOlive-Nord 2 AntiqueOlive-NordItalic 3 AntiqueOlive-Roman 2 ApolloMT-Expert 0 ApolloMT-Italic 1 ApolloMT-ItalicExpert 1 ApolloMT-ItalicOsF 1 ApolloMT-SC 0 ApolloMT-SemiBold 0 ApolloMT-SemiBoldExpert 0 ApolloMT-SemiBoldOsF 0 ApolloMT 0 Arcadia-A 2 Arcadia 2 Ariadne-Roman 6 AshleyScriptMT 4 Auriol-Black 0	Auriol-BlackItalic 1 Auriol-Bold 0 Auriol-BoldItalic 1 Auriol-Italic 1 Auriol 0 AvantGarde-Bold 2 AvantGarde-BoldObl 2 AvantGarde-Book 2 AvantGarde-BookOblique 3 AvantGarde-CondBold 2 AvantGarde-CondBook 2 AvantGarde-CondDemi 2 AvantGarde-CondMedium 2 AvantGarde-Demi 2 AvantGarde-DemiOblique 3 AvantGarde-ExtraLight 2 AvantGarde-ExtraLightObl 2 AvantGarde-Medium 2 AvantGarde-MediumObl 2 Avenir-Black 2 Avenir-BlackOblique 3 Avenir-Book 2 Avenir-BookOblique 3 Avenir-Heavy 2 Avenir-HeavyOblique 3 Avenir-Light 2 Avenir-LightOblique 3 Avenir-Medium 2 Avenir-MediumOblique 3 Avenir-Oblique 3 Avenir-Roman 2
BakerSignet 0 Balzano 2 Banco 2 BauerBodoni-Black 0 BauerBodoni-BlackCond 0 BauerBodoni-BlackItalic 1 BauerBodoni-Bold 0 BauerBodoni-BoldCond 0 BauerBodoni-BoldItalic 1 BauerBodoni-BoldItalicOsF 1 BauerBodoni-BoldItalicOsF 1 BauerBodoni-BoldOsF 0 BauerBodoni-Italic 1 BauerBodoni-ItalicOsF 1 BauerBodoni-Roman 0 BauerBodoni-RomanSC 0 Bauhaus-Bold 2 Bauhaus-Demi 2 Bauhaus-Heavy 2 Bauhaus-Light 2 Bauhaus-Medium 2 Beesknees 2 BellCentennial-Address 2 BellCentennial-BoldListing 2 BellCentennial-BoldListingAlt 2 BellCentennial-NameAndNumber 2 BellCentennial-SubCaption 2 BellGothic-Black 2 BellGothic-Bold 2 BellGothic-Light 2 Belwe-Bold 0 Belwe-Condensed 0 Belwe-Light 0 Belwe-Medium 0 Bembo-Bold 0 Bembo-BoldExpert 0 Bembo-BoldItalic 1	Bembo-BoldItalicExpert 1 Bembo-BoldItalicOsF 1 Bembo-BoldOsF 0 Bembo-Expert 0 Bembo-ExtraBold 0 Bembo-ExtraBoldExpert 0 Bembo-ExtraBoldItalic 1 Bembo-ExtraBoldItalicExpert 1 Bembo-ExtraBoldItalicOsF 1 Bembo-ExtraBoldOsF 0 Bembo-Italic 1 Bembo-ItalicExpert 1 Bembo-ItalicOsF 1 Bembo-SC 0 Bembo-Semibold 0 Bembo-SemiboldExpert 0 Bembo-SemiboldItalic 1 Bembo-SemiboldItalicExpert 1 Bembo-SemiboldItalicOsF 1 Bembo-SemiboldOsF 0 Bembo 0 Benguiat-Bold 0 Benguiat-Bold 0 Benguiat-Bold duplicate ignored Benguiat-BoldItalic 1 Benguiat-Book 0 Benguiat-Book 0 Benguiat-Book duplicate ignored Benguiat-BookItalic 1 Benguiat-Medium 0 Benguiat-MediumItalic 1 BenguiatGothic-Bold 2 BenguiatGothic-BoldOblique 3 BenguiatGothic-Book 2 BenguiatGothic-BookOblique 3 BenguiatGothic-Heavy 2	BenguiatGothic-HeavyOblique 3 BenguiatGothic-Medium 2 BenguiatGothic-MediumOblique 3 Berkeley-Black 0 Berkeley-BlackItalic 1 Berkeley-Bold 0 Berkeley-BoldItalic 1 Berkeley-Book 0 Berkeley-BookItalic 1 Berkeley-Italic 1 Berkeley-Medium 0 Berling-Bold 0 Berling-BoldItalic 1 Berling-Italic 1 Berling-Roman 0 Bernhard-BoldCondensed 2 BernhardModern-Bold 2 BernhardModern-BoldItalic 3 BernhardModern-Italic 3 BernhardModern-Roman 2 BiffoMT 2 Birch 0 Blackoak 0 Bodoni-Bold 0 Bodoni-BoldCondensed 0 Bodoni-BoldItalic 1 Bodoni-Book 0 Bodoni-BookItalic 1 Bodoni-Italic 1 Bodoni-Poster 0 Bodoni-PosterCompressed 0 Bodoni-PosterItalic 1 Bodoni 0 Bookman-Bold 0 Bookman-BoldItalic 1 Bookman-Demi 0	Bookman-Demitalic 1 Bookman-Light 0 Bookman-LightItalic 1 Bookman-Medium 0 Bookman-MediumItalic 1 BulmerMT-Bold 0 BulmerMT-BoldAlt 0 BulmerMT-BoldDisplay 0 BulmerMT-BoldDisplayAlt 0 BulmerMT-BoldExpert 0 BulmerMT-BoldItalDisplayAlt 0 BulmerMT-BoldItalic 1 BulmerMT-BoldItalicAlt 1 BulmerMT-BoldItalicDisplay 1 BulmerMT-BoldItalicExpert 1 BulmerMT-Italic 1 BulmerMT-ItalicAlt 1 BulmerMT-ItalicDisplay 1 BulmerMT-ItalicDisplayAlt 1 BulmerMT-ItalicExpert 1 BulmerMT-Regular 0 BulmerMT-RegularAlt 0 BulmerMT-RegularDisplay 0 BulmerMT-RegularDisplayAlt 0 BulmerMT-RegularExpert 0 BulmerMT-RegularSC 0 BulmerMT-SemiBold 0 BulmerMT-SemiBoldAlt 0 BulmerMT-SemiBoldExpert 0 BulmerMT-SemiBoldItalicExpert 0 BulmerMT-SemiBoldItalic 1 BulmerMT-SemiBoldItalicAlt 1 BulmerMT-SemiBoldSC 0

Table 1 Emulated Fonts (PostScript language files only)

