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CODING OF MOVING PICTURES AND AUDIO

Title: Updates based on Public Feedback to Changes to the OFF Font Format

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Introduction

This introduction is to give context and is not itself proposed text.

A recent proposal to the ISO MPEG OpenFont committee, [m66260](#), was accepted in January of 2024. Since that time there have been a number of comments on the proposal.

Some of these pointed out small typographical errors, and these are included in this Proposal.

Some of the comments made technical suggestions, and, where appropriate, these are also incorporated in this proposal.

The primary goal is to enable font producers to create fonts containing more than 65535 glyphs, and to guide implementors, technical writers, trainers, and others, in their use.

Technical discussion of most the items proposed here may be found in Github issues, as noted for each change.

hdmx

https://github.com/harfbuzz/boring-expansion-spec/issues/131

In 5.6.2 hdmx—Horizontal device metrics, in the Device Record table headed Each DeviceRecord for format 0 looks like this, change the table as follows:

Each DeviceRecord for format 0 looks like this.

Device Record		
Type	**Name**	**Description**
uint8	pixelSize	Pixel size for following widths (as ppem).
uint8	maxWidth	Maximum width.
uint8	widths[numGlyphs]	Array of widths (numGlyphs is from the 'MAXP' table if present, otherwise 'maxp').

LTSH

https://github.com/harfbuzz/boring-expansion-spec/issues/132

In 5.6.4 LTSH—Linear threshold, at the end of the section, add Format 1 as follows:

Format 1 of the 'LTSH' table supports more than 6535 glyphs in a font:

Type	Name	Description
uint16	version	Version number (set to 1).
uint24	numGlyphs	Number of glyphs (numGlyphs is from the 'MAXP' table if present, otherwise 'maxp').
uint8	yPels[numGlyphs]	The vertical pel height at which the glyph can be assumed to scale linearly. On a per glyph basis.

BASE

https://github.com/harfbuzz/boring-expansion-spec/issues/129

In 6.3.1.4 BASE table structure, update BaseCoordFormat3=4 table to fix a typo: format should be 4, not 2.

BaseCoordFormat4 table: Design units plus contour point (24-bit glyph ID)

Type	Name	Description
uint16	baseCoordFormat	Format identifier – format = 4
int16	coordinate	X or Y value, in design units
uint24	referenceGlyph	Glyph ID of control glyph
uint16	baseCoordPoint	Index of contour point on the reference glyph

JSTF

In 6.3.5.1 JSTF—The justification table, after JsfScriptRecord and before Justification script table, insert the following new subsection, just after "Example 1 at the end of this clause shows a JSTF Header table and JstfScriptRecord."

JSTF header 1.1

Type	Name	Description
uint16	majorVersion	Major version of the JSTF table, = 1
uint16	minorVersion	Minor version of the JSTF table, = 1
uint16	jstfScriptCount	Number of JstfScriptRecords in this table
JstfScriptRecord	jstfScriptRecords[jstfScriptCount]	Array of JstfScriptRecords, in alphabetical order by jstfScriptTag
uint16	jstfScriptCount2	Number of JstfScriptRecords2 in this table
JstfScriptRecord2	jstfScriptRecords2[jstfScriptCount]	Array of JstfScriptRecords2, in alphabetical order by jstfScriptTag

JstfScriptRecord2

Type	Name	Description
Tag	jstfScriptTag	4-byte JstfScript identification
Offset32	jstfScriptOffset	Offset to JstfScript2 table, from beginning of JSTF Header

After the JstfScript table, add:

The JstfScript2 table is based on the JstfScript table, but has 32-bit offsets:

JstfScript2 table

Type	Name	Description
Offset32	extenderGlyphOffset	Offset to ExtenderGlyph table, from beginning of JstfScript table (may be NULL)
Offset32	defJstfLangSysOffset	Offset to Default JstfLangSys table, from beginning of JstfScript2 table (may be NULL)
uint16	jstfLangSysCount	Number of JstfLangSysRecords in this table, may be zero (0)
JstfLangSysRecord	jstfLangSysRecords[jstfLangSysCount]	Array of JstfLangSysRecords, in alphabetical order by jstfLangSysTag

ExtenderGlyph2 table

The *ExtenderGlyph2* table supports fonts containing more than 65535 glyphs.

Type	Name	Description
uint32	glyphCount	Number of extender glyphs in this script
uint32	extenderGlyphs[glyphCount]	Extender glyph IDs – in increasing numerical order

FVAR

https://github.com/harfbuzz/boring-expansion-spec/issues/15

In 7.3.3 fvar—Font variations table, after VariationAxisRecord, after the paragraph about the HIDDEN_AXIS tag, add a new final paragraph as follows:

For smooth animation, and for non-linear interpolation, it may be necessary for a font to use multiple axes with the same axisTag.

If a font contains more than one axis with the same *axisTag*, at most one of those axes shall be visible (i.e. have the HIDDEN_AXIS bit set to zero). The VariationAxisRecord for such a visible axis in this case shall appear first, before the records for any of the other axes with that same axisTag, all of which shall have their HIDDEN_AXIS flag set to 1.

[end]