ITU-T SG16 Sapporo Events

—Workshop on Multimedia Technologies—

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1. Introduction

On July 1, 2014, a Workshop on Multimedia Technologies was held in the Small Hall at the Sapporo Convention Center as a local event running concurrently with the ITU-T SG16 Sapporo meeting (Photo 1, 2). This paper presents a summary of the workshop and the content of the day's lectures.

2. Lecture summary

This workshop was tied in with another local exhibition event called *Showcasing on Cutting-Edge Multimedia Technologies* that ran from July 1 through July 4, and was planned by the Japanese companies that hosted the SG16 meeting. The workshop consisted of a technical session where technologies were introduced centered around the items presented at the exhibition, and keynote sessions by the platinum sponsors. The workshop was organized by the program committee. The make-up of this committee is shown in Table 1. The workshop was supported by the Ministry of Internal Affairs and Communications, with the cooperation of the Telecommunication Technology Committee (TTC). The technology sessions were organized by the TTC Multimedia Advisory Group (MM-AG), and in particular the session 1 lectures on IPTV (Internet Protocol Television) were organized by the TTC IPTV working group. The post of chairperson on the day was shared between Masahiro Serizawa of NEC and myself (Kiyoshi Tanaka, NTT), who are the vice-chairmen of each organizing group.

There were 81 participants in the workshop, of whom 56 were also participating in the ITU-T SG16 and JCT-VC meetings that were being held on the same day.

3. Lectures

The lecture program is shown in Table 2. The day's keynote session was started after welcoming addresses from representatives of the host, supporter, and cooperator (program committee representative Yushi Naito, Ministry of Internal Affairs and Communications representative Toshihiro Matsui, and TTC representative Yoichi Maeda). The keynote lectures were delivered by Toshiaki Fujita of NTT, Fumihiko Tomita of the NICT, and Kenichi Tanaka of Mitsubishi Electric Corporation, who described the state of R&D and standardization at their respective

Table 1

Program Committee	
Kiyoshi Tanaka,	Nippon Telegraph and Telephone Corporation
Michiko Fukahori,	National Institute of Information and Communications Technology
Yushi Naito,	Mitsubishi Electric Corporation
Kazuhiko Tanaka,	The ITU Association of Japan
Yosuke Endo,	Japan Broadcasting Corporation (NHK) / The Telecommunication Technology Committee IPTV Working Group Chair

Photo 1: The venue on the day of the event

Photo 2: The workshop in progress

Table 2

Keynote Speech		
13:15-13:30	Welcoming addresses: Yushi Naito, SG16 Chairman/Mitsubishi Electoric Corporation Toshihiro Matsui, Director, Standardization Division, Global ICT Strategy Bureau, Ministry of Internal Affairs and Communications Yoichi Maeda, CEO and SVP, The Telecommunication Technology Committee	
13:30-13:45	Toshiaki Fujita, Senior Vice President of Service Innovation Laboratory Group, Nippon Telegraph and Telephone Corporation	
13:45-14:00	Fumihiko Tomita, Vice President, National Institute of Information and Communications Technology	
14:00-14:15	Kenichi Tanaka, Fellow, Mitsubishi Electric Corporation	
Technical Session (Organized by TTC MM-AG)		
Special Session:		
14:15-14:45	**Invited Speech:** Beyond the content distribution, and its technology	Jay Kishigami, Professor, Muroran Institute of Technology
Session 1 (Organized by TTC IPTV-WG)		
14:55-15:10	H.265/HEVC Encoder for UHDTV	Mitsuo Ikeda, Senior Research Engineer, Supervisor, NTT Media Intelligence Laboratories, Nippon Telegraph and Telephone Corporation
15:10-15:25	8K-UHDTV HEVC Real-time Encoder	Atsuro Ichigaya, Research Engineer, Advanced Television Systems Research Division, Science & Technology Research Laboratories, Japan Broadcasting Corporation (NHK)
15:25-15:40	ITU-T standards based IPTV solutions and the global testbed	Hideki Yamamoto, Senior Manager, Broadband Media Department, Carrier Systems Division, Telecom Systems Business Division, Oki Electric Industry Co., Ltd.
15:40-15:55	ITU-T Standards for Multimedia Application Platforms	Fernando Masami Matsubara, Manager, Planning & Administration Department, Mitsubishi Electric Corporation
Session 2		
15:55-16:10	To Create a World Without Communication Barriers	Chiori Hori, Director, Spoken Language Communication Laboratory, Universal Communication Research Institute, National Institute of Information and Communications Technology
16:10-16:25	An advanced traffic management solution for big-data circumstances	Yoshito Sakurai, Director International Standardization, Strategy Planning & Development Office, Information & Telecommunication Systems Company, Hitachi, Ltd.

organizations.