Caecilia-Bold 4 Caecilia-BoldItalic 5 Caecilia-BoldItalicOsF 5 Caecilia-BoldItalicSC 5 Caecilia-BoldOsF 4 Caecilia-BoldSC 4 Caecilia-Heavy 4 Caecilia-HeavyItalic 5 Caecilia-HeavyItalicOsF 5 Caecilia-HeavyItalicSC 5 Caecilia-HeavySC 4 Caecilia-HeavySC 4 Caecilia-Italic 5 Caecilia-ItalicOsF 5 Caecilia-ItalicSC 5 Caecilia-Light 4 Caecilia-LightItalic 5 Caecilia-LightItalicOsF 5 Caecilia-LightItalicSC 5 Caecilia-LightOsF 4 Caecilia-LightSC 4 Caecilia-LightSC 4 Caecilia-Roman 4 Caecilia-RomanOsF 4 Caecilia-RomanSC 4 Caliban 2 CalvertMT-Bold 4 CalvertMT-Light 4 CalvertMT 4 Candida-Bold 4 Candida-Italic 5 Candida-Roman 4 CantoriaMT-Bold 2 CantoriaMT-BoldItalic 3 CantoriaMT-ExtraBold 2 CantoriaMT-ExtraBoldItalic 3 CantoriaMT-Italic 3 CantoriaMT-Light 2 CantoriaMT-LightItalic 3 CantoriaMT-SemiBold 2 CantoriaMT-SemiBoldItalic 3 CantoriaMT 2 Carolina-Dfr 2 Carolina 2 CascadeScript 2 CaslonFiveForty-Italic 1 CaslonFiveForty-ItalicOsF 1 CaslonFiveForty-Roman 0 CaslonFiveForty-RomanSC 0	CaslonOpenFace 0 CaslonThree-Italic 1 CaslonThree-ItalicOsF 1 CaslonThree-Roman 0 CaslonThree-RomanSC 0 CaslonTwentyFour-Black 0 CaslonTwentyFour-BlackIt 1 CaslonTwentyFour-Bold 0 CaslonTwentyFour-BoldIt 1 CaslonTwentyFour-Book 0 CaslonTwentyFour-BookIt 1 CaslonTwentyFour-Medium 0 CaslonTwentyFour-MediumIt 1 Caxton-Bold 0 Caxton-BoldItalic 1 Caxton-Book 0 Caxton-BookItalic 1 Caxton-Light 0 Caxton-LightItalic 1 CentaurMT-Bold 0 CentaurMT-BoldExpert 0 CentaurMT-BoldItalic 1 CentaurMT-BoldItalicExpert 1 CentaurMT-BoldItalicOsF 1 CentaurMT-BoldOsF 0 CentaurMT-Expert 0 CentaurMT-Italic 1 CentaurMT-ItalicA 1 CentaurMT-ItalicAlternate 1 CentaurMT-ItalicExpert 1 CentaurMT-ItalicOsF 1 CentaurMT-SC 0 CentaurMT-SwashCapitals 0 CentaurMT 0 Centennial-Black 0 Centennial-BlackItalic 1 Centennial-BlackItalicOsF 1 Centennial-BlackOsF 0 Centennial-Bold 0 Centennial-BoldItalic 1 Centennial-BoldItalicOsF 1 Centennial-BoldOsF 0 Centennial-Italic 1 Centennial-ItalicOsF 1 Centennial-Light 0 Centennial-LightItalic 1 Centennial-LightItalicOsF 1 Centennial-LightSC 0	Centennial-Roman 0 Centennial-RomanSC 0 Century-Bold 0 Century-BoldCondensed 0 Century-BoldCondensedItalic 1 Century-BoldItalic 1 Century-Book 0 Century-BookCondensed 0 Century-BookCondensedItalic 1 Century-BookItalic 1 Century-Handtooled-Bold 0 Century-Handtooled-BoldItalic 1 Century-Light 0 Century-LightCondensed 0 Century-LightCondensedItalic 1 Century-LightItalic 1 Century-Ultra 0 Century-UltraCondensed 0 Century-UltraCondensedItalic 1 Century-Ultralight 1 CenturyExpanded-Italic 1 CenturyExpanded 0 CenturyOldStyle-Bold 0 CenturyOldStyle-Italic 1 CenturyOldStyle-Regular 0 Cergo-Bold 0 Cergo-BoldItalic 1 Cergo-Book 0 Cergo-BookItalic 1 Cergo-Medium 0 Cergo-MediumItalic 1 Charlemagne-Bold 0 Charlemagne-Regular 0 Charme 6 Cheltenham-Bold 0 Cheltenham-BoldCond 0 Cheltenham-BoldCondItalic 1 Cheltenham-BoldItalic 1 Cheltenham-Book 0 Cheltenham-BookCond 0 Cheltenham-BookCondItalic 1 Cheltenham-BookItalic 1 Cheltenham-HandtooledBdlt 1 Cheltenham-HandtooledBold 0 Cheltenham-Light 0 Cheltenham-LightCond 0 Cheltenham-LightCondItalic 1 Cheltenham-LightItalic 1	Cheltenham-Ultra 0 Cheltenham-UltraCond 0 Cheltenham-UltraCondItalic 1 Cheltenham-Ultralight 1 Clairvaux-Dfr 0 Clairvaux 0 Clarendon-Bold 0 Clarendon-Light 0 Clarendon 0 Clearface-Black 0 Clearface-BlackItalic 1 Clearface-Bold 0 Clearface-BoldItalic 1 Clearface-Heavy 0 Clearface-HeavyItalic 1 Clearface-Regular 0 Clearface-RegularItalic 1 ClearfaceGothicLH-Black 2 ClearfaceGothicLH-Bold 2 ClearfaceGothicLH-Light 2 ClearfaceGothicLH-Medium 2 ClearfaceGothicLH-Roman 2 Cochin-Bold 0 Cochin-BoldItalic 1 Cochin-Italic 1 Cochin 0 CooperBlack-Italic 1 CooperBlack 0 Copperplate-ThirtyAB 2 Copperplate-ThirtyBC 2 Copperplate-ThirtyOneAB 2 Copperplate-ThirtyOneBC 2 Copperplate-ThirtyThreeBC 2 Copperplate-ThirtyTwoAB 2 Copperplate-ThirtyTwoBC 2 Copperplate-TwentyNineAB 2 Copperplate-TwentyNineBC 2 Corona-Bold 0 Corona-Italic 1 Corona 0 Cushing-Bold 0 Cushing-BoldItalic 1 Cushing-Book 0 Cushing-BookItalic 1 Cushing-Heavy 0 Cushing-HeavyItalic 1 Cushing-Medium 0 Cushing-MediumItalic 1
Delphin-I 0 Delphin-IA 0 Delphin-II 0 Delphin-III 0 DidotLH-Bold 0 DidotLH-BoldOsF 0 DidotLH-Headline 0 DidotLH-HeadlineOsF 0	DidotLH-Initials 0 DidotLH-Italic 1 DidotLH-ItalicOsF 1 DidotLH-Roman 0 DidotLH-RomanOsF 0 DidotLH-RomanSC 0 DINEngschrift-Alternate 2 DINEngschrift 2	DINMittelschrift-Alternate 2 DINMittelschrift 2 DINNeuzeitGrotesk-BoldCond 2 DINNeuzeitGrotesk-Light 2 Diotima-Italic 1 Diotima-ItalicOsF 1 Diotima-Roman 0 Diotima-RomanOsF 0	Diotima-RomanSC 0 DomCasual-Bold 2 DomCasual 2 DorchesterScriptMT 6 Doric-Bold 2 DucDeBerry-Dfr 0 DucDeBerry 0
Eccentric 4 EgyptienneF-Black 0 EgyptienneF-Bold 0 EgyptienneF-Italic 1 EgyptienneF-Roman 0 EhrhardMT-Italic 1 EhrhardMT-Regular 0 EhrhardMT-Semibold 0 EhrhardMT-SemiboldItalic 1 ElectraLH-Bold 0 ElectraLH-BoldCursive 0 ElectraLH-BoldCursiveDisplay 0 ElectraLH-BoldCursiveOsF 0 ElectraLH-BoldDisplay 0 ElectraLH-BoldOsF 0	ElectraLH-BoldSC 0 ElectraLH-Cursive 0 ElectraLH-CursiveDisplay 0 ElectraLH-CursiveOsF 0 ElectraLH-Display 0 ElectraLH-Regular 0 ElectraLH-RegularOsF 0 ElectraLH-RegularSC 0 EllingtonMT-Bold 0 EllingtonMT-BoldItalic 1 EllingtonMT-ExtraBold 0 EllingtonMT-ExtraBoldItalic 1 EllingtonMT-Italic 1 EllingtonMT-Light 0 EllingtonMT-LightItalic 1	EllingtonMT 0 ElseNPL-Bold 0 ElseNPL-Light 0 ElseNPL-Medium 0 ElseNPL-SemiBold 0 EngraversLH-BoldFace 0 Esprit-Black 0 Esprit-BlackItalic 1 Esprit-Bold 0 Esprit-BoldItalic 1 Esprit-Book 0 Esprit-BookItalic 1 Esprit-Medium 0 Esprit-MediumItalic 1 Eurostile-Bold 2	Eurostile-BoldCondensed 2 Eurostile-BoldExtendedTwo 2 Eurostile-BoldOblique 3 Eurostile-Condensed 2 Eurostile-Demi 2 Eurostile-DemiOblique 3 Eurostile-ExtendedTwo 2 Eurostile-Oblique 3 Eurostile 2 Excelsior-Bold 0 Excelsior-Italic 1 Excelsior 0

