

ISO/IEC JTC1/SC2/WG2/IRG
Ideographic Rapporteur Group
Secretariat: China

Source/Contributor Identifier: Unicode Technical Committee
Meeting: For IRG #19 (Macao SAR, May 2002)
Title: Font Production and the IRG
Status: Member body's contribution
Reference: IRG N902
Requested Action: For discussion at IRG #19

The UTC agrees with Japan that the general principles involved for securing a font to use in printing ISO/IEC 10646 and Unicode are different for CJK Unified Ideographs from other scripts. The current policy needs to be refined to allow for this. At the same time, the UTC wishes to remind IRG members of a some points which should be borne in mind.

1. From the perspective of the UTC, the fundamental issue is that it is impossible to produce the standard without a TrueType, outline font. Synchronicity between ISO/IEC 10646 and Unicode is impossible unless both standards can be printed, and Unicode requires a TrueType, outline font for printing.

2. While the IRG and WG2 may define CJK Unified Ideographs based upon their shape, Unicode expressly does *not*. Within Unicode, CJK Unified Ideographs are normatively defined by their mappings to other character sets, character collections, or dictionaries. In the past, Unicode has used a font for the formal printing of the Unicode book but utilized other means to indicate the specific glyphs expected for characters. This policy could easily be extended and used in the future for similar purposes.

3. The whole issue of defining CJK Unified Ideographs based on their glyphs is a subtle and a nasty one. On the one hand, Japan is entirely correct that the differences between distinct CJK Unified Ideographs can depend on very minor visual distinctions. On the other hand, we need to avoid the implication to font vendors that no glyphic variations are possible. It's generally agreed, for example, that the four- and three-stroke forms of the grass radical may be selected entirely based upon the overall style of the font. (This is one reason why Unicode defines CJK Unified Ideographs in terms of their mappings.)

4. The reason why it is necessary for WG2 and Unicode to be able to modify the fonts supplied is that such fonts are often produced in very hit-and-miss conditions and without the full quality control that a commercial font will undergo. As such, some alterations to the font may be necessary in order for them to work within a production environment. Moreover, for most scripts, it is much faster for Unicode to alter a font to correct a glyphic error than to return it to the font vendor for alteration. Unicode is not really set up, however, to edit the shapes of glyphs in large CJK fonts, and one could argue that in such cases someone who is not an expert in CJK font production could as easily add a mistake as correct one. It may, therefore, be possible to make an exception for *glyph* alterations for CJK fonts. (There are other types of errors in glyph data which are possible, however. A contour may have the wrong direction, for example. Corrections to such errors may be possible without waiting for the font vendor to complete a full production cycle.)

The UTC agrees with Japan that the font production issue is not, strictly speaking, an IRG problem. The IRG and its members are not font vendors. We hope, however, that IRG members will continue to help us resolve this issue so that we can incorporate IRG output into the Unicode Standard and ISO/IEC 10646 in a timely fashion.

The UTC is confident that it will be able to work cooperatively with IRG and WG2 members to solve the font production problems to everybody's satisfaction.