These were followed by the technical sessions, which were prefaced by an invited speech from Professor Jay Kishigami of Muroran Institute of Technology, who is also a senior adviser for standardization strategy at NTT. Professor Kishigami gave an interesting lecture on the subject of metadata, including the similarities between ITU-T Recommendations F.750 and H.750 in relation to metadata, the importance of metadata in recent years, and the future direction of metadata.

Technical session 1 consisted of four lectures on subjects closely related to IPTV services. On the subject of video coding technology for the realization of high-definition video services, NTT's Mitsuo Ikeda gave a lecture on the roadmap for UHDTV services aimed at 8K video resolution, and on H.265/HEVC encoder technology for UHDTV, and NHK's Atsuro Ichigaya gave a lecture on codec technology for 8K UHDTV. Hideki Yamamoto of Oki Electric Industry then gave a description of IPTV and related services, and introduced the ITU IPTV IPv6 Global Testbed (I3GT). Next, Masami Matsubara of Mitsubishi Electric Corporation described the importance of standardization, centered on IPTV middleware technology. Session 2 consisted of a lecture on automatic translation by Chiori Hori of the NICT, and a lecture on big data by Yoshito Sakurai of Hitachi. All of the lectures were well received by the audience.

4. Conclusion

This paper presented an overview of the Workshop on Multimedia Technologies that was held alongside the ITU-T SG16 meeting. This workshop was planned, arranged and realized by volunteers from the Japanese companies that hosted the ITU-T SG16 event, and I would like to thank everyone who helped for their cooperation.

— Showcasing on Cutting-Edge Multimedia Technologies —

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Building on the theme of "Cutting-Edge Multimedia Technologies", the SG16 Sapporo Meeting Hosting Committee organized a Showcasing from 1 to 4 July 2014.

MIC, NICT, Mitsubishi Electric, NTT, Fujitsu, NHK, OKI, and 3Dragons participated in the exhibition (Table 1). There were several demonstrations on a variety of topics, including the ITU international standard.

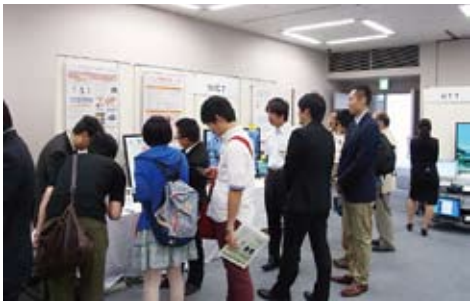
The Kamikawa State Secretary of MIC inspected the Showcasing on 1 July.

This inspection was broadcast on the news by the NHK Sapporo broadcasting station, Hokkaido Television Broadcasting (HTB), Hokkaido Broadcasting (HBC), and Sapporo Television Broadcasting (STV), and as a result, a high number of lay people—about 300 over the course of four days— who had seen the news on TV visited the exhibition and were able to experience "Cutting-Edge Multimedia Technology".

Table 1: Showcasing Exhibits

Organization	Exhibit
MIC (Supported by NHK, NICT, SHARP)	8K Video Demonstration using an 85-inch Monitor
NICT	(1) To Create a World Without Language Barriers (U-STAR) (2) "KoeTra": An application for the hearing impaired
NICT	Simple 3D Format (Global View and Depth)
MITSUBISHI ELECTRIC	IPTV terminal device based on ITU-T standards
MITSUBISHI ELECTRIC	High speed services over 10G-EPON access networks
NTT	Depth-based Free viewpoint TV
NTT	Reliable 4K H.265/HEVC Real-time Transmission by using MMT-FEC
FUJITSU	Application of Video Watermarking Technologies
NHK	8K-UHDTV H.265/HEVC Real-time Encoder
OKI	ITU-T standards based IPTV solutions
3Dragons	Full Color All-Round Parallax Display: "Holo-Deck"


Exhibition room packed with visitors.


Students from Hokkaido visiting a booth.


Inspection of the Kamikawa State Secretary of MIC.