Table 1 Emulated Fonts (PostScript language files only)

FairfieldLH-Bold 0 FairfieldLH-BoldItalic 1 FairfieldLH-BoldSC 0 FairfieldLH-CaptionBold 0 FairfieldLH-CaptionHeavy 0 FairfieldLH-CaptionLight 0 FairfieldLH-CaptionMedium 0 FairfieldLH-Heavy 0 FairfieldLH-HeavyItalic 1 FairfieldLH-HeavySC 0 FairfieldLH-Light 0 FairfieldLH-LightItalic 1 FairfieldLH-LightSC 0 FairfieldLH-Medium 0 FairfieldLH-MediumItalic 1 FairfieldLH-MediumSC 0 FairfieldLH-SwBoldItalicOsF 1 FairfieldLH-SwHeavyItalicOsF 1 FairfieldLH-SwLightItalicOsF 1 FairfieldLH-SwMediumItalicOsF 1 FaltaffMT 0 Fenice-Bold 0 Fenice-BoldOblique 1 Fenice-Light 0 Fenice-LightOblique 1 Fenice-Regular 0	Fenice-RegularOblique 1 Fenice-Ultra 0 Fenice-UltraOblique 1 FetteFraktur-Dfr 0 FetteFraktur 0 Flora-Bold 2 Flora-Medium 2 Flyer-BlackCondensed 2 Flyer-ExtraBlackCondensed 2 Folio-Bold 2 Folio-BoldCondensed 2 Folio-ExtraBold 2 Folio-Light 2 Folio-Medium 2 ForteMT 6 FranklinGothic-Book 2 FranklinGothic-BookCmp 2 FranklinGothic-BookCmpRtl 2 FranklinGothic-BookCnd 2 FranklinGothic-BookCndItal 2 FranklinGothic-BookItal 2 FranklinGothic-BookOblique 3 FranklinGothic-BookXCmp 2 FranklinGothic-Condensed 2 FranklinGothic-Demi 2 FranklinGothic-DemiCmp 2	FranklinGothic-DemiCmpRtl 2 FranklinGothic-DemiCnd 2 FranklinGothic-DemiCndItal 2 FranklinGothic-DemiItal 2 FranklinGothic-DemiOblique 3 FranklinGothic-DemiXCmp 2 FranklinGothic-ExtraCond 2 FranklinGothic-Heavy 2 FranklinGothic-HeavyItal 2 FranklinGothic-HeavyOblique 3 FranklinGothic-MedCnd 2 FranklinGothic-MedCndItal 2 FranklinGothic-Medium 2 FranklinGothic-MediumItal 2 FranklinGothic-Roman 2 FrizQuadrata-Bold 0 FrizQuadrata 0 Frutiger-Black 2 Frutiger-BlackCn 2 Frutiger-BlackItalic 3 Frutiger-Bold 2 Frutiger-BoldCn 2 Frutiger-BoldItalic 3 Frutiger-Cn 2 Frutiger-ExtraBlackCn 2 Frutiger-Italic 3	Frutiger-Light 2 Frutiger-LightCn 2 Frutiger-LightItalic 3 Frutiger-Roman 2 Frutiger-UltraBlack 2 Futura-Bold 2 Futura-BoldOblique 3 Futura-Book 2 Futura-BookOblique 3 Futura-Condensed 2 Futura-CondensedBold 2 Futura-CondensedBoldOblique 3 Futura-CondensedExtraBold 2 Futura-CondensedLight 2 Futura-CondensedLightOblique 3 Futura-CondensedOblique 3 Futura-CondExtraBoldObli 2 Futura-ExtraBold 2 Futura-ExtraBoldOblique 3 Futura-Heavy 2 Futura-HeavyOblique 3 Futura-Light 2 Futura-LightOblique 3 Futura-Oblique 3 Futura 2
Galahad-Alternate 2 Galahad-OfS 2 Galahad-Regular 2 Galliard-Black 0 Galliard-BlackItalic 1 Galliard-Bold 0 Galliard-BoldItalic 1 Galliard-Italic 1 Galliard-Roman 0 Galliard-Ultra 0 Galliard-UltraItalic 1 Garamond-Bold 0 Garamond-BoldCondensed 0 Garamond-BoldCondensedItalic 1 Garamond-BoldItalic 1 Garamond-Book 0 Garamond-BookCondensed 0 Garamond-BookCondensedItalic 1 Garamond-BookItalic 1 Garamond-HandtooledBold 0 Garamond-HandtooledBoldItalic 1 Garamond-Light 0 Garamond-LightCondensed 0 Garamond-LightCondensedItalic 1 Garamond-LightItalic 1 Garamond-Ultra 0 Garamond-UltraCondensed 0 Garamond-UltraCondensedItalic 1 Garamond-UltraItalic 1 GaramondThree-Bold 0 GaramondThree-BoldItalic 1 GaramondThree-BoldItalicOsF 1 GaramondThree-BoldSC 0	GaramondThree-Italic 1 GaramondThree-ItalicOsF 1 GaramondThree-SC 0 GaramondThree 0 GarthGraphic-Black 0 GarthGraphic-Bold 0 GarthGraphic-BoldCondensed 0 GarthGraphic-BoldItalic 1 GarthGraphic-Condensed 0 GarthGraphic-ExtraBold 0 GarthGraphic-Italic 1 GarthGraphic 0 GazetteLH-Bold 0 GazetteLH-Italic 1 GazetteLH-Roman 0 Giddyup-Thangs 6 Giddyup 6 GillSans-Bold 2 GillSans-BoldCondensed 2 GillSans-BoldExtraCondensed 2 GillSans-BoldItalic 3 GillSans-Condensed 2 GillSans-ExtraBold 2 GillSans-ExtraBoldDisplay 2 GillSans-Italic 3 GillSans-Light 2 GillSans-LightItalic 3 GillSans-LightShadowed 2 GillSans-Shadowed 2 GillSans-UltraBold 2 GillSans-UltraBoldCondensed 2 GillSans 2 Giovanni-Black 0	Giovanni-BlackItalic 1 Giovanni-Bold 0 Giovanni-BoldItalic 1 Giovanni-Book 0 Giovanni-BookItalic 1 Glypha-Black 4 Glypha-BlackOblique 5 Glypha-Bold 4 Glypha-BoldOblique 5 Glypha-Light 4 Glypha-LightOblique 5 Glypha-Oblique 5 Glypha-Thin 4 Glypha-ThinOblique 5 Glypha 4 Gothic-Thirteen 2 Goudy-Bold 0 Goudy-BoldItalic 1 Goudy-BoldItalicOsF 1 Goudy-BoldOsF 0 Goudy-ExtraBold 0 Goudy-Heavyface 0 Goudy-HeavyfacelItalic 1 Goudy-Italic 1 Goudy-ItalicOsF 1 Goudy-SC 0 Goudy 0 GoudyModernMT-Italic 1 GoudyModernMT 0 GoudySans-Black 0 GoudySans-BlackItalic 1 GoudySans-Bold 0 GoudySans-BoldItalic 1	GoudySans-Book 0 GoudySans-BookItalic 1 GoudySans-Medium 0 GoudySans-MediumItalic 1 GoudyTextMT-Alternate 0 GoudyTextMT-Dfr 0 GoudyTextMT-LombardicCapitals 0 GoudyTextMT 0 Granjon-Bold 0 Granjon-BoldOsF 0 Granjon-Italic 1 Granjon-ItalicOsF 1 Granjon-SC 0 Granjon 0 GrotesqueMT-Black 2 GrotesqueMT-Bold 2 GrotesqueMT-BoldExtended 2 GrotesqueMT-Condensed 2 GrotesqueMT-ExtraCondensed 2 GrotesqueMT-Italic 3 GrotesqueMT-Light 2 GrotesqueMT-LightCondensed 2 GrotesqueMT-LightItalic 3 GrotesqueMT 2 Guardi-Black 0 Guardi-BlackItalic 1 Guardi-Bold 0 Guardi-BoldItalic 1 Guardi-Italic 1 Guardi-Roman 0

