INTERNATIONAL ORGANISATION FOR STANDARDISATION

**ORGANISATION INTERNATIONALE DE NORMALISATION**

**ISO/IEC JTC1/SC 29/WG 3**

**CODING OF MOVING PICTURES AND AUDIO**

**ISO/IEC JTC1/SC 29/WG 3/M55402**

**October 7, 2020**

**Source: AHG on Font Format**

**Status: Contribution to the 1st SC29/WG3 (MPEG Systems) Meeting**

**Title: Report of the AHG on Font Format**

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# Ad Hoc group mandates

1. To study the technical issues outlined in the liaison statements from SC34 (m52545) and from CSS WG (m52854).
2. Identify possible approaches to solving confirmed technical issues, and communicate with the members of CSS WG to discuss and resolve any identified ambiguities that need clarifications, or requirements for new features and technology to support new functionality.
3. Develop and propose to WG11 input contributions that would become the basis for a new work item, and suggest a way forward.

# Input Contributions for this meeting

|  |  |
| --- | --- |
| m55371 | Proposed amendments for extending COLR table format and functionality (Google) |
| m55402 | Report of the AHG on Font Format |

# AHG Activities

The AHG Chair was advised to bring to the attention of the SC29/WG3 the fact that the vast majority of the AHG participants are not members of the SC29/WG3, and participate in this work only in a capacity of invited experts.

NO CONSENSUS HAS BEEN REACHED ON THE CONTENT OF THIS REPORT!

The following is a summary of AHG activities.

* + - 1. Significant increase in membership of this AHG was primarily driven by initiating exploratory discussion threads covering the technical areas related to text layout and shaping for complex scripts – topics that are not currently covered by the font format specification.
      2. During this period, the AHG have seen a significant increase in the levels of activities, this has certainly been one of the most active and controversial discussion periods on record, ever since the AHG was first established in 2004. Leading up to Oct. 6, 2020 (the day of preparation of this report), the total count of messages sent to the AHG email list since last WG meeting has reached 750.
      3. As a supplement to the AHG email list, a new GitHub repo “[MPEGGroup/OpenFontFormat](https://github.com/MPEGGroup/OpenFontFormat)” was established based on the [member’s request](https://lists.aau.at/pipermail/mpeg-otspec/2020-August/002134.html). The AHG intends to continue using this repo as an issue tracker to supplement spec-related discussion on the mailing list.
      4. Summary of discussions relevant to the AHG mandates:
* *Discussion of the technical issues identified by incoming liaison from SC34.*  
  In the [early technical discussions](https://lists.aau.at/pipermail/mpeg-otspec/2020-August/001835.html) on the subject of vertical writing and character orientation (brought up by SC34 liaison), an intermediate conclusion was reached that attempts to solve the vertical layout issues by introducing new vertical layout features (instead of updating existing fonts and applications to support Unicode Vertical Text Layout [UAX#50](http://www.unicode.org/reports/tr50/) and currently existing layout features) wasn’t considered a viable approach. Unfortunately, [further discussions on this subject](https://lists.aau.at/pipermail/mpeg-otspec/2020-August/002001.html) diverged into arguments that touched on many aspects of SC29 and SC34 collaboration, which were clearly out of scope for this AHG.
* *Discussion of the technical issues identified by incoming liaison from W3C CSS WG.*  
  There was an [initial discussion](https://lists.aau.at/pipermail/mpeg-otspec/2020-August/002156.html) started in the AHG that touched on one particular aspect of CSS WG liaison related to the need for additional font metrics; however, the progress on this topic has been minimal, and more discussions are definitely needed.
* *Identify possible approaches to solving confirmed technical issues, and communicate with the members of CSS WG to discuss and resolve any identified ambiguities that need clarifications, or requirements for new features and technology to support new functionality.*  
  Further discussions related to all other aspects and topics raised by the CSS liaison are needed.
* *Develop and propose to WG11 input contributions that would become the basis for a new work item, and suggest a way forward.*  
  The AHG conducted numerous discussions that touched on many aspects of extending our work into the new technical areas. We considered a broad range of approaches and possible solutions that operate on and at the interface between text encoding and font format, including both general and specific aspects of standardization work that may not necessarily fall under the SC29/WG3 umbrella. The work items that are closely related to text encoding and layout may end up being considered for development by the Unicode Consortium, while certain script-specific and/or text shaping specifications may find other organizations such as e.g. W3C to be a better home for this new work. As a direct result of these discussions, a new W3C “[Font and Text Community Group](https://www.w3.org/community/font-text/)” has been formed to continue the discussion and consider possible new work items and their venues. We believe that these activities will also inform the new work and contribute new proposals for OFF specification.   
  In addition to above-mentioned discussions, there was a number of topics brought up related to various technical issues identified in the specification text, both as clarifications and updates to existing parts and new functionality proposals.   
  Among the new proposals, one in particular related to introduction of [new functionality in the existing mechanism for scalable color glyphs](https://github.com/MPEGGroup/OpenFontFormat/issues/20) has been discussed at length, and is submitted as a separate input contribution m55371 to the WG meeting by their authors.  
  Many [additional discussions](https://lists.aau.at/pipermail/mpeg-otspec/2020-August/thread.html) took place. Some of them are related to specific table descriptions, while others are aimed at providing more general changes both in term of structure of the documents and terminology used, deprecation of certain elements of the spec, and editorial updates. The AHG expects that some of these clarifications and updates can be introduced as parts of the next amendment (AMD2) to existing fourth edition of the ISO/IEC 14496-22:2019, while other changes would be considered in scope for the future [fifth] edition of the “Open Font Format” specification.

# Digressions and discourse as part of the AHG discussions

The significant increase in AHG membership and lack of familiarity with ISO process necessitated discussions on the AHG list that were dedicated to reviewing ISO policies and procedures, rights and responsibilities of participants in ISO activities, and the ground rules for using AHG mailing list and newly established GitHub repository. It is my belief that in the end we achieved a much better shared understanding of the limitations of the processes that ISO currently requires us to follow, and the rules that govern our work (as documented by the [README file](https://github.com/MPEGGroup/OpenFontFormat/blob/master/README.md) of the new GitHub repo).

There were plenty of controversy as part of these debates, with a number of the email messages exchanged that questioned the effectiveness of the ISO process and the work of the AHG itself. One participant suggested that the work of the AHG should be discontinued, while others objected to this notion.

# AHG Recommendations

The AHG recommends that the newly established GitHub repository “[MPEGGroup/OpenFontFormat](https://github.com/MPEGGroup/OpenFontFormat)” should be recognized as an officially sanctioned venue for technical discussions and issue tracking, with the understanding that all final proposals that the AHG intends to submit as input contributions to the WG should be made available for review on the AHG email list.

The AHG also recommends continuing exploration activities and discussions of the technical issues raised by the CSS WG and newly formed Font and Text CG. We invite the participation of their experts to help us propose and develop solutions that would become parts of the future amendment of the ISO/IEC 14496-22:2019.