

ISO/IEC JTC 1/SC 29 "Coding of audio, picture, multimedia and hypermedia information"

Secretariat: JISC

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Liaison Statement from SC 29/WG 03 to IETF AVT on MPEG Green Metadata [SC 29/WG 03 N 430]

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Description

In accordance with Recommendation 11.1.1 at the 5th WG 03 Meeting, 2021-10-11/15, the SC 29 Secretariat sends this liaison statement to IETF AVT. [Requested action: For SC 29's information]

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MPEG Systems

Convenorship: KATS (Korea, Republic of)

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**INTERNATIONAL ORGANIZATION FOR STANDARDIZATION
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SC 29/WG 03 would like to update you on the progress of the new edition (3rd) of ISO/IEC 23001-11 Energy-Efficient Media Consumption (Green Metadata). SC 29/WG 03 has issued the CD of ISO/IEC 23001-11 3rd edition in October 2021.

ISO/IEC 23001-11 specifies metadata (Green Metadata) that facilitates reduction of energy usage during media consumption. The format of metadata is specified for the following usages:

- reduced decoder power consumption;
- reduced display power consumption;
- media selection for joint decoder and display power reduction;
- quality recovery after low-power encoding.

This metadata facilitates reduced energy usage on the transmitter and the receiver side during media consumption without any degradation in the Quality of Experience (QoE). However, it is also possible to use this metadata to get larger energy savings, but at the expense of some QoE degradation.

The 3rd edition of 23001-11 adds three main aspects to the standard:

- The green metadata for Interactive signalling for remote decoder-power reduction are enhanced by adding new syntax elements. These allow a finer control for reducing decoder complexity on a high variety of platforms implementing different decoders (hardware / software) as well as processor cores. These metadata are mostly targeting point-to-point video applications and can save roughly 30% of the decoder energy and power, independent from the platform.
- The new edition adds the specification of a VVC SEI message carrying green metadata related to Complexity metrics for decoder-power reduction.
- The VVC SEI message can also carry metrics for quality recovery after low-power encoding. These metadata are mostly targeting segmented video delivery mechanism such as DASH.

SC 29/WG 03 hopes that this information is of interest to you, and you may consider using the Green Metadata to offer services for enabling use cases of video delivery with reduced energy usage, in particular concerning interactive signalling for remote decoder-power reduction. We would be interested to get feedback from your organisation on the potential usage of these metadata in your applications.