Table 1 Emulated Fonts (PostScript language files only)

Hadriano-Bold 0 Hadriano-ExtraBold 0 Hadriano-ExtraBoldCondensed 0 Hadriano-Light 0 Helvetica-Black 2 Helvetica-BlackOblique 3 Helvetica-Compressed 2 Helvetica-Condensed-Black 2 Helvetica-Condensed-BlackObl 2 Helvetica-Condensed-Bold 2 Helvetica-Condensed-BoldObl 2 Helvetica-Condensed-Light 2 Helvetica-Condensed-LightObl 2 Helvetica-Condensed-Oblique 3 Helvetica-Condensed 2 Helvetica-ExtraCompressed 2 Helvetica-Fraction 2 Helvetica-FractionBold 2 Helvetica-Light 2 Helvetica-LightOblique 3 Helvetica-UltraCompressed 2 HelveticaCalserrat-Roman 2 HelveticaNeue-Black 2 HelveticaNeue-BlackCond 2 HelveticaNeue-BlackCondObl 2	HelveticaNeue-BlackExt 2 HelveticaNeue-BlackExt 2 HelveticaNeue-BlackItalic 3 HelveticaNeue-Bold 2 HelveticaNeue-BoldCond 2 HelveticaNeue-BoldCondObl 2 HelveticaNeue-BoldExt 2 HelveticaNeue-BoldItalic 3 HelveticaNeue-BoldOutlineEuro 2 HelveticaNeue-Condensed 2 HelveticaNeue-CondensedObl 2 HelveticaNeue-ExtBlackCond 2 HelveticaNeue-ExtBlackCondObl 2 HelveticaNeue-Extended 2 HelveticaNeue-Extended 2 HelveticaNeue-Heavy 2 HelveticaNeue-HeavyCond 2 HelveticaNeue-HeavyCondObl 2 HelveticaNeue-HeavyExt 2 HelveticaNeue-HeavyExt 2 HelveticaNeue-HeavyItalic 3 HelveticaNeue-Italic 3 HelveticaNeue-Light 2 HelveticaNeue-LightCond 2	HelveticaNeue-LightCondObl 2 HelveticaNeue-LightExt 2 HelveticaNeue-LightExt 2 HelveticaNeue-LightItalic 3 HelveticaNeue-Medium 2 HelveticaNeue-MediumCond 2 HelveticaNeue-MediumCondObl 2 HelveticaNeue-MediumExt 2 HelveticaNeue-MediumExt 2 HelveticaNeue-MediumItalic 3 HelveticaNeue-Roman 2 HelveticaNeue-Thin 2 HelveticaNeue-ThinCond 2 HelveticaNeue-ThinCondObl 2 HelveticaNeue-ThinExt 2 HelveticaNeue-ThinExt 2 HelveticaNeue-ThinItalic 3 HelveticaNeue-UltraLigCond 2 HelveticaNeue-UltraLigCondObl 2 HelveticaNeue-UltraLigExt 2 HelveticaNeue-UltraLigExt 2 HelveticaNeue-UltraLight 2 HelveticaNeue-UltraLightItal 2 HelveticaRounded-Black 2 HelveticaRounded-BlackObl 2	HelveticaRounded-Bold 2 HelveticaRounded-BoldCond 2 HelveticaRounded-BoldCondObl 2 HelveticaRounded-BoldObl 2 Herculianum 6 Hiroshige-Black 0 Hiroshige-BlackItalic 1 Hiroshige-Bold 0 Hiroshige-BoldItalic 1 Hiroshige-Book 0 Hiroshige-BookItalic 1 Hiroshige-Medium 0 Hiroshige-MediumItalic 1 Hobo 2 HorleyOldStyleMT-Bold 0 HorleyOldStyleMT-BoldItalic 1 HorleyOldStyleMT-Italic 1 HorleyOldStyleMT-Light 0 HorleyOldStyleMT-LightItalic 1 HorleyOldStyleMT-SbItalic 1 HorleyOldStyleMT-SemiBold 0 HorleyOldStyleMT 0
Impact 2 Impressum-Bold 0 Impressum-Italic 1 Impressum-Roman 0 Industria-Inline 2 Industria-InlineA 2 Industria-Solid 2 Industria-SolidA 2	InflexMT-Bold 0 Insignia-A 2 Insignia 2 Isabella 0 Isadora-Bold 0 Isadora-Regular 0 Italia-Bold 4 Italia-Book 4	Italia-Medium 4 ItalianOldStyleMT-Bold 0 ItalianOldStyleMT-BoldItalic 1 ItalianOldStyleMT-Italic 1 ItalianOldStyleMT 0 ItcEras-Bold 2 ItcEras-Book 2 ItcEras-Demi 2	ItcEras-Light 2 ItcEras-Medium 2 ItcEras-Ultra 2 ItcKabel-Bold 2 ItcKabel-Book 2 ItcKabel-Demi 2 ItcKabel-Medium 2 ItcKabel-Ultra 2
JansonText-Bold 0 JansonText-BoldItalic 1 JansonText-BoldItalicOsF 1 JansonText-BoldOsF 0	JansonText-Italic 1 JansonText-ItalicOsF 1 JansonText-Roman 0 JansonText-RomanSC 0	JoannaMT-Bold 0 JoannaMT-BoldItalic 1 JoannaMT-ExtraBold 0 JoannaMT-Italic 1	JoannaMT-SemiBold 0 JoannaMT-SemiBoldItalic 1 JoannaMT 0
Kabel-Black 2 Kabel-Book 2 Kabel-Heavy 2 Kabel-Light 2 Kaufmann-Bold 6	Kaufmann 6 KinoMT 2 KlangMT 2 KochAntiqua 0 Kompakt 0	Korinna-Bold 2 Korinna-KursivBold 2 Korinna-KursivRegular 2 Korinna-Regular 2 KuenstlerScript-Black 6	KuenstlerScript-Medium 6 KuenstlerScript-TwoBold 6
LatinMT-Condensed 0 Leawood-Black 0 Leawood-BlackItalic 1 Leawood-Bold 0 Leawood-BoldItalic 1 Leawood-Book 0 Leawood-BookItalic 1 Leawood-Medium 0 Leawood-MediumItalic 1 LegacySans-Bold 2 LegacySans-BoldItalic 3 LegacySans-Book 2 LegacySans-BookItalic 3 LegacySans-Medium 2 LegacySans-MediumItalic 3 LegacySans-Ultra 2 LegacySerif-Bold 0 LegacySerif-BoldItalic 1 LegacySerif-Book 0 LegacySerif-BookItalic 1	LegacySerif-Medium 0 LegacySerif-MediumItalic 1 LegacySerif-Ultra 0 LetterGothic-Bold 2 LetterGothic-BoldSlanted 2 LetterGothic-Slanted 2 LetterGothic 2 Life-Bold 0 Life-Italic 1 Life-Roman 0 LinoLetter-Black 4 LinoLetter-BlackItalic 5 LinoLetter-BlackItalicOsF 5 LinoLetter-BlackOsF 4 LinoLetter-BlackSC 4 LinoLetter-Bold 4 LinoLetter-BoldItalic 5 LinoLetter-BoldItalicOsF 5 LinoLetter-BoldOsF 4 LinoLetter-BoldSC 4	LinoLetter-Italic 5 LinoLetter-ItalicOsF 5 LinoLetter-Medium 4 LinoLetter-MediumItalic 5 LinoLetter-MediumItalicOsF 5 LinoLetter-MediumOsF 4 LinoLetter-MediumSC 4 LinoLetter-Roman 4 LinoLetter-RomanOsF 4 LinoLetter-RomanSC 4 LinoScript 6 Linotext-Dfr 0 Linotext 0 Lithos-Black 2 Lithos-Bold 2 Lithos-ExtraLight 2 Lithos-Light 2 Lithos-Regular 2 LubalinGraph-Book 4 LubalinGraph-BookOblique 5	LubalinGraph-Demi 4 LubalinGraph-DemiOblique 5 Lucida-Bold 0 Lucida-BoldItalic 1 Lucida-Italic 1 Lucida 0 LucidaSans-Bold 2 LucidaSans-BoldItalic 3 LucidaSans-Italic 3 LucidaSans 2 LucidaSansTypewriter-Bd 2 LucidaSansTypewriter-Bd 2 LucidaSansTypewriter 2 LucidaSansTypewriter 2 LucidaTypewriter-Bold 4 LucidaTypewriter-Bold 4 LucidaTypewriter 4 LucidaTypewriter 4

Table 1 Emulated Fonts (PostScript language files only)

