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|  | INTERNATIONAL TELECOMMUNICATION UNION**TELECOMMUNICATIONSTANDARDIZATION SECTOR**STUDY PERIOD 2022-2024 | SG16-LS55 |
| STUDY GROUP 16 |
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| **LS** |
| **Source:** | ITU-T Study Group 16 |
| **Title:** | LS on W3C WebCodecs and W3C WebCodecs Codec Registry [to the W3C Media Working Group] |
| **LIAISON STATEMENT** |
| **For action to:** | W3C Media Working Group |
| **For information to:** | – |
| **Approval:** | ITU-T Study Group 16 meeting (Geneva, 28 October 2022) |
| **Deadline:** | 11 January 2023 |
| **Contact:** | Gary J. SullivanMicrosoft Corp.USA | E-mail: garys@ieee.org  |
| **Contact:** | Yan YeAlibabaChina | Tel: +86 182 2118 7833E-mail: yan.ye@alibaba-inc.com |
| **Contact:** | Thomas WiegandFraunhofer HHIGermany | Tel: +49 30 31002 617E-mail: twiegand@ieee.org  |

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| **Abstract:** | This liaison statement notes recent developments in W3C on the W3C WebCodecs specification and the W3C WebCodecs Codec Registry specification. It welcomes the consideration of recent standards developed by ITU-T SG16 in these specifications and suggests the consideration of Versatile Video Coding (VVC, Rec. ITU-T H.266 | ISO/IEC 23090-3) in future work on this subject. |

It has been brought to the attention of ITU-T SG16 that the W3C Media Working Group has been developing specifications that reference some important Recommendations in the domain of ITU-T SG16. It is noted that the W3C WebCodecs specification, published as a W3C Working Draft, references Rec. ITU-T H.273 | ISO/IEC 23091-2 (Video CICP), and that the W3C WebCodecs Codec Registry specification, published as a W3C Group Draft Note, includes references to Rec. ITU-T G.711, Rec. ITU-T H.264 | ISO/IEC 14496-10 (AVC), and Rec. ITU-T H.265 | ISO/IEC 23008-2 (HEVC). ITU-T SG16 is very interested in this work and would like to request information from the W3C Media Working Group about its ongoing efforts and future plans regarding these W3C WebCodecs and W3C WebCodecs Codec Registry specifications.

ITU-T SG16 would also like to inform the W3C Media Working Group about the recent development of Rec. ITU-T H.266 | ISO/IEC 23090-3, which may be relevant for future inclusion into the W3C WebCodecs Codec Registry specification. Rec. ITU-T H.266, known as Versatile Video Coding (VVC), is the latest in a series of very successful such jointly developed ITU-T Recommendations and International Standards for video coding, and is the direct successor to AVC and HEVC.

VVC provides substantial coding efficiency improvements over HEVC (which itself provides substantial coding efficiency improvements over AVC). Formal subjective testing has been performed to confirm that VVC can achieve about a 50% bit rate reduction relative to HEVC for equal subjective video quality. Using objective metrics, test results generally demonstrate that VVC provides about a 40% bit rate reduction for 4K/UHD video test sequences for metrics such as PSNR.

The first edition of the VVC standard was published as Rec. ITU-T H.266 in August 2020, and it includes the specification of a "Main 10" profile that supports 8- and 10-bit 4:2:0 video, a "Main 10 4:4:4" profile with 4:4:4 and 4:2:2 format support, corresponding "Multilayer Main 10" and "Multilayer Main 10 4:4:4" profiles with support for layered coding, and "Main 10 Still Picture" and "Main 10 4:4:4 Still Picture" profiles for image coding employing the same coding tools as in the corresponding video profiles.

The second edition of the VVC standard was published in April 2022, and it includes additional profiles corresponding to operation range extensions, a new level (level 6.3), additional supplement enhancement information, and corrections to various minor defects in the first edition of the standard.

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