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Part 22: Open Font Format

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Partie 22: Format de police de caractères ouvert

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Foreword

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This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

This fourth edition cancels and replaces the third edition (ISO/IEC 14496-22:2015), which has been technically revised. It also incorporates the Amendments ISO/IEC 14496-22:2015/Amd.1:2017 and ISO/IEC 14496-22:2015/Amd.2:2017.

The main changes compared to the previous edition are as follows:

— new technology clauses were added;

— many existing clauses, subclauses, tables, figures and annexes were editorially revised.

A list of all parts in the ISO/IEC 14496 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

Multimedia applications require a broad range of media-related standards. In addition to the typical audio and video applications, multimedia presentations include scalable 2D graphics and text supporting all languages of the world. Faithful reproduction of scalable multimedia content requires additional components including scalable font technology. The Open Font Format, which is based on the OpenType®[1] font format, was originally developed as an extension of the TrueType®[2] font format, adding support for PostScript®[3] Compact Font Format (CFF) font data. OFF fonts and the operating system services which support OFF fonts provide users with a simple way to install and use fonts, whether the fonts contain TrueType outlines or CFF (PostScript Type1) outlines.

The Open Font Format addresses the following goals:

- broader multi-platform support;
- excellent support for international character sets;
- excellent protection for font data;
- smaller file sizes to make font distribution more efficient;
- excellent support for advanced typographic control.

CFF data included in OFF fonts may be directly rasterized or converted to the TrueType outline format for rendering, depending on which rasterizers have been installed in the host operating system. But the user model is the same: OFF fonts just work. Users will not need to be aware of the type of outline data in OFF fonts. And font creators can use whichever outline format they feel provides the best set of features for their work, without worrying about limiting a font's usability.

OFF fonts can include the OFF Layout tables, which allow font creators to design broader international and high-end typographic fonts. The OFF Layout tables contain information on glyph substitution, glyph positioning, justification, and baseline positioning, enabling text-processing applications to improve text layout.

As with TrueType fonts, OFF fonts allow the handling of large glyph sets using Unicode encoding. Such encoding allows broad international support, as well as support for typographic glyph variants.

Additionally, OFF fonts may contain digital signatures, which allows operating systems and browsing applications to identify the source and integrity of font files, including embedded font files obtained in web documents, before using them. Also, font developers can encode embedding restrictions in OFF fonts which cannot be altered in a font signed by the developer.

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Information technology — Coding of audio-visual objects —

Part 22:
Open Font Format

1 Scope

This document specifies the Open Font Format (OFF) specification, including the TrueType and Compact Font Format (CFF) outline formats. Many references to both TrueType and PostScript exist throughout this document, as Open Font Format fonts combine the two technologies. The document defines data structures for variaous font tables, and provides the necessary details for developers to build a font rendering and taxt layout/shaping engines in compliance with this document.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 10646, *Information technology — Universal Coded Character Set (UCS)*

ISO/IEC 14496-18, *Information technology — Coding of audio-visual objects — Part 18: Font compression and streaming*

ISO/IEC 15948, *Information technology — Computer graphics and image processing — Portble Network Graphics: Functional specification* [4]

IEC 61966-2-1/Amd 1:2003: *Multimedia systems and equipment — Colour measurement and management — Part 2-1: Colour management — Default RGB colour space — sRGB*.

TrueType Instruction Set, http://www.microsoft.com/typography/otspec/ttinst.htm

Unicode 11.0, http://www.unicode.org/versions/Unicode11.0.0/

Scalable Vector Graphics (SVG) 1.1 (2nd edition), W3C Recommendation, 16 August 2011 http://www.w3.org/TR/SVG11/

IETF BCP 47 specification, “Tags for Identifying Languages”. http://tools.ietf.org/html/bcp47

[4] Also available as a W3C Recommendation (Reference [15]).

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