



ASIA-PACIFIC TELECOMMUNITY

2nd APT/ITU Conformance and Interoperability Workshop
(C&I-2)

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IPTV Testing & Showcasing Plan

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The coordination committee meeting on 30 July 2014 for the 2nd APT/ITU C&I event

IPTV Testing & Showcasing Plan

Ver.1.1 31 July 2014
Ver.1 30 July 2014

Hideki Yamamoto
OKI



2nd APT/ITU C&I event



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IPTV Testing & Showcasing General

■ Purpose

● Testing

- ▶ Confirm conformance on draft of H.721.Rev.1 (Basic terminal) between server (OKI) and test terminal.

● Showcasing

- ▶ Demonstrate TOT's IPTV services
- ▶ Demonstrate live transmission from I3GT (ITU IPTV IPv6 Global Testbed) to the venue in Thailand
- ▶ Demonstrate interactive networking among server, STB/Display and H.810 e-health devices
- ▶ Demonstrate application programs made by 3rd party

■ Participating Organizations

- TOT, Mitsubishi Electric and OKI(HTB, Partners in Thailand and Ateneo de Manila Univ.)



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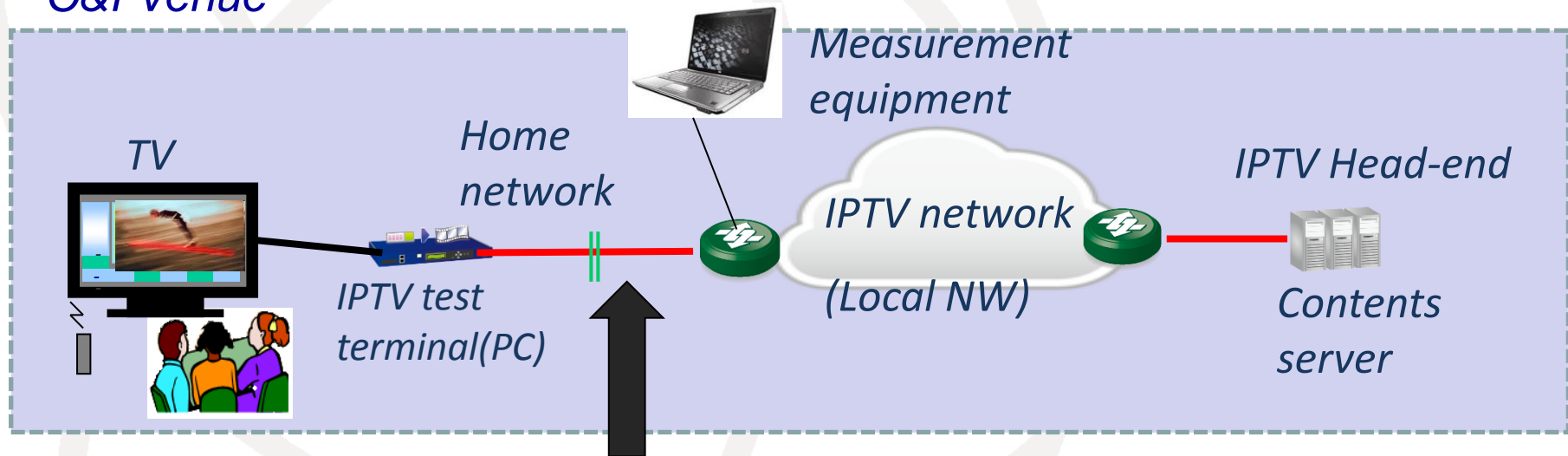


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IPTV Testing Configuration

■ Testing ----- OKI and Mitsubishi Electric

- C&I testing for draft of ITU-T H.721 rev.1 and its testing document (draft of ITU-T HSTP-CONFH721R1) will be used.
- Measurement equipment will be used to examine protocols between contents servers and terminals.
C&I Venue



