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| **Joint Collaborative Team on Video Coding (JCT-VC)**  **of ITU-T SG 16 WP 3 and ISO/IEC JTC 1/SC 29/WG 11**  39th Meeting: by teleconference, 18–24 April 2020 | Document: JCTVC-AM0002-v1 |

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| *Title:* | **JCT-VC AHG report: HEVC test model editing and errata reporting (AHG2)** | | |
| *Status:* | AHG report input to JCT-VC | | |
| *Purpose:* | AHG report | | |
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| *Source:* | AHG | | |

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# Abstract

This document reports the work of the JCT-VC ad hoc group on (HEVC and AVC) test model editing and errata reporting (AHG2) between the 38th meeting in Brussels, BE (Jan. 2020) and the 39th meeting by teleconference.

# Mandate

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| **Title and Email Reflector** | **Chairs** | **Meeting** |
| **Test model editing and errata reporting (AHG2)**  ([jct-vc@lists.rwth-aachen.de](mailto:jct-vc@lists.rwth-aachen.de))   * Develop proposed improvements to the JCTVC-AK1002 HEVC Test Model 16 (HM 16) Update 13 of Encoder Description * Collect reports of errata for the HEVC and AVC specification and the published HDR-related technical reports. * Gather and address comments for refinement of these documents. * Coordinate with AHG3 on software development and software technical evaluation to address issues relating to mismatches between software and text. | B. Bross, C. Rosewarne (co‑chairs), J.‑R. Ohm, K. Sharman, G. J. Sullivan, A. Tourapis, Y.‑K. Wang (vice‑chairs) | N |

# Status of AHG2 work

## JCTVC-AL1004 Errata report items for HEVC, AVC, Video CICP, and CP usage TR

At the time of preparing this AHG2 report, JCT-VC output document JCTVC-AL1004 was not available in the document register.

## JCTVC-AL1002 revised encoder description

Update 13 of the Encoder Description (JCTVC-AL1002) was prepared and uploaded, incorporating expanded description of the quantization process along with numerous editorial improvements.

## Absence of “persistence flag” for Annotated Region SEI message

In all SEI messages that have a "cancel flag", there is also a corresponding "persistence flag", except in the case of the newly adopted annotated regions SEI message. Without this flag, it is not possible to indicate that the annotated regions information applies only to the current picture. Due to the extensibility provision that is built into the SEI message syntax, it would be possible to append a persistence flag at the end of the syntax to correct this likely oversight. The presence of the extra flag could be optional (conditioned on whether there is more data in the SEI message), so that encoders built for the original syntax would still be conforming. When the flag is not present, it would be inferred to be equal to 1.

## Input documents

The following input document was noted as being of relevance to mandate 2 of the AHG:

* JCTVC-AM0021 - On Errata items for HEVC, AVC, and Video CICP

## Text ticket review

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| **Ticket** | **One liner** | **Status** |
| 1505 | Relates to semantics of AUs appearing after an ‘end of sequence’ or ‘end of bitstream’ NAL unit. | New ticket |
| 1504 | Small typos in profile\_tier\_level syntax in tabular form (7.3.3) | Aspect 1: Extra ')' is still present in H.265 (11/19) Aspect 2: sub\_layer\_profile\_compatibility\_flag missing[ i ] issue confirmed fixed in H.265 (11/19). |
| 1500 | typo in equation (8-69),(8-70) (palette\_transpose\_flag not transposing) | Confirmed present in H.265 (11/19). |
| 1498 | Typos in Table 9-43 (for palette\_run\_suffix PalletMaxRun should be PalletMaxRunMinus1) | Confirmed present in H.265 (11/19). |
| 1491 | duplicate invocation of 9.3.4.3 arithmetic decoding process (invoked both in 9.3.4.1 and also in 9.3.4.2). | Confirmed present in H.265 (11/19) - confirm whether action is needed) |
| 1489 | Alleged error in range LPS table update | The example in the ticket is believed to be incorrect as the steps do not match Figure 9-6 (Flowchart for decoding a decision). In particular, the renormalization should be the last step and hence the example should begin with already renormalized inputs. |
| 1427 | Eqns (8-185) and (8-187) could be removed as editorial cleanup. | The ticket is marked as enhancement and note the equation numbers are updated since the ticket was filed. |

# Recommendations

The recommendations of the HEVC test model editing and errata reporting AHG are for JCT-VC to:

1. Encourage the use of the issue tracker to report issues with the text of both the HEVC specification and the encoder description.
2. Confirm resolutions of open tickets (if any) in the issue tracker and close them.
3. Review the above-identified input document.