Machine-Bold 2 Machine 2 Madrone 0 Marigold 0 MaturaMT-ScriptCapitals 2 MaturaMT 2 Maximus 0 MediciScript 6 Melior-Bold 0 Melior-BoldItalic 1 Melior-Italic 1 Melior 0 Memphis-Bold 4 Memphis-BoldItalic 5 Memphis-ExtraBold 4 Memphis-Light 4 Memphis-LightItalic 5 Memphis-Medium 4 Memphis-MediumItalic 5 MendozaRoman-Bold 0 MendozaRoman-BoldItalic 1 MendozaRoman-Book 0	MendozaRoman-BookItalic 1 MendozaRoman-Medium 0 MendozaRoman-MediumItalic 1 Meridien-Bold 0 Meridien-BoldItalic 1 Meridien-Italic 1 Meridien-Medium 0 Meridien-MediumItalic 1 Meridien-Roman 0 Minion-Black 0 Minion-BlackOsF 0 Minion-Bold 0 Minion-BoldItalic 1 Minion-BoldItalicOsF 1 Minion-BoldOsF 0 Minion-DisplayItalic 1 Minion-DisplayItalicSC 1 Minion-DisplayRegular 0 Minion-DisplayRegularSC 0 Minion-Italic 1 Minion-ItalicSC 1 Minion-Regular 0	Minion-RegularSC 0 Minion-Semibold 0 Minion-SemiboldItalic 1 Minion-SemiboldItalicSC 1 Minion-SemiboldSC 0 Minion-SwashDisplayItalic 1 Minion-SwashItalic 1 Minion-SwashSemiboldItalic 1 MinionExp-Black 0 MinionExp-Bold 0 MinionExp-BoldItalic 1 MinionExp-DisplayItalic 1 MinionExp-DisplayRegular 0 MinionExp-Italic 1 MinionExp-Regular 0 MinionExp-Semibold 0 MinionExp-SemiboldItalic 1 Minister-Black 0 Minister-BlackItalic 1 Minister-Bold 0 Minister-Italic 1 Minister-Book 0	Minister-BookItalic 1 Minister-Light 0 Minister-LightItalic 1 ModernMT-Bold 0 ModernMT-BoldItalic 1 ModernMT-Condensed 0 ModernMT-CondensedItalic 1 ModernMT-Extended 0 ModernMT-ExtendedItalic 1 ModernMT-Wide 0 ModernMT-WideItalic 1 MonaLisa-Recut 0 MonaLisa-Solid 0 MonolineScriptMT 6 Myriad-CnBold 2 Myriad-CnBoldItalic 3 Myriad-CnItalic 3 Myriad-CnSemibold 2 Myriad-CnSemiboldItalic 3 Myriad-Condensed 2 Myriad-Tilt 2
NeueHammerUnziale-One 6 NeueHammerUnziale-OneAlt 6 NeueHammerUnziale-Two 6 NeueHammerUnziale-TwoAlt 6 Neuland 2 NeuzeitS-Book 2 NeuzeitS-BookHeavy 2 NewAster-Black 0 NewAster-BlackItalic 1 NewAster-Bold 0 NewAster-BoldItalic 1 NewAster-Italic 1 NewAster-Semibold 0 NewAster-SemiboldItalic 1 NewAster 0	NewBaskerville-Bold 0 NewBaskerville-BoldItalic 1 NewBaskerville-BoldItalicOsF 1 NewBaskerville-BoldSC 0 NewBaskerville-Italic 1 NewBaskerville-ItalicOsF 1 NewBaskerville-Roman 0 NewBaskerville-SC 0 NewBerolinaMT 6 NewCaledonia-Black 0 NewCaledonia-BlackItalic 1 NewCaledonia-Bold 0 NewCaledonia-BoldItalic 1 NewCaledonia-BoldItalicOsF 1 NewCaledonia-BoldSC 0	NewCaledonia-Italic 1 NewCaledonia-ItalicOsF 1 NewCaledonia-SC 0 NewCaledonia-Semibold 0 NewCaledonia-SemiboldItalic 1 NewCaledonia 0 NewCenturySchlbk-Bold 0 NewCenturySchlbk-BoldItalic 1 NewCenturySchlbk-Fraction 0 NewCenturySchlbk-FractionBold 0 NewCenturySchlbk-Italic 1 NewCenturySchlbk-Roman 0 NewsGothic-Bold 2 NewsGothic-BoldOblique 3 NewsGothic-Oblique 3	NewsGothic 2 NotreDame-Roman 0 NotreDame-RomanDfr 0 Novarese-Bold 0 Novarese-BoldItalic 1 Novarese-Book 0 Novarese-BookItalic 1 Novarese-Medium 0 Novarese-MediumItalic 1 Novarese-Ultra 0 NuptialScript 6 Nyx 0
OCRA-Alternate 4 OCRA 4 OCRB-Alternate 2 OCRB 2 OctavianMT-Expert 0 OctavianMT-Italic 1 OctavianMT-ItalicExpert 1 OctavianMT-ItalicOsF 1 OctavianMT-SC 0 OctavianMT 0 OfficinaSans-Bold 2 OfficinaSans-BoldItalic 3	OfficinaSans-Book 2 OfficinaSans-BookItalic 3 OfficinaSerif-Bold 4 OfficinaSerif-BoldItalic 5 OfficinaSerif-Book 4 OfficinaSerif-BookItalic 5 OldStyleSeven-Italic 1 OldStyleSeven-ItalicOsF 1 OldStyleSeven-SC 0 OldStyleSeven 0 Olympian-Bold 0 Olympian-BoldItalic 1	Olympian-Italic 1 Olympian 0 Omnia 6 Ondine 6 OnyxMT 0 Optima-Black 2 Optima-BlackItalic 3 Optima-Bold 2 Optima-BoldItalic 3 Optima-BoldOblique 3 Optima-DemiBold 2 Optima-DemiBoldItalic 3	Optima-ExtraBlack 2 Optima-ExtraBlackItalic 3 Optima-Italic 3 Optima-Medium 2 Optima-MediumItalic 3 Optima-Oblique 3 Optima 2 Orator-Slanted 2 Orator 2 Oxford 6 Ozwald 0
PalaceScriptMT-Semibold 6 PalaceScriptMT 6 Palatino-Black 0 Palatino-BlackItalic 1 Palatino-Bold 0 Palatino-BoldItalic 1 Palatino-BoldItalicOsF 1 Palatino-BoldOsF 0 Palatino-Italic 1 Palatino-ItalicOsF 1 Palatino-Light 0 Palatino-LightItalic 1 Palatino-Medium 0 Palatino-MediumItalic 1 Palatino-Roman 0 Palatino-SC 0 Parisian 2	ParkAvenue 6 Peignot-Bold 2 Peignot-Demi 2 Peignot-Light 2 Pelican 6 PepitaMT 6 Perpetua-Bold 0 Perpetua-BoldExp 0 Perpetua-BoldItalic 1 Perpetua-BoldItalicExp 1 Perpetua-BoldItalicOsF 1 Perpetua-BoldOsF 0 Perpetua-Exp 0 Perpetua-Italic 1 Perpetua-ItalicExp 1 Perpetua-ItalicOsF 1 Perpetua-SC 0	Perpetua 0 PhotinaMT-Bold 0 PhotinaMT-BoldItalic 1 PhotinaMT-Italic 1 PhotinaMT-Semibold 0 PhotinaMT-SemiboldItalic 1 PhotinaMT-UltraBold 0 PhotinaMT-UltraBoldItalic 1 PhotinaMT 0 Plantin-Bold 0 Plantin-BoldCondensed 0 Plantin-BoldItalic 1 Plantin-Italic 1 Plantin-Light 0 Plantin-LightItalic 1 Plantin-Semibold 0 Plantin-SemiboldItalic 1	Plantin 0 Pompejana-Roman 6 Ponderosa 0 Poplar 2 Present-Black 6 Present-BlackCondensed 6 Present-Bold 6 Present-BoldCondensed 6 Present-Condensed 6 Present 6 Present 6 PrestigeElite-Bold 4 PrestigeElite-BoldSlanted 4 PrestigeElite-Slanted 4 PrestigeElite 4
Quorum-Black 0 Quorum-Bold 0	Quorum-Book 0 Quorum-Light 0	Quorum-Medium 0	

Table 1 Emulated Fonts (PostScript language files only)