Draft of H.721 rev.1 Basic Terminals testing

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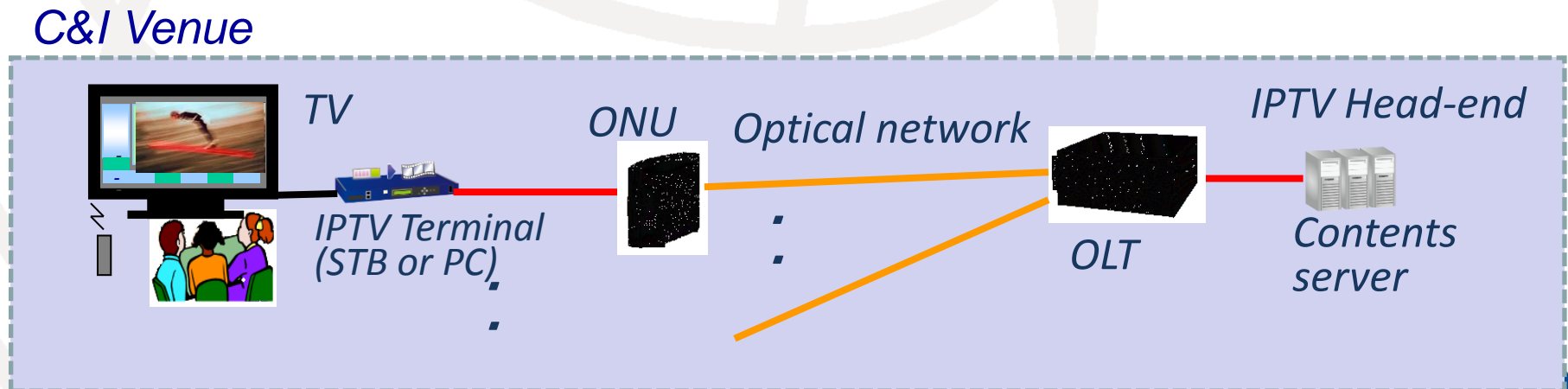
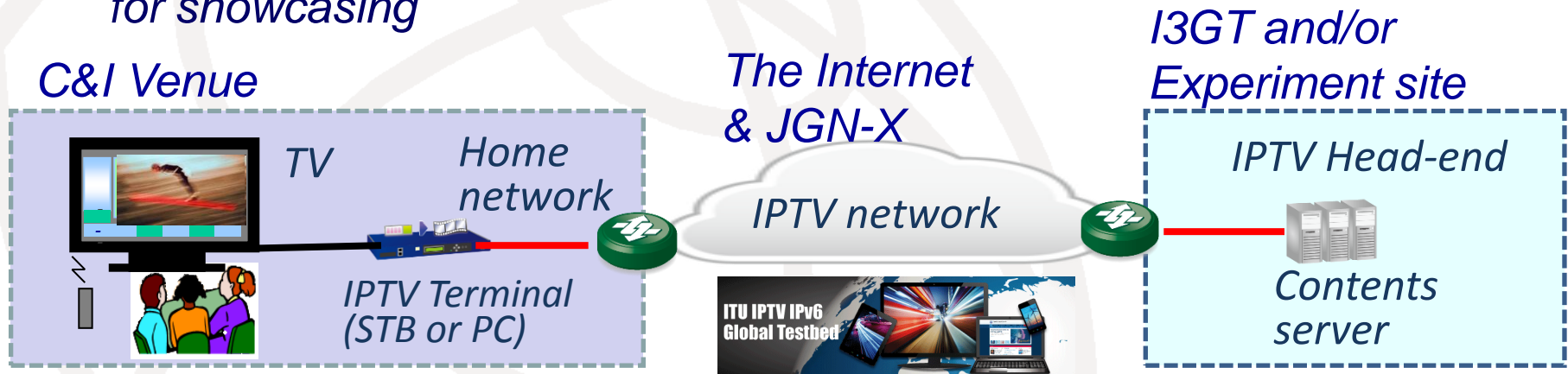


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IPTV Showcasing Conceptual Configuration

