

The background is a vibrant red color. It is decorated with various digital and network-related motifs. On the left side, there are faint, semi-transparent images of a code editor window with a '</>' icon, a waveform graph, and some binary code (0s and 1s). In the center and right, there are glowing white and red nodes connected by thin white lines, forming a complex network or mesh. Some nodes are larger and brighter, creating a sense of depth and connectivity.

AHG17: Miscellaneous SPS HLS corrections

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Five minor changes to SPS syntax elements

- Proposals #1-3: Change parsing of syntax elements from Exp-Golomb coding to fixed length coding
 - Syntax elements with small ranges not expected to be biased towards 0 or small values in the range
- Proposals #4-5: Specifying a valid conformance range for syntax elements that currently do not have an explicitly bounded range
 - Unbounded range undesirable for conformance

Parsing changes (1/2)

1. sps_seq_parameter_set_id

- Range of 0 to 15, inclusive and currently coded with ue(v)
- Propose to code with u(4) to be consistent with other similar syntax elements, e.g., the IDs for the DPS and VPS are coded in the SPS with u(4).

2. chroma_format_idc

- Range of 0 to 3, inclusive and currently coded with ue(v)
- Propose to code with u(2)
- Note value of zero represents monochrome which is not expected to be the most commonly used chroma format
- If extensibility desired, recommend to change to u(n) and define explicit range with reserved values

Parsing changes (2/2)

3. `log2_max_pic_order_cnt_lsb_minus4`

- Range of 0 to 12, inclusive and currently coded with `ue(v)`
- Propose to code with `u(4)`

Specifying conformance range (1/2)

4. min_qp_prime_ts_minus4

- No specified range and currently coded with $\text{ue}(v)$
- VTM6.0 sets this value as follows (with no manual configurability)
 - $(6 * (\text{m_bitDepth}[\text{channelType}] - \text{m_inputBitDepth}[\text{channelType}]))$
- Assuming a maximum coded bit depth of 16 and a minimum input bit depth of 8 results in a maximum value of 48.
- Propose to specify conformant range to be 0 to 48, inclusive

Specifying conformance range (2/2)

5. `log2_min_luma_coding_block_size_minus2`

- No specified range and currently coded with `ue(v)`
- The value of `log2_min_luma_coding_block_size` must not be larger than `log2_ctu_size`.
- Propose to specify conformance range to be 0 to $(\text{log2_ctu_size_minus5} + 3)$, inclusive



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