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| **Joint Collaborative Team on 3D Video Coding Extension**  **of ITU-T SG 16 WP 3 and ISO/IEC JTC 1/SC 29/WG 11**  14th Meeting: San Diego, US, 22 – 26 Feb 2015 | Document: JCT3V-N0003 |

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| *Title:* | **JCT-3V AHG Report: MV-HEVC and 3D-HEVC Software Integration (AHG3)** | | |
| *Status:* | AHG report input to JCT-3V | | |
| *Purpose:* | AHG report | | |
| *Author(s) or Contact(s):* | Gerhard Tech (Fraunhofer HHI) Hongbin Liu Yi-Wen Chen (Mediatek) | Email: | [gerhard.tech@hhi.fraunhofer.de](mailto:gerhard.tech@hhi.fraunhofer.de) [liuhongbinhit@qq.com](mailto:liuhongbinhit@qq.com) [yiwen.chen@mediatek.com](mailto:yiwen.chen@mediatek.com) |
| *Source:* | AHG | | |

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# Abstract

This report summarizes the activities of the AhG on MV-HEVC and 3D-HEVC Software Integration that have taken place between the 13th JCT-3V meeting in Geneva and the 14thJCT-3V meeting in San Diego. Activities focused on bug fixes, the update of HTM to HM-16.7, the release of the MV-HEVC Software Draft 5, the release of the 3D-HEVC Software Draft 3.

# Mandates

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| **Title** | **Chairs** | **Mtg** |
| **MV-HEVC / 3D-HEVC Software Integration (AHG4)**  ([jct-3v@lists.rwth-aachen.de](mailto:jct-3v@lists.rwth-aachen.de))   * Coordinate development of the HTM software and its distribution to JCT-3V members, and finalize the work plan within one week. * Produce documentation of software usage for distribution with the software. * Prepare and deliver HTM-16.0 software version and the reference configuration encodings according to JCT3V-G1100 (expected 11-30). * Prepare and deliver the Draft 5 of MV-HEVC software JCT3V-M1009 and Draft 3 of 3D-HEVC software JCT3V-M1012. * Coordinate with 3D-HEVC Draft and MV-HEVC / 3D-HEVC Test Model editing to identify any mismatches between software and text. | G. Tech  H. Liu  Y. W. Chen  (co-chairs) | N |

# HTM integration

Development of the software was coordinated with the parties needing to integrate changes.

The distribution of the software was announced on the JCT-3V e-mail reflector and the software was made available through the SVN server:

[https://hevc.hhi.fraunhofer.de/svn/svn\_3DVCSoftware/tags/](https://hevc.hhi.fraunhofer.de/svn/svn_3DVCSoftware/tags/HTM-4.0)

Anchor bitstreams have been created and uploaded to:

[ftp.hhi.fraunhofer.de](ftp://ftp.hhi.fraunhofer.de); path: /HTM-Anchors/

**Note that username and password have changed**. To obtain them, please send a mail to gerhard.tech@hhi.fraunhofer.de.

One version of the HTM software were produced and announced on the JCT-3V email reflector. A second version will be released during the meeting. The following sections give a brief summary of the integrations.

## Version HTM-16.0

HTM-16.0 was developed by integrating changes between HM-16.6 and HM-16.7 to HTM-15.2. Moreover, minor bug fixes and clean-ups have been integrated. The coding performance compared to HTM-15.2 changes insignificantly.

## Version HTM-16.1

Version 16.1 will be released during the meeting. It contains further fixes for non-CTC conditions and clean-ups. The coding performance under CTC conditions is identical to HTM-16.0.

# MV-HEVC Software Draft 5

The MV-HEVC software draft 5 (JCT3V-M1009) has been released. The software has been generated by removing 3D-HEVC related source code and configuration files from HTM-16.0. The software can also be accessed using the svn:

https://hevc.hhi.fraunhofer.de/svn/svn\_3DVCSoftware/branches/HTM-16.0-MV-draft-5

The related document has been submitted as FDAM text.

# 3D-HEVC Software Draft 3

The 3D-HEVC software draft 3 (JCT3V-M1012) has been released. The software corresponds to HTM-16.0. The software can also be accessed using the svn:

https://hevc.hhi.fraunhofer.de/svn/svn\_3DVCSoftware/tags/HTM-16.0

The related document has been submitted as DAM study text. Note that, although it was missing in the MPEG document system until January, the AHG provided this document in time.

# Recommendations

The recommendations of the MV-HEVC and 3D-HEVC Software Integration AHG are:

* Continue development of HTM.
* Continue to identify bugs and discrepancies with text and address them.