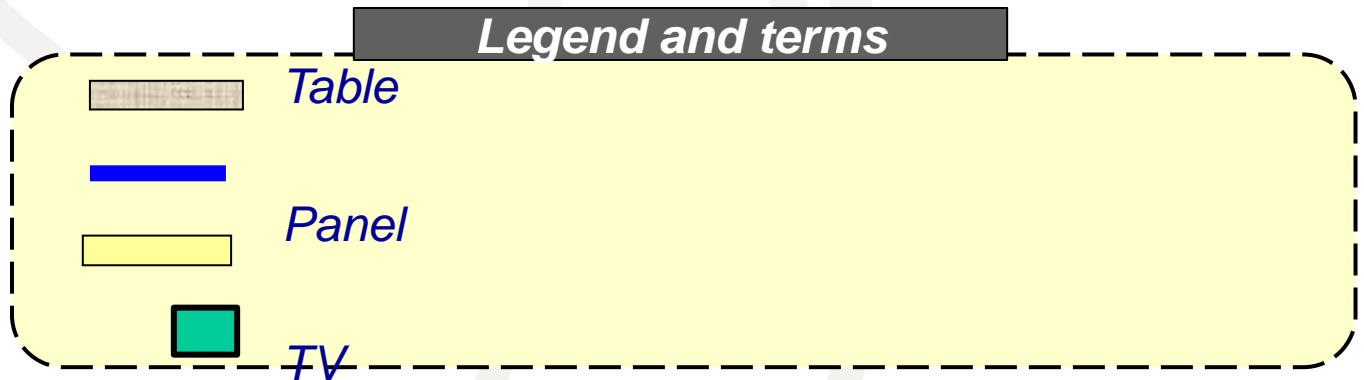
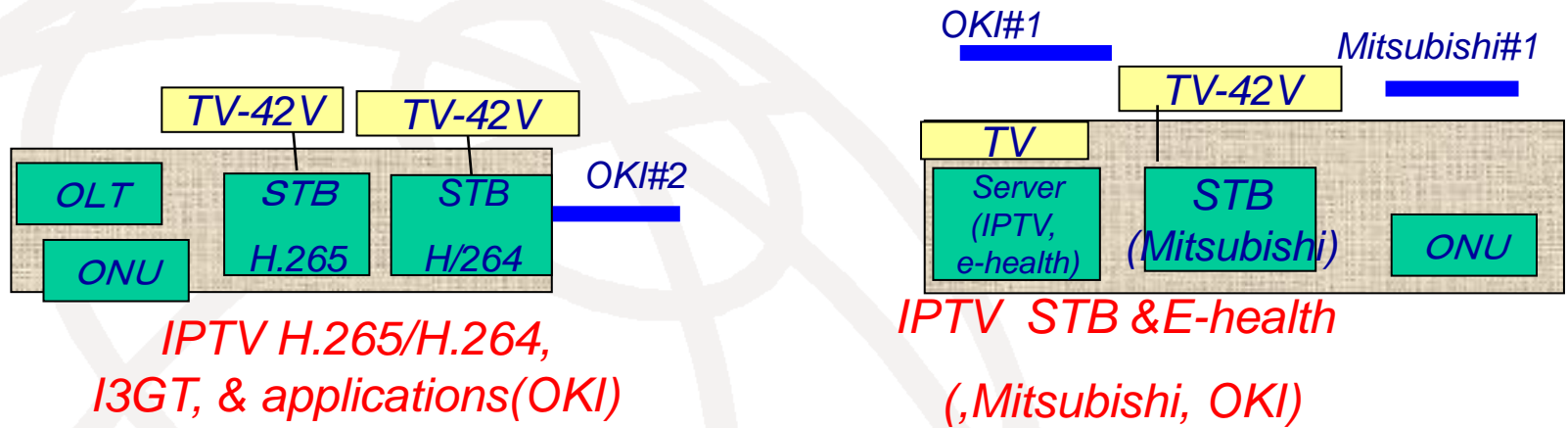
■ Showcasing

Remote servers (I3GT and/or experiment site) and local servers are used for showcasing



* Using optical access equipment is under consideration

IPTV Testing & Showcasing Layout Image



** Using optical access equipment is under consideration*

Equipment/Devices

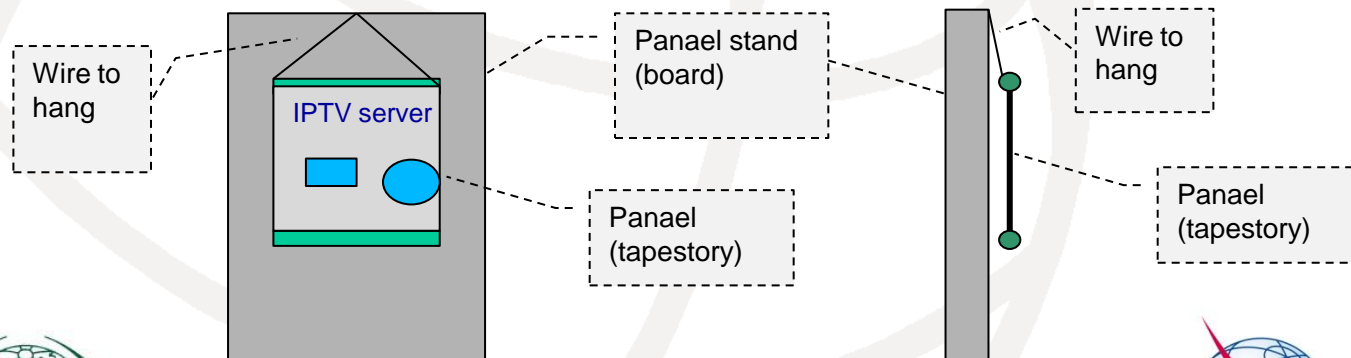
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IPTV Testing & Showcasing facilities

No	Name	Quantity	Specifications	Memo
1	Internet connectivity	2 ports	Total bandwidth 10Mbps, RJ-45	Global address is better but not mandatory
2	Panel stand	4	A0 size panel be hung	See fig.
3	Electric power	30	AC 220 V, A-type	
4	LCD TV rental	3	Around 42 inch	Rent from a suggested company by hotel.



