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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](https://github.com/harfbuzz/boring-expansion-spec/issues/131), 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 65535 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. |

In 6.3.5.1 JSTF—The justification table, after JsScriptRecord 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 |

After the Extender Glyph table, just before Justification Language System table, insert:

ExtenderGlyph2 table

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

| Type | Name | Description |
|--------|----------------------------|--|
| uint16 | glyphCount | Number of extender glyphs in this script |
| uint24 | extenderGlyphs[glyphCount] | Extender glyph IDs – in increasing numerical order |

In the MultiItemVariationData table

<https://github.com/harfbuzz/boring-expansion-spec/commit/3a911400bdd0ab5b9f1816a542a6202d048394f0>

Change the format from uint16 to uint8.

Add a note immediately after the table:

NOTE 1 The format is encoded as an 8-bit value to save space.

NOTE: dmap and fvar changes were moved to separate documents.

[end]