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CODING OF MOVING PICTURES AND AUDIO**

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MPEG standardizes streaming of text

Poznań, Poland August 5, 2005 – The 73rd MPEG meeting was hosted by Poznań University of Technology, Institute of Electronics and Telecommunications, Division of Multimedia Telecommunications and Radioelectronics, PTETiS, Poznań Section.

MPEG has achieved two important milestones in the area of text and font representation at its meeting in Poznań Poland. MPEG responded to the need for more than audio-video streaming by developing a standard for streaming text representation. Part 17 of MPEG-4 provides a transport-generic means to partition text into so-called “Timed Text Units”. This allows, for example, for the streaming of text in a format based on 3GPP Timed Text providing a low bit rate solution for subtitles or karaoke-like applications growing in popularity worldwide. Being transport generic permits its use over IP networks using RTP or using MPEG’s widely used broadcast format MPEG-2 Transport Stream.

The second, and equally important, milestone is the launch of part 22 of MPEG-4 for “Open Font Format Specification” (OFFS) that is based on the OpenType® specification used widely throughout industry today to represent font data. OFFS will combine standards such as Unicode with other commonly available and widely used technology to make font distribution more efficient as well as providing broad support for advanced typographic features and text layout.

When completed these standards along with the already completed Font Compression and Streaming standard (MPEG-4 Part 18) will provide a powerful addition to MPEG’s suite of standards that support the full range of multimedia technologies.

MPEG has also completed a dual pronged addition to its suite of audio standards. Audio Lossless coding (ALS) achieves a lossless compression of multi-channel audio signals using a simple technique of time-domain prediction and residual entropy coding. The second of the audio standards is Scalable to Lossless coding (SLS). This achieves lossless compression starting from a lossy-compressed audio bitstream to which is attached a scalable enhancement layer that extends the lossy representation to lossless. The enhancement layer is embedded in such a way as to permit the audio frame to be truncated. This results in a wide range of fidelities in the reconstructed audio output. These represent two new tools in suite of MPEG audio compression technology that were requested by industry.

Finally in the headlines, following a very successful first open seminar in April in Busan, Republic of Korea on the Future of Multimedia Developments, MPEG will hold a second seminar at its next meeting in Nice, France in October.

http://www.chiariglione.org/mpeg/tutorials/fvws/Call_Future_Video.doc

In other MPEG News

On Wednesday July 27th, the experts of MPEG gave a seminar on the MPEG-21 Multimedia Framework. This was an open-to-all seminar that explained the technologies behind the MPEG-21 acronyms such as DID or DIA, DII, FF, REL and RDD that many in industry have been hearing about for several years in an exciting afternoon of presentations and animated exchange. The slides from this presentation are available on the MPEG web site. <http://www.chiariglione.org/mpeg/tutorials/mpeg-21-poznan/index.htm>

In Poznań MPEG opened a new area of work in the streaming of Digital Items. A number of technological proposals were submitted in response to a call and these are now being evaluated by the MPEG-21 Experts. Digital Items are MPEG standard multimedia containers that will be able to be delivered on existing multimedia transports such as RTP and MPEG-2 once this work item is completed. This is an exciting development as it allows users to exploit MPEG-21 technologies while retaining interoperability with existing transport formats.

Multimedia Middleware (M3W) took another step forward in Poznań this week with agreements on the architecture and its relationship to an important aspect used throughout industry today called Middleware. The APIs for services and a component model were defined as well as resource and quality management APIs. These are important steps toward completing a standard that will further integrate multimedia with the middleware technologies that exist today in the market place.

MPEG has completed the definition of two profiles related to 3D graphics tools based on strong support from the industry forums, such as the Korean Mobile 3D Standardization Forum (M3DSF) and the Web3D Consortium. The "Core 3D Compression" profile, proposed by M3DSF, represents a collection of compression tools to allow implementation of minimum functionalities for compact transmission and storage of 3D object under a constrained environment (e.g. mobile), where the processing power and memory size can be very limited. The X3D Interactive profile, proposed by Web3D Consortium, represents a collection of nodes to allow implementation of a low-footprint engine (e.g. a Java applet or small browser plugin) and is intended to address limitations of software renderers.

Call for Proposals on Fixed-point 8x8 IDCT and DCT

MPEG has initiated an investigation on possible standardization of a fixed-point discrete cosine transform (DCT) and its complementary inverse (IDCT). The Call for Proposals issued following the 72nd meeting has been updated at the 73rd WG 11 meeting. This transform is a core element of international video coding standards including MPEG-1 Video/ MPEG-2 Video /MPEG-4 part 2 Video, JPEG-1992 and H.261-H.263. The design that is called for would ensure fulfilment of conformance requirements within the scope of MPEG standards and beyond. A widely-used fixed-point design would also improve the stability of encoder/decoder interoperation, and thus result in higher video fidelity of compressed bit streams. It would also ease the burden of the design effort needed to implement an encoder and/or decoder.

Call for Proposals on 3D Audiovisual Coding

Recently MPEG has led an exploration activity on 3D audiovisual (3DAV) coding, including perspectives of multi-view video coding. Potential applications include Free-Viewpoint Television (FTV) and the presentation of video on new types of 3D displays. A preliminary assessment by the experts of MPEG has shown that a significant increase of performance can be anticipated when compressing multiple camera views of the same scene. The Call for Proposals on such technology was issued by the 73rd WG11 meeting, with responses expected for the January 2006 meeting.

Details of how to obtain MPEG's Calls for Proposal's (CfPs) and other public information about MPEG and its technology standards work is shown below.

Workshops on Future Digital Video Developments

Periodically, MPEG seeks to understand if there are potentially-important new technology developments for future video and audio codec standardization. After completing AVC, MPEG is again reaching out to the community of experts both inside and outside of MPEG. Therefore, MPEG has organized two workshops to explore future directions in video compression as first steps in a process devised to identify video coding standardization opportunities. The workshops are designed explore technical and other viewpoints, including video coding features, that are required by the potential video compression-related products and applications of tomorrow. The first workshop took place in April in Busan, Korea, and included a series of short presentations on issues, technologies and applications. This was followed by a discussion session to identify the most important trends (<http://www.chiariglione.org/mpeg/tutorials/fvws/fvws1.htm>). Partly based on the trends identified in Busan, a second full-day workshop is planned to be held on Sunday, 16 October, 2005 in Nice, France, including new subjects, tutorials and expert discussions. For the associated details, see the Calls for further information on the MPEG Website.

Further information

Future MPEG meetings are as follows:

- Nice, France, October 17-21, 2005
- Bangkok, Thailand 16-20 January 2006
- Geneva, Switzerland 3-7 April 2006
- Klagenfurt, Austria 17-21 July 2006

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

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

The text and details related to the Calls mentioned above (together with other current Calls) are in the Hot News section, http://www.chiariglione.org/mpeg/hot_news.htm. These documents include information on how to respond the Calls.

The MPEG homepage also has links to other MPEG pages, which are maintained by some of the subgroups. It also contains links to public documents that are freely available for download to non-MPEG members. Journalists that wish to receive MPEG Press Releases by email can contact Peter Schirling.