



ISO/IEC JTC 1/SC34 Information technology -- Document Description and Processing Languages

TITLE: Requirements for Amendment 1 to ISO/IEC 9541-4
SOURCE: SC34/WG2
PROJECT:
PROJECT EDITOR:
STATUS:
ACTION:
DATE: 2009-03-25
DISTRIBUTION: SC34, SC34/WG2, SC34/WG4 and Liaisons
REFER TO:
REPLY TO:

ISO/IEC JTC1/SC34/WG2 N351

Requirements for Amendment 1 (Media type and subtypes) to ISO/IEC 9541-4: Harmonization for Open Font Format

Although Open Font Format (ISO/IEC 14496-22) is a standardization of a font file format in MPEG-4, today this font format is quite widely used for various purposes. It is expected that the OFF resource can be transferred by network, but no standard media types for OFF resources are registered. Some applications define their own media types, like “application/x-font-ttf”. The standard media type for OFF resource is required.

At present, there are only 3 font-related media subtypes in IANA, under “application” media type; “application/font-tdpfr”, “application/font-fontforge-sfd” and “application/vnd.ms-fontobject” (the last one is unclear). The font formats which are currently in-use but have no appropriate registrations in IANA are:

- TrueType related font
 - TrueType font
 - TrueType Collection font
 - OpenType font including single face described by Adobe Type2 CharStrings

- OpenType font including multiple face described by Adobe Type2 CharStrings (not standardized yet)
- Adobe SING glyphlet resource file
- TrueType GX (a TrueType font including the extension table for intelligent layout)
- sbit-font (sfnt-based bitmap font for Macintosh)
- Suitcase font (TrueType font with FOND resource, for Macintosh)
- Microsoft Embedded OpenType
- PostScript related font
 - PostScript Type 1 font
 - ✧ PFA format
 - ✧ PFB format
 - Multiple Master Font
 - PostScript Type 3 font
 - Compact Font Format (CFF) font
 - PostScript Type42 font (encapsulated TrueType fonts)
 - CID-keyed Type1 font
 - CID-keyed Type2 font
 - Original Composite Font
 - sfnt-wrapped PostScript font
 - ✧ Adobe Type1 PostScript in sfnt
 - ✧ Adobe CID-keyed Type1 in sfnt
 - metric-only font
 - ✧ AFM format
 - ✧ PFM format
 - ✧ ACFM format
- Other scalable fonts
 - Bitstream Speedo font
- Various bitmap fonts
 - Adobe BDF font
 - Apple NFNT-font (original bitmap font for Macintosh)
 - ✧ fbit-font (NFNT-supporting font for multi-byte character set)
 - X11 PCF font
 - Windows .FNT font
 - Windows .FON font

This list includes only the font formats which the file format specifications are disclosed to public. If the undisclosed font formats (e.g. Agfa IntelliFont, Dynalab DigiType, Bitstream stroke-based fonts) are taken into account, the list would be much larger. Considering the fact that the number of sub level media types for each font formats is greater than a dozen, so the registration of top level

media type “font” is better than using many sub level media type under “application”.

The OFF file structure is based on the “sfnt” resource structure defined by Apple for “sfnt”, to store scalable font. The structure is adopted by various files, not only OFF. For example, Adobe SING glyphlet file uses same file structure to store the graphic components to compose a glyph, but it cannot be used as a stand-alone font file. Considering such utilization of “sfnt” format, both of media types with and without explicit specification of the contents would be more convenient than dealing it as a single font format. Therefore, the author proposes to register a media types “font/sfnt”, “font/sfnt-ttf”, “font/sfnt-ttc” and “font/sfnt-otf” to cover all OFF variants and other data packed in “sfnt” format.