

**INTERNATIONAL ORGANIZATION FOR STANDARDIZATION
ORGANISATION INTERNATIONALE DE NORMALISATION
ISO/IEC/JTC 1/SC 29/WG 11
CODING OF MOVING PICTURES AND AUDIO**

ISO/IEC JTC 1/SC 29/WG 11 N12258

December 2011 – Geneva, CH

Source: Convenor of MPEG
Status: Approved by WG11
Subject: MPEG Press Release
Date: 02 December 2011



MPEG ratifies its draft standard for DASH

Geneva, CH – The 98th MPEG meeting was held in Geneva, Switzerland, from the 28th of November to the 2nd of December 2011.

MPEG ratifies DASH

ISO/IEC 23009-1, known as MPEG-DASH, has been ratified unanimously by positive votes from 24 national bodies in November 2011. Publication by ISO as an International Standard will take place shortly.

MPEG-DASH is the first International Standard for dynamic adaptive streaming of multimedia content over HTTP, based on work previously published by 3GPP. It provides a rich set of features to support on-demand, live streaming and time-shift services. It also supports streaming of multiplexed or independent streams over the existing Internet infrastructure with efficient use of CDNs (Content Delivery Networks). Since it requires only HTTP servers, existing server solutions can be used for large-scale deployment scenarios such as the delivery of TV content over Internet and mobile networks. Several standardization organizations and industry consortia are building on MPEG-DASH in their own specifications.

MPEG introduces MPEG-H as its latest suite of standards

Following consideration of recent changes of multimedia service environments and evolving characteristics of user behaviour for multimedia experiences, MPEG has decided to develop a new suite of standards providing technical solutions for emerging challenges in multimedia industries. The new MPEG-H suite of standards, "High Efficiency Coding and Media Delivery in Heterogeneous Environments," will initially include standards for System, Video and Audio technology and will continue to grow to accommodate further industry needs. On-going activities will become part of the new standard suite. MPEG Media Transport (MMT) will become Part 1 and High Efficiency Video Coding (HEVC, which is being jointly developed with ITU-T) will become Part 2 of MPEG-H. The main objectives of this standard will include, but are not limited to, enabling the following technologies and experiences:

- Integrated services with multiple components in a hybrid delivery environment, providing support for seamless and efficient use of heterogeneous network environments, including broadcast, multicast, storage media and mobile networks.
- Highly immersive audio experiences in which the decoding device renders a 3D audio scene. This may

be using 10.2 or 22.2 channel configurations or much more limited speaker configurations or headphones, such as found in a personal tablet or smartphone.

- Highly immersive visual experiences, with ultra high definition displays that give no perceptible pixel structure even if viewed from such a short distance that they subtend a large viewing angle (up to 55 degrees horizontally for 4Kx2K resolution displays, up to 100 degrees for 8Kx4K).

MPEG invites industry to MPEG-H 3D Audio Event, San Jose, February 2012

At its 99th meeting in San Jose, CA, MPEG will host the **MPEG-H 3D Audio Event**. This two hour, workshop-style event has two main purposes. Firstly, it will provide an overview of the Systems, Video and Audio functionalities envisaged in MPEG-H. Secondly, and more importantly, it will provide a forum for interested companies in the Silicon Valley area to learn about and contribute to the final shape of MPEG-H Audio. Prospective users of the new standard are welcome to share their views of desirable functionalities for MPEG-H Audio either via a short presentation or by participation in the workshop-style discussion.

MPEG-H Audio is envisioned to provide an enhanced audio experience, for instance, by using a large number of loudspeakers in a 3-dimensional configuration (e.g. high, mid, and low for front, side and surround). Key issues to be addressed in the standard include a compact and bit-efficient representation of multi-channel audio programs and the ability to flexibly render an audio program to an arbitrary number of loudspeakers with arbitrary configurations. Audio must be presented on both Home Theatre setups and also personal mobile devices, including smartphones, and a wide range of such flexible uses will be enabled by MPEG-H Audio.

More information about this event is available at <http://mpeg.chiariglione.org/events.php>.

MPEG continues toward royalty-free video coding

At its 98th meeting, MPEG received responses to the Call for Proposals on Internet Video Coding Technologies. As a result, two tracks towards royalty-free video coding are being pursued. One track, called **IVC**, focuses on developing a standard based on MPEG-1 technology which is believed a safe royalty-free baseline that can be enhanced by additional unencumbered technology described in MPEG-2, JPEG, research publications and innovative technologies which are promised to be subject to royalty-free licenses. A second track, called **WebVC**, is driven by stakeholders of AVC technology. WebVC focuses on the constrained baseline profile from the widely used AVC standard (Rec. ITU-T H.264 | ISO/IEC 14496-10). Proponents of WebVC have indicated that they hope to convince stakeholders to grant a royalty-free license for this technology, which was originally standardized in 2003.

