



ITU-T Workshop ***on Video and Image Coding*** ***and Applications (VICA)***

22-23 JULY 2005, ITU HEADQUARTERS, GENEVA, SWITZERLAND

In between the meetings of two lead technical groups working on image and video compression, ISO/IEC's JPEG and ITU-T's Study Group 16, ITU will host a workshop on Video and Image Coding and Applications (VICA) at the ITU headquarters, Geneva, Switzerland, on 22 and 23 July 2005. Key experts will join users to review the development, assessment and application of video and image coding and to discuss and start work on an action plan and a roadmap for VICA standardization.

Presentations will instigate discussion on how standards work in the field, including how next-generation networks (NGN) can support the development of so-called ubiquitous services – any device, anytime, anywhere. Current work on home network environments will also be taken into account.

Also at the event there will be a demonstration showing various products using related standards.

ITU-T Workshop on Video and Image Coding and Applications (VICA)

PROGRAMME DAY 1 (FRIDAY 22 JULY 2005)

09:30-10:30 OPENING SESSION

Objectives: Presentation of the future challenges of image/video coding and applications standardization from the perspective of the IT, telco, broadcasting and entertainment communities.

Session Chair: **Pierre-André Probst** (Chair, ITU-T SG 16; OFCOM/Switzerland)

Presentations:

- *Opening presentation* – **Pierre-André Probst** (Chair, ITU-T SG 16; OFCOM/Switzerland)
- *Welcome address* by **Houlin Zhao** (Director of TSB)
- *Overview of digital video coding standards* – **Gary Sullivan** (Rapporteur ITU-T Q.6/16; Microsoft/USA)
- *JPEG family of image coding standards: Retrospective and new developments* – **Daniel Lee** (Convenor, JPEG; Yahoo! /USA)

10:30-11:00 COFFEE BREAK

11:00-13:00 SESSION 1: NETWORK PLATFORMS

Objectives: Overview of existing platforms in home-, access- and core networks, their evolution towards NGN and the opportunities for and limitations to the transport of digital video and images.

Session Chair: **Sakae Okubo** (Chairman, WP 2/16; Waseda University/Japan)

Presentations:

- *Home network perspective on digital video codec* – **Mayumi Matsumoto** (Rapporteur ITU-T Q.5/9; NEC Magnus Communications/Japan)

- *Video and image compression in cable networks* – **Jean-François Mulé** (Associate Rapporteur ITU-T Q.9/9) and **Mayumi Matsumoto** (Rapporteur ITU-T Q.5/9; NEC Magnus Communications/Japan)
- *Video and image coding in mobile networks* – **Stephan Wenger** (Nokia/Finland)
- *The next-generation network: Framework and its potential* – **Naotaka Morita** (Vice-Chair ITU-T SG 13; NTT/Japan)
- *Think semantics! The need for reconsidering video application protocol design principles* – **Colin Perkins** (Co-Chair IETF MMUSIC & AVT; University of Glasgow) and **Jörg Ott** (Co-Chair IETF MMUSIC; Helsinki University of Technology)

13:00-14:00 LUNCH BREAK

14:00-15:30 SESSION 2: APPLICATIONS

Objectives: Review the evolution of multimedia applications, their impact on the requirements to VICA schemes and on the development of standards.

Session Chair: **Dave Lindbergh** (Rapporteur Q.23/16; Polycom, USA)

Presentations:

- *H.264/MPEG-4 AVC Application and deployment status* – **Thomas Wiegand** (Associate Rapporteur ITU-T Q.6/16; HHI/Germany)
- *MPEG-2 extends DICOM to new domains (endoscopy, microscopy, surgery)* – **Georges Le Goulher** (DICOM)
- *The impact of new and emerging video surveillance technology on future video coding standards* – **Michael Horowitz** (CoVi Technologies/USA)
- *Intelligent video surveillance based on JPEG standards* – **Virginie Carniel** (Emitall Surveillance/Switzerland)

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15:30-16:00 COFFEE BREAK

16:00-17:30 SESSION 3: DIGITAL VIDEO

Objectives: To present the status of video coding and discuss future developments towards the harmonization of video coding solutions for future applications (including inter-working and compatibility aspects).