Raleigh-Bold 0 Raleigh-DemiBold 0 Raleigh-Medium 0 Raleigh 0 Revue 2 Rockwell-Bold 4 Rockwell-BoldCondensed 4 Rockwell-BoldItalic 5 Rockwell-Condensed 4 Rockwell-ExtraBold 4 Rockwell-Italic 5 Rockwell-Light 4	Rockwell-LightItalic 5 Rockwell 4 Romic-Bold 0 Romic-ExtraBold 0 Romic-Light 0 Romic-LightItalic 1 Romic-Medium 0 Rotation-Bold 0 Rotation-Italic 1 Rotation-Roman 0 RotisSansSerif-Bold 2 RotisSansSerif-ExtraBold 2	RotisSansSerif-Italic 3 RotisSansSerif-Light 2 RotisSansSerif-LightItalic 3 RotisSansSerif 2 RotisSemiSans-Bold 2 RotisSemiSans-ExtraBold 2 RotisSemiSans-Italic 3 RotisSemiSans-Light 2 RotisSemiSans-LightItalic 3 RotisSemiSans 2 RotisSemiSerif-Bold 0 RotisSemiSerif 0	RotisSerif-Bold 0 RotisSerif-Italic 1 RotisSerif 0 RunicMT-Condensed 0 RussellSquare 2 RussellSquare 2 Rusticana-Roman 2 RuzickaFreehandLH-Bold 6 RuzickaFreehandLH-BoldSC 6 RuzickaFreehandLH-Roman 6 RuzickaFreehandLH-RomanSC 6
Sabon-Bold 0 Sabon-BoldItalic 1 Sabon-BoldItalicOsF 1 Sabon-BoldOsF 0 Sabon-Italic 1 Sabon-ItalicOsF 1 Sabon-Roman 0 Sabon-RomanSC 0 SanMarco-Dfr 0 SanMarco 0 Sassoon-Primary 2 ScotchRomanMT-Italic 1 ScotchRomanMT 0 ScriptMT-Bold 6 Serifa-Black 4 Serifa-Bold 4 Serifa-Italic 5 Serifa-Light 4 Serifa-LightItalic 5 Serifa-Roman 4 SerifGothic-Black 2 SerifGothic-Bold 2 SerifGothic-ExtraBold 2 SerifGothic-Heavy 2 SerifGothic-Light 2 SerifGothic 2 SerifLH 0 Serpentine-Bold 2 Serpentine-Bold 2 Serpentine-Light 2	Serpentine-Light 2 Serpentine-Medium 2 Serpentine-Medium 2 Shannon-Bold 2 Shannon-Book 2 Shannon-ExtraBold 2 Shannon-Oblique 3 Shelley-AllegroScript 6 Shelley-AndanteScript 6 Shelley-VolanteScript 6 SimonciniGaramond-Bold 0 SimonciniGaramond-Italic 1 SimonciniGaramond 0 Slimbach-Black 0 Slimbach-BlackItalic 1 Slimbach-Bold 0 Slimbach-BoldItalic 1 Slimbach-Book 0 Slimbach-BookItalic 1 Slimbach-Medium 0 Slimbach-MediumItalic 1 SnellRoundhand-BlackScript 6 SnellRoundhand-BoldScript 6 SnellRoundhand-Script 6 Souvenir-Bold 0 Souvenir-BoldItalic 1 Souvenir-Demi 0 Souvenir-Demibold 1 Souvenir-Light 0 Souvenir-LightItalic 1	Souvenir-Medium 0 Souvenir-MediumItalic 1 Spartan-BookClassified 2 Spartan-HeavyClassified 2 SpectrumMT-Expert 0 SpectrumMT-Italic 1 SpectrumMT-ItalicExpert 1 SpectrumMT-ItalicOsF 1 SpectrumMT-SC 0 SpectrumMT-SemiBold 0 SpectrumMT-SemiBoldExpert 0 SpectrumMT-SemiBoldOsF 0 SpectrumMT 0 StempelGaramond-Bold 0 StempelGaramond-BoldItalic 1 StempelGaramond-BoldItalicOsF 1 StempelGaramond-BoldOsF 0 StempelGaramond-Italic 1 StempelGaramond-ItalicOsF 1 StempelGaramond-Roman 0 StempelGaramond-RomanSC 0 StempelSchneidler-Black 4 StempelSchneidler-BlackItalic 5 StempelSchneidler-Bold 4 StempelSchneidler-BoldItalic 5 StempelSchneidler-Italic 5 StempelSchneidler-Light 4 StempelSchneidler-LightItalic 5 StempelSchneidler-MedItalic 5 StempelSchneidler-Medium 4	StempelSchneidler-Roman 4 StonelInformal-Bold 0 StonelInformal-BoldItalic 1 StonelInformal-Italic 1 StonelInformal-Semibold 0 StonelInformal-SemiboldItalic 1 StonelInformal 0 StoneSans-Bold 2 StoneSans-BoldItalic 3 StoneSans-Italic 3 StoneSans-PhoneticAlternate 2 StoneSans-PhoneticIPA 2 StoneSans-Semibold 2 StoneSans-SemiboldItalic 3 StoneSans 2 StoneSerif-Bold 0 StoneSerif-BoldItalic 1 StoneSerif-Italic 1 StoneSerif-PhoneticAlternate 0 StoneSerif-PhoneticIPA 0 StoneSerif-Semibold 0 StoneSerif-SemiboldItalic 1 StoneSerif 0 Syntax-Black 2 Syntax-Bold 2 Syntax-Italic 3 Syntax-Roman 2 Syntax-UltraBlack 2
