Printing Kanji Characters (8/95)

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TOPIC ---

What's required for printing Kanji characters? Since the LaserWriter IINTX-J
was designed specifically for KanjiTalk, is this the hardware requirement? If
so, how do the LaserWriter IIf and IIg handle printing Kanji characters? Please
explain how printing 2-byte character languages works with PostScript and
TrueType.

DISCUSSION --

Two-byte character printing is very similar to printing one-byte Roman script.
The main difference previously was in the printer used (LaserWriter IINTX-J) to
print the extremely large character sets of the two-byte Asian languages (there
are close to 7,000 Kanji characters). With the introduction of Kanji TrueType
in KanjiTalk 6.2 and now KanjiTalk 7.1, the gap has narrowed since an NTX-J is
no longer required for printing high quality Kanji characters.

Because of the sheer number of characters, a technology was needed to decrease
the number of outlines required. Use of composite fonts became that technology,
as it provided the facility to combine more than one font to create another. In
the case of KanjiTalk (and similarly with the other Asian operating systems), a
special printer controller board was created to handle the composite font
outlines, and an external 40MB hard disk was used to store them. This set
formed the LaserWriter IINTX-J printer.

The following sequence of events is exactly the same for printing one-byte fonts
as two-byte fonts, except where the outlines are found, and how they are
processed on the printer (as just explained with the LaserWriter IINTX-J). In
rough outline form, the search is as follows:

1) Look for associated PostScript fonts in the printer ROM, font cache, or
    external hard disk.
2) If not found, then look for the downloadable PostScript font on the
   Macintosh.
3) If not found, then look for the TrueType outline font on the Macintosh.
4) Lastly, use the bitmap font on the Macintosh.

Again, the difference is that the PostScript outline fonts aren't present in the

printer's ROM or the Macintosh; they're on the hard disk. If not found there, then the sequence of events continues as normal starting with step 3. When printing to a LaserWriter IIf or IIg, a Japanese font hard disk isn't available. The Kanji TrueType font gets downloaded to the printer. In the case that no corresponding outline font is found, then a bitmap of the screen font is used, resulting in fairly choppy output.

There are now a total of six Kanji TrueType fonts, two introduced initially with KanjiTalk 6.2, and four more with KanjiTalk 7.1. As with any TrueType font, printing isn't limited to laser printers, so you can print to QuickDraw printers such as the StyleWriter and ImageWriter with good results.

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