3GPP TSG SA WG 4 Meeting 108-e TDoc S4-200684

Electronic Meeting 6th – 9th April 2020

**Title: LS on CMAF**

**Response to: LS S4-200536 on CMAF from SC 29/WG 11 (MPEG)**

**Release: 16**

**Work Item: TVProf and 5GMS3**

**Source: 3GPP SA WG4**

**To: ISO/IEC JTC1/SC29/WG 11 (MPEG)**

**Cc:**

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**Send any reply LS to: 3GPP Liaisons Coordinator,** **mailto:3GPPLiaison@etsi.org**

**Attachments:** - 3GPP TS 26.116: Television (TV) over 3GPP services; Video profiles:

<http://www.3gpp.org/ftp//Specs/archive/26_series/26.116/26116-g10.zip>

- 3GPP Draft TS 26.511: 5G Media Streaming, 5G Media Streaming (5GMS); Profiles, codecs and formats

 <http://ftp.3gpp.org//Specs/archive/26_series/26.511/26511-120.zip>

 - S4-200209: Preliminary Analysis of HEVC Media profiles in CMAF

 <https://www.3gpp.org/ftp/tsg_sa/WG4_CODEC/TSGS4_107_Wroclaw/Docs/S4-200209.zip>

# 1 Overall description

3GPP SA4 would like to thank MPEG for the LS informing about its latest developments on CMAF HEVC Media Profiles.

3GPP SA4 believes that the HEVC Media profiles defined in MPEG CMAF are very similar to the TV Video Profiles documented in 3GPP TS 26.116 and the ongoing work on 5G Media Streaming where HEVC profiles are also specified under 3GPP TS 26.511.

Over the past years, 3GPP SA4 specified detailed interoperability requirements in these two specifications for DASH/CMAF based HEVC media profiles. 3GPP SA4 has investigated some potential discrepancies between CMAF media profiles in MPEG and the 3GPP TV Video Profiles. These are documented in a contribution S4-200209 that is attached for your information.

3GPP SA4 definitely appreciates what MPEG has defined for structural constraints on CMAF and already took those aspects into account while developing the 5G Media Streaming specification (3GPP TS 26.511). CMAF is the core encapsulation format for 5G Media Streaming.

However, 3GPP SA4 identifies a risk in having HEVC media profiles in CMAF being defined in multiple places. 3GPP SA4 is aware that other organizations also did the same (or at least defined DASH and ISO BMFF based profiles), while targeting their own application environment. 3GPP SA4 thus sees a risk in trying to align the specifications across the industry.

Therefore, 3GPP SA4 would first like to understand the MPEG requirements and motivations for such media profile definitions before trying to align them. As an illustration, the 3GPP TV Video profiles have been defined while ensuring the compliance to the DVB specifications, however no interlace support is provided.

As a reminder, 3GPP develops global standards and are adopted by worldwide industry constituencies. It would be therefore unfortunate that MPEG media profiles contradict the ones defined in 3GPP if they address the same type of applications.

3GPP SA4 believes that good conformance and test material for CMAF HEVC media profiles are important for the industry and if MPEG is committed to provide such test material for the HEVC media profiles, 3GPP SA4 is highly interested in such a work.

Finally, 3GPP SA4 would also be interested if MPEG has any indication whether the defined media profiles are supported in HTML-5/MSE based playback in common browsers.

# 2 Actions

**To MPEG**

**ACTION:** 3GPP SA4 kindly asks MPEG to take the above information into account.

3GPP SA4 would appreciate to be informed on the requirements and the motivation for defining HEVC Media profiles that are usually specified by the industry.

 3GPP SA4 would like to receive any information and pointer about the support of those media profiles in HTML-5/MSE.

# 3 Dates of next TSG SA WG 4 meetings

SA4#109-e 20th May 2020 – 3rd June 2020 Electronic meeting

SA4#110 24th Aug. 2020 – 28th Aug. 2020 US