Tekton-Bold 2 Tekton-BoldOblique 3 Tekton-Oblique 3 Tekton 2 Tempo-HeavyCondensed 2 Tempo-HeavyCondensedItalic 3 Tiepolo-Black 0 Tiepolo-BlackItalic 1 Tiepolo-Bold 0 Tiepolo-BoldItalic 1 Tiepolo-Book 0 Tiepolo-BookItalic 1 Tiffany-Demi 0 Tiffany-Demibold 1 Tiffany-Heavy 0 Tiffany-HeavyItalic 1 Tiffany-Italic 1 Tiffany 0	Times-BoldItalicOsF 1 Times-BoldSC 0 Times-ExtraBold 0 Times-ItalicOsF 1 Times-PhoneticAlternate 0 Times-PhoneticIPA 0 Times-RomanSC 0 Times-Semibold 0 Times-SemiboldItalic 1 TimesEuropa-Bold 0 TimesEuropa-BoldItalic 1 TimesEuropa-Italic 1 TimesEuropa-Roman 0 TimesNewRomanMT-BoldCond 0 TimesNewRomanMT-Cond 0 TimesNewRomanMT-CondItalic 1 TimesNewRomanPS-Bold 0 TimesNewRomanPS-BoldItalic 1	TimesNewRomanPS-Italic 1 TimesNewRomanPS 0 TimesTen-Bold 0 TimesTen-BoldItalic 1 TimesTen-BoldItalicOsF 1 TimesTen-BoldOsF 0 TimesTen-Italic 1 TimesTen-ItalicOsF 1 TimesTen-Roman 0 TimesTen-RomanSC 0 TradeGothic-Bold 2 TradeGothic-BoldCondTwenty 2 TradeGothic-BoldCondTwentyObl 2 TradeGothic-BoldOblique 3 TradeGothic-BoldTwo 2 TradeGothic-BoldTwoOblique 3 TradeGothic-CondEighteen 2 TradeGothic-CondEighteenObl 2	TradeGothic-Light 2 TradeGothic-LightOblique 3 TradeGothic-Oblique 3 TradeGothic 2 TradeGothicLH-BoldExtended 2 TradeGothicLH-Extended 2 Trajan-Bold 0 Trajan-Regular 0 TrumpMediaeval-Bold 0 TrumpMediaeval-BoldItalic 1 TrumpMediaeval-BoldItalicOsF 1 TrumpMediaeval-BoldOsF 0 TrumpMediaeval-Italic 1 TrumpMediaeval-ItalicOsF 1 TrumpMediaeval-Roman 0 TrumpMediaeval-SC 0
Univers-Black 2 Univers-BlackExt 2 Univers-BlackExtObl 2 Univers-BlackOblique 3 Univers-Bold 2 Univers-BoldExt 2 Univers-BoldExtObl 2 Univers-BoldOblique 3 Univers-Condensed 2 Univers-CondensedBold 2 Univers-CondensedBoldOblique 3 Univers-CondensedLight 2 Univers-CondensedLightOblique 3 Univers-CondensedOblique 3 Univers-Extended 2	Univers-ExtendedObl 2 Univers-ExtraBlack 2 Univers-ExtraBlackExt 2 Univers-ExtraBlackExtObl 2 Univers-ExtraBlackObl 2 Univers-Light 2 Univers-LightOblique 3 Univers-LightUltraCondensed 2 Univers-Oblique 3 Univers-ThinUltraCondensed 2 Univers-UltraCondensed 2 Univers 2 Universal-GreekwithMathPi 2 Universal-NewswithCommPi 2 UniversityRoman 0	Usherwood-Black 0 Usherwood-BlackItalic 1 Usherwood-Bold 0 Usherwood-BoldItalic 1 Usherwood-Book 0 Usherwood-BookItalic 1 Usherwood-Medium 0 Usherwood-MediumItalic 1 Utopia-Black 0 Utopia-BlackOsF 0 Utopia-Bold 0 Utopia-BoldItalic 1 Utopia-BoldItalicOsF 1 Utopia-BoldOsF 0 Utopia-Italic 1	Utopia-ItalicOsF 1 Utopia-Regular 0 Utopia-RegularSC 0 Utopia-Semibold 0 Utopia-SemiboldItalic 1 Utopia-SemiboldItalicOsF 1 Utopia-SemiboldSC 0 Utopia-Titling 0 UtopiaExp-Black 0 UtopiaExp-Bold 0 UtopiaExp-BoldItalic 1 UtopiaExp-Italic 1 UtopiaExp-Regular 0 UtopiaExp-Semibold 0 UtopiaExp-SemiboldItalic 1

