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**ISO/IEC JTC 1/SC 29/WG 3**

**CODING OF MOVING PICTURES AND AUDIO**

**ISO/IEC JTC 1/SC 29/WG 3 m** **56219**

**Online – January 2021**

**Title: Break-out Group Report on Font Format activity**

**Author: Vladimir Levantovsky**

**BoG Session scheduling:**

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| **Date** | **LA** | **Dallas** | **New York** | **UTC** | **Paris** | **Beijing** | **Seoul** | **General** | **Track A** | **Track B** |
| **13** | **13** | **15** | **16** | **21** | **22** | **5** | **6** |  | **DASH #2** | **Font Format** |

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| BoG | Leader | Contact | zoom | Report |
| Font Format | Vladimir Levantovsky  | vladimir.levantovsky\_at\_gmail.com  | <https://iso.zoom.us/my/mpegsystems> | m56219 |

**Proposed agenda**

* Review input contributions to this meeting
* Discuss and resolve remaining open issues
* Output document status and recommended next steps

**Attendees**

* Vladimir Levantovsky
* Dominik Röttsches (Google)
* Itaru Kaneko
* Suzuki Toshiya
* Peter Constable
* Chris Lilley (W3C)

**Input contributions**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| m55831 | Font | [9.1] Proposed updates for extending COLR table format and functionality | Peter Constable, Dominik Röttsches, Roderick Sheeter |  |

Topics discussed:

* *In 5.7.11.1.2.1 Color Lines: when it comes to color interpolation, currently the spec says that color values along the color line are linearly interpolated – is this enough?*
- either two choices could be offered (linear & in sRGB space) or just one: in any case it should be explicitly mentioned in the spec, recommend a minimal level of precision for interpolation;
- alpha must be pre-multiplied;
- choice of interpolation methods could be added in the future revision of the spec;
- interpolation in liner space (if this is the only option offered at this time) would be a preferred option, specification should say it. (Consider [CSS Color module](https://www.w3.org/TR/css-color-4/#predefined) as a reference.)

Needs additional proposal to resolve

* *In 5.7.11.1.2.2 Linear Gradients: the description of the gradient and rotation vectors, and effects the rotation vector has on the final results are underspecified. Issues that need additional clarifications include
a) rotation effect on color interpolation results if the angular distance between gradient orientation vector and rotation vector are more than 90 degrees in either direction (CW or CCW), and
b) what effect , if any, the magnitude of the rotation vector has. (Currently, the spec is silent about it.)*

Adopt [proposed updates](https://github.com/googlefonts/colr-gradients-spec/pull/207/files) in the current Working Draft text.

* *In 5.7.11.1.2.3 Radial Gradients: what is the expected behavior in case where both circles overlap with r > 0?*

Needs additional proposal to resolve, discussion is in [GitHub](https://github.com/googlefonts/colr-gradients-spec/issues/150)

* *In 5.7.11.1.2.3 Radial Gradients: specify the expected behavior in case where a transform flattens both circles and their centers to a line.*

Needs additional proposal and review, discussion is in [GitHub](https://github.com/googlefonts/colr-gradients-spec/issues/151)

* *In 5.7.11.4 COLR table and OFF font variations – discuss and incorporate the* [*proposed changes*](https://github.com/googlefonts/colr-gradients-spec/commit/9cfbcaefc88f487b547431b62dfab22ee743d9b8?short_path=f8c59e8#diff-f8c59e8d70f0a695574ea35269cf5f70c46db8cc40daa2d5e128e8c79be10528) *in the last two paragraphs.*

Resolution: adopt the proposed changes as part of the AMD2 draft.

* *In 5.7.11 COLR Table: supporting COLR without CPAL for composite monochromatic glyphs?*

Needs additional proposal and review, discussion is in [GitHub](https://github.com/googlefonts/colr-gradients-spec/pull/205)

**Recommendations**: incorporate the input contribution m55831 as part of the updated Working Draft text.

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| m55833 | Font | [9.1] Proposed new amendments for ISO/IEC 14496-22 AMD2 | Peter Constable, Vladimir Levantovsky |  |

**Recommendations**: incorporate the input contribution m55833 as part of the updated Working Draft text.

### **Summary of Discussions**

**Disposition of input contributions:**

m55831: Acknowledged and accepted. A small number of open issues still remain; additional contributions are needed to resolve them.

m55833: Acknowledged and accepted as is.

**Conclusions:**

1. Update the working draft amendment with the proposed changes in both m55831 and m55833
2. Continue as a working draft amendment.
3. Establish the AHG with the following mandates:
- Review and discuss the text of Working Draft amendment to review and update COLR v1 data structure descriptions.
- Discuss clarifications and updates to other parts of the OFF specification, and submit AHG recommendations for proposed changes to address identified technical issues.

### **Reference output document**

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| **No.** | **Title** | **In Charge** | **TBP** | **Available Date** | **S/N** |
|  | **ISO/IEC 14496-22 - Open Font Format** |  |  |  |  |
| **NN** | **WD2 of ISO/IEC 14496-22:2019 AMD 2 Extending color font functionality and other updates** | **Vladimir Levantovsky** | **Y** | **2021-01-22** | **xxxxx** |