|  |  |
| --- | --- |
| **Joint Collaborative Team on Video Coding (JCT-VC)**  **of ITU-T SG16 WP3 and ISO/IEC JTC1/SC29/WG11**  10th Meeting: Stockholm, Sweden, July 11-20, 2012 | Document: JCTVC-J0084  M25406 |

|  |  |  |  |
| --- | --- | --- | --- |
| *Title:* | **AHG9: Restrict Picture Order Count to 40-bit** | | |
| *Status:* | Input Document to JCT-VC | | |
| *Purpose:* | Proposal | | |
| *Author(s) or Contact(s):* | Minhua Zhou Texas Instruments Inc., USA | Tel: Email:  : | +1-214-480-3816 [zhou@ti.com](mailto:zhou@ti.com) |
| *Source:* | Texas Instruments Inc; | | |

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Abstract

At the 9th JCTVC meeting in Geneva, the dynamic range of picture order count (PicOrderCntVal) was increased from 32-bit to 64-bit. 64-bit PicOrderCntVal can support continuous 120 fps video recording for up to 4874.5 million years. However, on the decoder side there is certain complexity associated with carriage of 64-bit PicOrderCntVal. It is therefore recommended to restrict PicOrderCntVal to 40 bits, which can already support continuous 120 fps video recording for up to 290.5 years.

# References

[1] [B. Bross](mailto:benjamin.bross@hhi.fraunhofer.de), [W.-J. Han](mailto:wjhan.han@samsung.com), [J.-R. Ohm](mailto:ohm@ient.rwth-aachen.de), [G. J. Sullivan](mailto:garysull@microsoft.com), [T. Wiegand](mailto:thomas.wiegand@hhi.fraunhofer.de) “High Efficiency Video Coding (HEVC) text specification draft 7,” JCT-VC Document, JCTVC-I1003, 9th Meeting: Geneva, Switzerland, 27 April – 07 May, 2012.

# Patent rights declaration(s)

**Texas Instruments, Inc. does not have IPR relating to the technology described in this contribution and, conditioned on reciprocity.**

# CD text

**In section 8.3.1 Decoding process for picture order count**

**replace**

The value of PicOrderCntVal shall be in the range of −263 to 263 − 1, inclusive. In one coded video sequence, the PicOrderCntVal values for any two coded pictures shall be different.

NOTE 2 – Retention of only the 32 least significant bits of PicOrderCntVal is sufficient for proper decoder operation, enabling unique identification of pictures.

**With**

The value of PicOrderCntVal shall be in the range of −239 to 239 − 1, inclusive. In one coded video sequence, the PicOrderCntVal values for any two coded pictures shall be different.