Table 1 Emulated Fonts (PostScript language files only)

VAGRounded-Black 2 VAGRounded-Bold 2 VAGRounded-Light 2 VAGRounded-Thin 2 VectoraLH-Black 2 VectoraLH-BlackItalic 3 VectoraLH-Bold 2	VectoraLH-BoldItalic 3 VectoraLH-Italic 3 VectoraLH-Light 2 VectoraLH-LightItalic 3 VectoraLH-Roman 2 Veljovic-Black 0 Veljovic-BlackItalic 1	Veljovic-Bold 0 Veljovic-BoldItalic 1 Veljovic-Book 0 Veljovic-BookItalic 1 Veljovic-Medium 0 Veljovic-MediumItalic 1 Versailles-Black 0	Versailles-BlackItalic 1 Versailles-Bold 0 Versailles-BoldItalic 1 Versailles-Italic 1 Versailles-Light 0 Versailles-LightItalic 1 Versailles-Roman 0
Weidemann-Black 4 Weidemann-BlackItalic 5 Weidemann-Bold 4 Weidemann-BoldItalic 5 Weidemann-Book 4 Weidemann-BookItalic 5 Weidemann-Medium 4	Weidemann-MediumItalic 5 Weiss-Bold 0 Weiss-ExtraBold 0 Weiss-Italic 1 Weiss 0 WiesbadenSwing-Roman 6 WilhelmKlingsporGotisch-Dfr 0	WilhelmKlingsporGotisch 0 Wilke-Black 0 Wilke-BlackItalic 1 Wilke-Bold 0 Wilke-BoldItalic 1 Wilke-Italic 1 Wilke-Roman 0	Willow 0 WittenbergerFrakturMT-Bd 0 WittenbergerFrakturMT-BdDfr 0 WittenbergerFrakturMT-Dfr 0 WittenbergerFrakturMT 0
ZapfChancery-Bold 6 ZapfChancery-Demi 6	ZapfChancery-Italic 6 ZapfChancery-Light 6	ZapfChancery-LightItalic 6 ZapfChancery-MediumItalic 6	ZapfChancery-Roman 6

Table 1 Emulated Fonts (PostScript language files only)

You are able to add to or modify the Font Emulation database using the file `SW/Config/FontEmulation`:

- Aliasing of a font in the database so an identical font with a different name can be emulated.
- Switching Font Emulation off for a specified font. This is useful if a corporate logo is using a font in the database.
- Override a font definition in the database.
- Add a new font definition to the database.

5 The FontEmulation file

Modifying the Font Emulation file requires some knowledge of the PostScript language.

Note: If Font Emulation fails to emulate a font (for whatever reason), the RIP will behave as if Font Emulation was not enabled. Therefore, if the RIP is configured to abort jobs when there is a font missing, the job will abort; if the RIP is configured to substitute Courier for the missing font, Courier will be used.

Note: Font names are case sensitive.

This Font Emulation configuration file can be found in the following location:

`/SW/Config/FontEmulation`

5.1 Switching font emulation off for a specific font

A font in the database can have emulation specifically disabled for it. This is important for corporate fonts that must only be produced in their original form.

To disable a specific font from using font emulation, use:

```
/TheFontName false
```

where `/TheFontName` is the font name for which you wish to disable font emulation.

For example:

```
/Caslon false
```

This line will remove the font `/Caslon` from font emulation.

5.2 Aliasing of a font in the database

A font in the Font Emulation database can be aliased so that an identical font with a different name can be emulated. To do this use:

```
/MyFontName /DatabaseFontName
```

where `/MyFontName` is the name of font you want to use in place of the font currently in the database `/DatabaseFontName`.

For example:

```
/AmericanaQuiteBold /Americana-Bold
```

This line will substitute the font `/AmericanaQuiteBold` with `/Americana-Bold`. This is allowed as long as `/Americana-Bold` is in the database.

5.3 Adding or overriding a font in the database

To override a database font with an updated definition of that font, or add new fonts to the font emulation database, you can use the following:

```
/Willow <0123...734873>
```

```
/MyNewFont <903843...9823492>
```

This will updated the font called /Willow and add a new font called /MyNewFont.

Note to OEMs:If you would like to update a font definition or add new font definitions to the database please contact your GGSL representative.

Change history		
v1.1	March 07, 2005	New Document
v1.2	Sept. 26, 2005	Updated
v1.3	April 13 2013	Minor text corrections and updated copyright page

**Document issue: 109**

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