Depending on the progress of the two tracks, MPEG will decide in 2012 whether to choose IVC or WebVC to become an International Standard.

MPEG launches activity to create Augmented Reality application format

During its 98th meeting, WG11 started a new activity aimed at enabling augmented reality applications and services. This activity is expected to yield a new application format in 2012, namely ISO/IEC 23000-13 (MPEG-A Part 13). This new standard will compile and possibly extend existing MPEG technologies that, when combined, will make it possible to: (a) model and efficiently code dynamic, interactive 2D/3D scenes with both natural and synthetic media in a way that is suitable for streaming; (b) access local and remote

media resources and support server-side updates of the client scene; and (c) represent data from sensors and actuators embedded in the terminal and its environment.

MPEG evaluates responses received to Call for Proposals on 3D Video Coding

MPEG received more than 20 contributions responding to its Call for Proposals on 3D Video Coding. An analysis was performed which confirmed that the compression of depth maps, which will be necessary for enhanced 3D display functionality, can be performed efficiently. Further substantial savings of data rate can be achieved when depth maps are combined with video difference signals. Additional investigations have been started in the context of the AVC standard and the forthcoming HEVC standard, in terms of the technical tools and their maturity with regard to standardization timelines. The subjective testing effort for this CfP evaluation was among the largest subjective tests ever performed in MPEG. It involved coordinating formal subjective evaluations carried out by a pool of 13 highly qualified test laboratories around the world. The test for this Call for Proposals on 3D video coding was the first rigorous subjective evaluation experiment devoted to evaluation of compression efficiency in 3D video. More than 600 people participated in viewing and scoring the visual quality of more than 2700 3D video clips. An important contribution to this effort was provided by the European Cooperation in Science and Technology (COST) team IC1003 - QUALINET.

MPEG considers multiple proposals for CDVS

MPEG received 9 contributions responding to its Call for Proposals on Compact Descriptors for Visual Search (CDVS). This new initiative is intended to facilitate the retrieval of images and video based on characteristic similar parts – e.g. finding the same object in different pictures. Investigation was performed based on a large data set of test examples. Local feature description technology was identified that is able to perform the task with good results. The process of establishing a test model has been started toward developing this technology for upcoming inclusion in the MPEG-7 (ISO/IEC 15938) standard.

Call for Requirements issued for Multimedia Preservation Description Information

MPEG believes that it is important to provide standard technology helping users to preserve digital multimedia that is used in many different domains, including cultural heritage, scientific research, engineering, education and training, entertainment, and fine arts for long-term across system, organizational, administrative and generational boundaries. At this meeting, WG11 issued a Call for Requirements (CfR) on Multimedia Preservation Description Information (MPDI) and asks industry to contribute knowledge and information that: (a) characterizes the material being preserved so that one can assess how well it is preserved; (b) describes what has been done for purposes of preservation; and (c) enables assessment of the success of preservation. Responses are due at the 100th MPEG in April 2012. Details for obtaining the CfR (N12402) are given below.

Digging Deeper – How to Contact MPEG

Communicating the large and sometimes complex array of technology that the MPEG Committee has developed is not a simple task. Experts, past and present, have contributed a series of tutorials and vision documents that explain each of these standards individually. The repository is growing with each meeting, so if something you are interested is not yet there, it may appear shortly – but you should also not hesitate to request it. You can start your MPEG adventure at:

<http://mpeg.chiariglione.org/technologies.php>.

Further Information

Future MPEG meetings are planned as follows:

- No. 99, San Jose, USA, 6 – 10 February 2012
- No. 100, Geneva, CH, 30 April – 04 May 2012
- No. 101, Stockholm, SE, 16 – 20 July 2012
- No. 102, Shanghai, CN, 15 – 19, October 2012
- No. 103, Geneva, CH, 21 – 25, January 2013

For further information about MPEG, please contact:

Dr. Leonardo Chiariglione (Convenor of MPEG, Italy)
Via Borgionera, 103
10040 Villar Dora (TO), Italy
Tel: +39 011 935 04 61
Leonardo @ chiariglione.org

This press release and other MPEG-related information can be found on the MPEG homepage:

<http://mpeg.chiariglione.org/>

The text and details related to current Calls are in the Hot News section,

http://mpeg.chiariglione.org/hot_news.php. These documents include information on how to respond to Calls.

The MPEG homepage also has links to other MPEG pages which are maintained by the MPEG subgroups. It also contains links to public documents that are freely available for download by those who are not MPEG members. Journalists that wish to receive MPEG Press Releases by email should contact Dr. Arianne T. Hinds at [arianne.hinds_@ infoprint.com](mailto:arianne.hinds@infoprint.com).