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| **Joint Collaborative Team on Video Coding (JCT-VC)**  **of ITU-T SG 16 WP 3 and ISO/IEC JTC 1/SC 29/WG 11**  33rd Meeting: Macao, CN, 6–12 Oct. 2018 | Document: JCTVC-AG0006 |

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| *Title:* | **JCT-VC AHG 6 report: Report development for usage of video signal type code points** | | |
| *Status:* | Input Document to JCT-VC | | |
| *Purpose:* | Ad Hoc Group 6 Report | | |
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| *Source:* | AHG Chairs | | |

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# Abstract

This report summarizes the activities of the AhG on Report development for usage of video signal type code points that have taken place between the 32st and 33nd JCT-VC meetings. Activities focused on work on text and diagrams of the draft output document JCTVC-AF1003 (Version 1) intended for a Technical Record and a follow on draft JCTVC-AF1011 (Version2) for future changes to this technical record.

# Introduction

The mandates of this AHG were:

* Produce the output draft text JCTVC-AF1003 and develop proposed improvements of its content
* Produce the output draft text JCTVC-AF1011 and develop proposed improvements of its content
* Study the industry usage of video signal type code points and identify the most common and important combinations of such code points (including study of the draft text JCTVC-AF1003).

# Activities

## Reflector

The e-mail reflector is [jct-vc@lists.rwth-aachen.de]. To receive email, please subscribe to the e-mail reflector: <http://mailman.rwth-aachen.de/mailman/listinfo/jct-vc>. For e-mail exchange, it is recommended to put [AHG6] in the subject line for easy grouping.

The reflector had several emails on comments to improve the output document content and format. Also there was some discussion on similar topic areas on ultra low latency, IMF , and JPEG 2000. A discussion resulted in adding in text to the WD to add area to describe synonyms and common terms and use CICP, HEVC/HEVC, and SMPTE MXF for the tables listing common combinations of video properties.

## Teleconferences

Two teleconference occurred on August 27 ( Version 1 Edits) and September 26 (remainder Version 1 edits and Version 2 discussion. For attendance were the following individuals: Alexandros Tourapis/ Apple, Sean McCarthy/Dolby, Gary Sullivan/Microsoft-JCT CoChair, Lars Borg/Adobe, Yasser Syed (Co-Chair)/ Comcast-NBCU. The second call had Chad Fogg/Movielabs (Co-Chair), Alexis Tourapis/ Apple, Atsuro Ichigaya/ NHK, and Yasser Syed/Comcast (Co-Chair)

The Group was discussing the working draft for a planned technical report envisioned as 23091-4 where the first iteration is the draft ( AF1003) which would eventually become the First PDTR for consideration. The second working draft (AF1011) will become an Amendment to the eventual Technical Record created from the initial version 1 draft. The goal of the group is to ready AF1003 during the JCT meeting in October 2018 to create a PDTR document if the JCTVC committee believes it is ready. The version 2 document is expected to be an amendment of the initial Technical Record in about a year.

Version 1 Doc was being worked on to create output edit draft. Items that were worked on were:

1. Redid references to group into different Organization and to remove dates to allow for most current reference of that doc (including amendments). Also discussed that version numbering of spec for some ITU-R spec would be indicated in the reference, but table references would be simplier without the version number (e.g. BT.709 instead of BT.709-6)
2. Edited Definitions section for narrow range, colour volume
3. Added/edited Abbreviations for 2K/4K/8K, YCbCr ( and many varations of this)
4. Section 6 – Redid diagram to redoe and lessen the amount of text. Moved Camera Logs to Version 2, added text about P3D65 and removed some of DCI information
5. Section 7.1, added summary table to associated SD/HD/UHD, tags, and colourimetry properties
6. Section 7.1.1 redid format on Defined properties to make it more readable and added a code points table for colourimetry properties.
7. Colourimetry Tag tables- removed “.” On tags. Redid SDR-NCG/SDR-WCG/HDR-WCG tables to make it more readable. Added notes on trander characteristics that were functionally the same but may be defined different for each applications. Added note to say that parameters noted in CCIP would use CCIP as a source,
8. Moved Footnotes to table and made them notes added to after the table
9. Moved section7.2 (baseband, codecs, compression, chroma subsampling) into version 2
10. Section 7.2 (Now MDCV)- Redid table to make it more readable. Removed Hex versions of coded decimal values. Removed column for P3Plus-4000 due to no further information on data values for that MDCV display point. May add this in later if we get this information.
11. Text in document was edited to use more spec like terminology.
12. Large Discussions on what P3 meant for both signal and Display. In end of discussion identified that better definition of it was P3D65 to define white point along with it since this was the white point used in video content workflow. This was also documented in 2067-21.
13. Discussion of ChromaLocation Type ( Parameter specified in HEVC spec) lead to a footnote added in version 1 for parts of workflow that have chroma Subsampling. More details will be put in Version 2 of document ( Tables etc).
14. Many discussions on what is defined but not used, what is used but not defined, and how to deal with this.

Version 2 document draft output document started and made into submitted draft for AF1011.

1. Added references for baseband specification, Camera Logs, popular applications links
2. Added table to indicate target applications for the widely used content workflow
3. Added in Chroma vertical alignment to Colorimetry section and into code points section.
4. Added in possibility for Chroma tables for baseband, HDMI, etc.
5. Added back in section of Video/Image Characteristics

Lots of email activities to discuss on the output documents and to discuss what is used by the industry and what is specified as well.

## Activities and output

Work was done to produce, review, add comments to, and refine the output document JCTVC-AF1003 (Version1) and JCTVC- AF1011 (version2) and capture email and teleconference activity in this report JCTVC-AG1006.