

Specification for design and implementation of open type fonts for Tibetan script

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OpenType is the most powerful and popular font format today. It is a new cross-platform font file format developed jointly by Adobe, Apple, and Microsoft. OpenType allows users move font files back and forth between platforms, and hence the same OpenType font files will work on Macintosh and Windows computers, and (with FreeType – an open source font engine) under UNIX and Linux. A superset of the existing TrueType and Type 1 (PostScript) formats, OpenType provides greater language support than any previous font format containing not only the standard font layout data, but glyph processing information (instructions) such as glyph substitution and positioning as well, enabling the full support of complex scripts (such as Tibetan) which require character reordering and/or glyph processing to display, print or edit. OpenType fonts use the international Unicode encoding standard, which is becoming more widely adopted in industry, which assigns a unique code number for characters that represent most of the scripts in the world. Currently, the OpenType font format is the only way to thoroughly support those scripts in a computer system. It is believed that the Tibetan Unicode character set in combination with OpenType technology will offer a long-term solution to a number of Tibetan data processing problems. In this paper, we will (1) provide a brief introduction to Unicode and OpenType technology; (2) address encoding issues in the Tibetan script relevant to designing various OpenType fonts; (3) survey OpenType features for the Tibetan script; (4) describe the Tibetan syllable and stack processing rules for applications based on Unicode and OpenType technology; and (5) discuss the various other issues connected with the Unicode Tibetan character set and OpenType font design for Tibetan scripts.