Session Chair: Gary Sullivan (Rapporteur ITU-T Q.6/16; Microsoft/USA)

Presentations:

- *Overview of H.264/MPEG-4 advanced video coding (AVC)* – **Gary Sullivan** (Rapporteur ITU-T Q.6/16; Microsoft/USA)
- *Standardization in JVT: Scalable video coding* – **Jens-Rainer Ohm** (RWTH Aachen University/Germany)

- *The SMPTE 421M “VC-1” standardization project* – **Mark Jeffrey** (Microsoft/USA) and **Muriel Deschanel** (Microsoft)

- *AVS – a project towards to an open and cost-efficient Chinese national standard* – **Wen Gao** (Chair, AVS China)

18:00-20:00 COCKTAIL – Sponsored by Psytechnics Ltd



09:00-18:00 EXHIBITION

DAY 2 (SATURDAY, 23 JULY 2005)

09:00-10:30 SESSION 4: IMAGE CODING

Objectives: To present the status of image coding and discuss on future developments towards the harmonization of image coding schemes for future applications (including the inter-working and compatibility aspects).

Session Chair: Istvan Sebestyen (ITU-T SG 16 Vice-Chair; Siemens Germany)

Presentations:

- *The first joint ITU/ISO image compression standards* – **Joan Mitchell** (IBM/USA) and **Istvan Sebestyen** (ITU-T SG 16 Vice-Chair; Siemens Germany)
- *JPEG 2000: A versatile image coding system for multimedia applications* – **Touradj Ebrahimi** (EPFL/Switzerland)
- *JPEG-2000 extensions* – **Frederic Dufaux** (EPFL/Switzerland)

10:30-10:45 COFFEE BREAK

10:45-12:00 SESSION 5: PERFORMANCE MEASUREMENTS AND ASSESSMENTS

Objectives: Examine the state of the art on existing methodologies and tools used for the assessment and measurement of the quality of digital video (problems and experiences made so far).

Session Chair: Arthur Webster (Rapporteur ITU-T Q.9/9; NTIA/USA)

Presentations:

- *Towards a standardized perceptual quality metric for multimedia* – **David Hands** (BT/UK)
- *General purpose objective video quality measurement tools* – **Steve Wolf** (NTIA/USA)
- *State of the art of multimedia quality assessment methods* – **Takanori Hayashi** (NTT/Japan)

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12:00-13:30 LUNCH BREAK

13:30-15:00 SESSION 6: FUTURE TRENDS IN VICA

Objectives: Based on the advanced research work on video and image applications, to understand the evolution of multimedia services and applications and its medium- and long-term impact on future VICA standards.

Session Chair: Touradj Ebrahimi (EPFL/Switzerland)

Co-chair: Jörn Ostermann (University of Hanover/Germany)

Presentations:

- *New techniques for improved video coding* – **Thomas Wiegand** (Associate Rapporteur ITU-T Q.6/16; HHI/Germany)
- *Exploration work in MPEG video* – **Jens-Rainer Ohm** (RWTH Aachen University/Germany)
- *Video compression: Which scenario?* – **Fulvio Moschetti** (European Patent Office)
- *Perceptual video quality metrics for encoder optimization* – **David McNally** (Genista/Switzerland)

15:00-15:15 COFFEE BREAK

15:15-16:30 SESSION 7: PANEL ON VICA STANDARDIZATION TOWARDS A ROADMAP, AND WRAP-UP

Objectives: Review the outcome of the sessions and agree on a standardization roadmap for VICA, in particular to identify key inter-working issues, their priorities, and means for coordination and harmonization of the work between the different players.

Session Chair: Pierre-André Probst (Chair, ITU-T SG 16; OFCOM/Switzerland)

Panel participants:

- Chairs of Sessions 1-6
- Invited experts

09:30-16:30 EXHIBITION

For updated information, please see: www.itu.int/ITU-T/worksem/vica

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