

# DRAFT AMENDMENT ISO/IEC 23001-11: DAM 1

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## Information technology — MPEG systems technologies — Part 11: Energy-efficient media consumption (green metadata) AMENDMENT 1: Carriage of Green Metadata in an HEVC SEI Message

*Technologies de l'information — Technologies des systèmes MPEG —  
Partie 11: Consommation des supports éconergétiques (métadonnées vertes)  
AMENDEMENT 1: .*

ICS: 35.040

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Ch. de Blandonnet 8 • CP 401  
CH-1214 Vernier, Geneva, Switzerland  
Tel. +41 22 749 01 11  
Fax +41 22 749 09 47  
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## INTERNATIONAL STANDARD

## Information technology – MPEG Systems Technologies – Part 11: Energy-Efficient Media Consumption (Green Metadata)

## Amendment 1

## Carriage of Green Metadata in an HEVC SEI Message

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## 1) SEI Messages

Replace the text in Annex A with the following text:

## A.1 Green Metadata SEI message syntax and semantics carried in AVC NAL units

This clause describes the payload syntax and semantics if payloadType 56 appears in an AVC NAL unit with nal\_unit\_type set to 6.

## A.1.1 Syntax

	C	Descriptor
green_metadata( payload_size )		
<b>green_metadata_type</b>	5	u(8)
if ( green_metadata_type == 0 ) {		
<b>period_type</b>	5	u(8)
if ( period_type == 2 )		
<b>num_seconds</b>	5	u(16)
else if ( period_type == 3 )		
<b>num_pictures</b>	5	u(16)
<b>percent_non_zero_macroblocks</b>	5	u(8)
<b>percent_intra_coded_macroblocks</b>	5	u(8)
<b>percent_six_tap_filterings</b>	5	u(8)
<b>percent_alpha_point_deblocking_instances</b>	5	u(8)
}		
else if ( green_metadata_type == 1 ) {		
<b>xsd_metric_type</b>	5	u(8)
<b>xsd_metric_value</b>	5	u(16)
}		

## A.1.2 Semantics

**green\_metadata\_type** – specifies the type of metadata that is present in the SEI message. If green\_metadata\_type is 0, then complexity metrics are present. Otherwise, if green\_metadata\_type is 1, then metadata enabling quality recovery after low-power encoding is present.

## A.2 Green Metadata SEI message syntax and semantics carried in HEVC NAL units

This clause describes the payload syntax and semantics if payloadType 56 appears in an HEVC NAL unit with nal\_unit\_type set to PREFIX\_SEI\_NUT.

### A.2.1 Syntax

	C	Descriptor
green_metadata( payload_size )		
<b>green_metadata_type</b>	5	u(8)
if ( green_metadata_type == 1 ) {		
<b>xsd_metric_type</b>	5	u(8)
<b>xsd_metric_value</b>	5	u(16)
}		

### A.2.2 Semantics

**green\_metadata\_type** – specifies the type of metadata that is present in the SEI message. If green\_metadata\_type is 1, then metadata enabling quality recovery after low-power encoding is present.

## 2) Adding missing information to Clause 6 on display power reduction

In Section 6.2.2 Systems with a signaling mechanism from the receiver to the transmitter, replace the table

	Size (bits)	Descriptor
<b>num_quality_levels</b>	4	unsigned integer
<b>rgb_component_for_infinite_psnr</b>	8	unsigned integer
for ( i = 1; i <= num_quality_levels; i++ ) {		
<b>max_rgb_component[i]</b>	8	unsigned integer
<b>scaled_psnr_rgb[i]</b>	8	unsigned integer
}		

with:

	Size (bits)	Descriptor
<b>num_quality_levels</b>	4	unsigned integer
<b>lower_bound</b>	8	unsigned integer
if (lower_bound > 0) {		
<b>upper_bound</b>	8	unsigned integer
}		
<b>rgb_component_for_infinite_psnr</b>	8	unsigned integer
for ( i = 1; i <= num_quality_levels; i++ ) {		
<b>max_rgb_component[i]</b>	8	unsigned integer
<b>scaled_psnr_rgb[i]</b>	8	unsigned integer
}		