

Product: H&J

Enhancement: Access fonts by name and attributes

Description of problem: Machine-generated data streams to be composed are typically encoded in a mark-up language such as xml, sgml or html, which may already contain stylistic mark-up such as font, size, and indents. XSL-FO files, for instance, are already formatted for styled output. These specify fonts by name (“Helvetica”, “Bookman-LightItalic”, etc.), and it can be problematic to translate these names into Penta family and font numbers. The ability to accept font calls by name would save a lot of difficult and potentially error-prone font-ID translation. Accompanying font-modifier terms like “bold”, “italic”, “extended” need to be accepted at the same time.

Solution: With Rev 16.00, the FC command offers this ability. The existing command [fc#] accepted a simple Penta-font number, as a way of doing a font-change without specifying family and member. The command now accepts either that number as before, or the alphabetic PostScript font name along with up to three attribute words. In the alphabetic form, field one may specify an *exact* font-name such as “Helvetica-Bold-Oblique”; or field one may be the font *family* name (“Helvetica”) with fields two through four specifying the font variant needed from among a flexible set of specifier words (“”, bold, oblique”). The fields given are validated against internal lists and then mapped onto the Penta familys database, taking advantage of that data structure’s standardized organization of font-family members. Essentially, the enhanced [fc command provides an intuitive and complete access to Penta font families without needing to know the numbering of fonts, families or members.

Command Syntax:

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[fc fontnum ]      or
[fc font-name , attr1, attr2, attr3 ]
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where:

fontnum is a Penta-font number.

font-name is the font name as delivered from the font supplier. This must match the name listed in your userdata/postscript/psftable file. *font-name* may also be the root name of a typeface family, to which the font supplier appends style attribute suffices separated by commas. For instance: Root name “Times” may be used when supplier’s fonts are named Times-Roman, Times-Italic, Times-Bold and Times-BoldItalic. In this case if no further attributes are given, the first family member (Times-Roman) is used.

attrX is a font attribute name that describes the family variant to use. Up to three may be supplied, which will be combined in selecting the right member from your Penta family database, from the typeface family that contains *font-name*. Legal attribute names are the same as those commonly supplied for font specification by suppliers and in mark-up languages. The attribute effects and their legal names follow.

To get:	Use any of:
Regular (roman)	roman, normal, regular, rg, book, bk, light, lt
Italic	italic, ital, it, oblique, obl
Bold	bold, bd, heavy, hv, medium, md
Bold italic	bolditalic, boldital, bdit
Small caps	smallcap, sc
Condensed	condensed, cn, narrow, nr, compressed, cm
Expanded	extended, ext, expanded, exp, ex
Superior	superior, sup
Inferior	inferior, inf

Spaces may be inserted before/after any command field for readability. All fields are case-insensitive: *BoldItal* and *boldital* are equivalent.

If *font-name* specifies a typeface member (eg. Times-Bold), and attributes are also given, the software will combine all and choose the most specific member, that is, the highest number in member range 1-18. Attributes that conflict with each other (eg. *condensed* with *extended*) will cause a “conflicting font attributes” command error. If a specific *font-name* plus its attributes have no family member, the attributes are given preference. For instance [fc Times-Italic , smallcap] will choose member 5 – roman small-cap – because no italic small-cap member exists.

If *font-name* is loaded into your widths and psftable database but is not found in your family database, then the attributes are ignored and you get a font change to that direct font. This is the same result as calling the font by number with [fc89] (for instance).

For convenience, named and numbered change-font/family commands may be used together. For instance, to get Palatino-Bold, you may use either of [fcPalatino-Roman,bold] or [fcPalatino-Roman][cf3].

Required data changes: No change normally necessary. All fonts to be accessed by name using [fc must exist in the FONT SECTION of file userdata/postscript/psftable, and they must be loaded and numbered, as usual, in your font widths file.

Internal Info

Changed in Revision: 16.00

Date: Mar 14, 2008.

Customer: DLXML, others.

Discussion: May prove useful to provide the above list of legal attribute names in a user-modifiable ascii database.

This enhancement is an important piece of the effort to fully support XSL-FO input.

Programs changed: HandJ.

Datafiles changed: pentadata/hnj.strings.

Source modules changed for HandJ: hnj-protos.f, jc-style.c, jus-convert-font.c