|  |  |
| --- | --- |
| **Joint Collaborative Team on Video Coding (JCT-VC)**  **of ITU-T SG16 WP3 and ISO/IEC JTC1/SC29/WG11**  4th Meeting: Daegu, KR, 20-28 January, 2011 | Document: JCTVC-D458 |

|  |  |  |  |
| --- | --- | --- | --- |
| *Title:* | **BoG report on Screen Content Coding (SCC)** | | |
| *Status:* | Input Document to JCT-VC | | |
| *Purpose:* | Report | | |
| *Author(s) or Contact(s):* | Oscar C. Au Dept. of ECE, Hong Kong University of Science and Technology  Clearwater Bay, Hong Kong | Tel: +852-2358-7053 Email: [eeau@ust.hk](mailto:eeau@ust.hk) |  |
|  | Jizheng Xu Microsoft 5F, Beijing Sigma Center, No. 49, Zhichun Road, Haidian District,  Beijing 100190 China  Haoping Yu Huawei Section B1, Huawei Industrial Base Bantian Longgang, Shenzhen, China | Tel: +86-10-5917-3019 Email: [jzxu@microsoft.com](mailto:jzxu@microsoft.com)  Tel: +86-755-2878-8991 Email: [haopingyu@huawei.com](mailto:haopingyu@huawei.com) |  |
| *Source:* | BoG on SCC | | |

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

# Abstract

This contribution provides a summary of the Break Out group meeting on Screen Content Coding (SCC) held at 2pm-4pm on Jan 25, 2011.

# Participating Organizations

ASTRI, Cisco, Huawei, Microsoft, Mitsubishi, Orange Lab, Qualcomm, Samsung, Technicolor, WebEx, Beijing University of Technology (BJUT), Hong Kong University of Science and Technology (HKUST), Zhejiang University (ZJU)

# General Background

* In the JCTVC meeting on Jan 25, 2011, it was decided to create a new Class “F” of test material for screen content coding. In general, these contents should non-camera captured video.
* BJUT submitted 4 test sequences and were accepted into the collection of Class “F” content. But there were questions about copyright and permission of usage.

# Focus of the Discussions

* Requirements (including copyrights) for Class F test materials (non-camera captured video)
* Mandates and work plan for the SCC AHG including tool evaluation methods, test conditions, etc.

# Some Comments

* It was generally agreed that Class F material include
  + Video with text overlay, running banner, crawling/scrolling text, etc.
  + Video generated by alpha blending
  + Presentation with various transition effects
  + Word editing with scrolling, window switching, effects, and with various font size, effect, equation, graphics, etc.
  + document reading such as pdf, ebook, etc.
  + Web page
  + Game
* On the format of submitted content
  + Color format should be YUV420, YUV444, or RGB
  + Resolution should be same as Class A, B, C, D, E
  + Duration should be at least 10 seconds at any existing frame rate in Class A, B, C, D, E
  + Bit depth should be 8-bit or 10-bit
  + Progressive scanned
  + Should have negligible coding artifact from prior coding, if any
* A Call-for-Content should be drafted and issued. All content contributors need to include in their submission
  + Copyright statement of submitted content with information about terms of usage such as permission and date
  + Description of content
  + Coding results on proposed sequence using latest HM software and test conditions (i.e. Intra, Low-Delay, Random Access, High Efficiency, Low Complexity)
* Submission procedure and work plan
  + Contributors to submit and upload content by Mar 8 (1 week before Mar 2011 JCTVC meeting) to a password protected ftp site. (ftp://sc@ftp.tnt.uni-hannover.de)
  + Upload password should be carefully controlled. Download password can be the MPEG password.
  + Content will be available for AHG members to download, preview and comment on Mar 9, 2011. All comments are to be sent to AHG Chairs.
  + AHG Chairs are to collect and summarize comments in report
  + In Mar 2011 JCTVC meeting, a BoG meeting should be set up to perform subjective viewing, to review coding results of content, and choose Class F test content and test conditions
* SCC coding tools should be studied. SCC coding tools can be submitted to JCTVC in Mar 2011. The goal should be to study/develop low-complexity tools to HM that give good performance in Class F with no harm in Class A, B, C, D, and E. For coding tool proposals, they should be tested using the latest HM and lastest test condition (HE, LoCo, AI, LD, RA on Class A, B, C, D, E), and they should be tested on Class F contents.