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Information technology — MPEG systems technologies —

Part 11: Energy-efficient media consumption (green metadata)

AMENDMENT 1: Energy-efficient media consumption (green metadata) for EVC

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AMENDMENT 1

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6.2.1

Replace the following:

With respect to the functional architecture in Figure 1, the green-metadata generator provides CMs that indicate the picture-decoding complexity of an AVC, HEVC or VVC bitstream to the decoder.

with:

With respect to the functional architecture in Figure 1, the green-metadata generator provides CMs that indicate the picture-decoding complexity of an AVC, HEVC, VVC or EVC bitstream to the decoder.

6.2.2

Add the following at the end of the subclause:

The syntax for the EVC CMs is described in Table X.1:

Table X.1 — Syntax for the HEVC CMs

period_type	u(8)
if (profile_idc == 0) {	
if (period_type = = 0 || period_type == 2) {	
num_non_zero_4_cus	uk(v)
num_non_zero_8_cus	uk(v)
num_non_zero_16_cus	uk(v)
num_non_zero_32_cus	uk(v)
num_non_zero_64_cus	uk(v)
portion_fractional_prediction_sample	u(8)
} else if (period_type = = 1 || period_type == 3) {	
num_count	u(16)
for (t=0; t<num_count; t++) {	
num_non_zero_4_cus [t]	uk(v)
num _non_zero_8_cus [t]	uk(v)
num _non_zero_16_cus [t]	uk(v)
num _non_zero_32_cus [t]	uk(v)
num _non_zero_64_cus [t]	uk(v)

Table X.1 *(continued)*

portion_fractional_prediction_sample [t]	u(8)
}	
}	
else if (profile_idc ==1) {	
if (period_type = = 0 || period_type == 2) {	
num_non_zero_samples	uk(v)
num_affine_samples	uk(v)
num_dmvr_samples	uk(v)
num_alf_samples	uk(v)
num_deblocking_filter_samples	uk(v)
num_htdf_samples	uk(v)
} else if (period_type = = 1 || period_type == 3) {	
num_count	u(8)
for (t=0; t<num_count; t++) {	
num_non_zero_samples [t]	uk(v)
num__samples [t]	uk(v)
num_dmvr_samples [t]	uk(v)
num_alf_samples [t]	uk(v)
num_deblocking_filter_samples [t]	uk(v)
num_htdf_samples [t]	uk(v)
}	
}	
}	

6.2.4.4

Add the following new subclause after subclause 6.2.4.3:

6.2.4.4 EVC Semantics

6.2.4.4.1 General

As EVC Baseline profile and Main profile share almost no tools and the methods used for partition of the pictures are not same, the profile the CVS conforming to is used to decide the set of syntax elements to describe the complexity metrics to be applied to each CVS. In addition, As the largest size of picture is indicated by the level the CVS is conformed to, the length of the syntax elements indicating the number of pixels and coding units are decided by the level. In addition, the width and height of the coding units are also considered when the length of the syntax elements indicating the number of coding units for the CVS conforming to the baseline profile is decided.

6.2.4.4.2 Variable length syntax element for EVC Semantics

The maximum number of pixels and coding units depend on the size of the picture the complexity metric is applied to. As the largest size of picture is indicated by the level the CVS is conformed to the length of the syntax elements indicating the number of pixels and coding units are decided by the levels. In addition, the width and height of the coding units are also considered when the length of the syntax elements indicating the number of coding units for the CVS conforming to the baseline profile as the width and height of the coding units get larger than the maximum number of coding units get smaller.

– uk(v): the field is unsigned integer and the length is decided by the value of the level_idc field in the SPS used by the CVS this SEI message is applied to and the value of k assigned to each field based on the size of the units counted. The length of the field according to each value of both level_idc and k is shown in the Table X.2.