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IPTV STB by Mitsubishi Electric

Features

- ◆ Multiple services (currently deployed STB)
 - ◆ Terrestrial and satellite TV broadcast
 - ◆ Premium channel TV broadcast
 - ◆ VoD, Revenue-generating interactive services: Karaoke, portal services
- ◆ Personal video recorder, Remote scheduled recording

ITU-T Recommendations supported

- H.721 IPTV Terminal devices – Basic model
- H.762 Lightweight interactive multimedia environment (LIME) for IPTV services
- H.770 Mechanisms for service discovery and selection

Specifications

- Full-HD H.264, MPEG2
- LAN 10/100 Base-TX x1
- USB 2.0 x2 ports for HDD PVR
- HDMI digital Audio/Video
- Stereo audio
- Composite/Component video
- Digital audio
- IR interface (for remote controller)



IPTV Head-end by OKI (1)

■ *OKI MEDIASERVER* is an ITU IPTV reference server used in I3GT

■ *Integrated IPTV Platform*

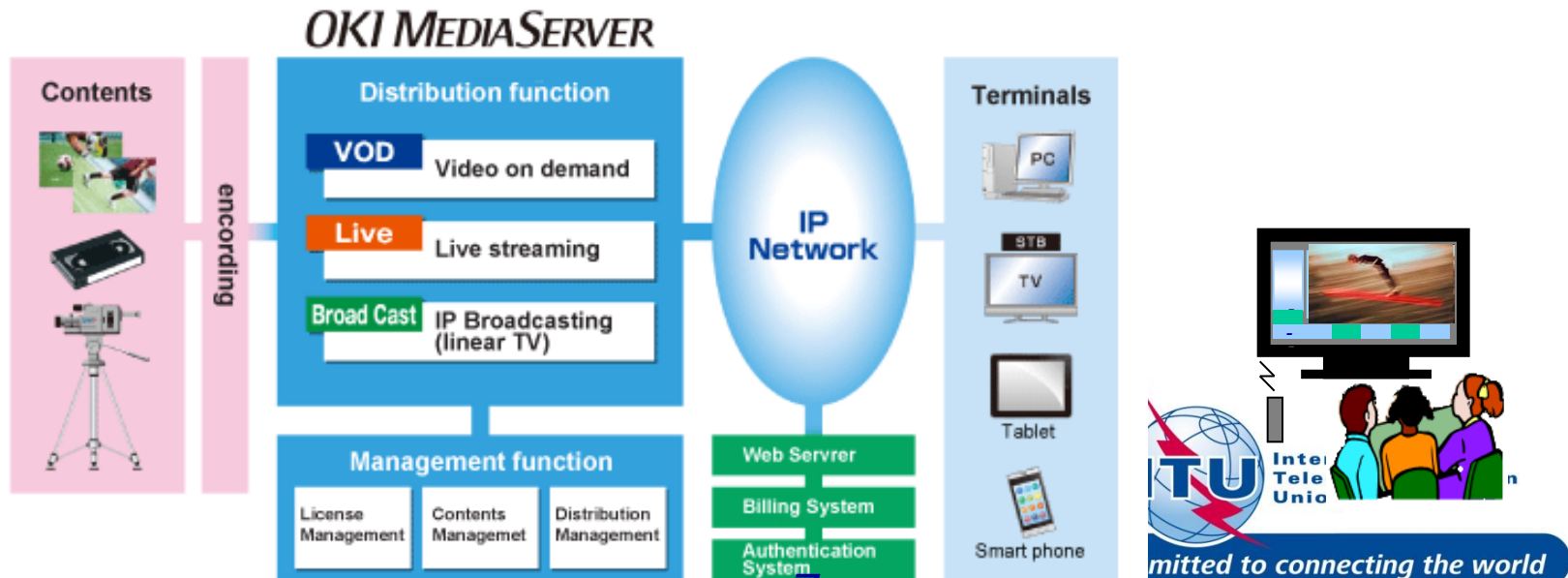
- *VOD, live streaming, IP broadcasting (linear TV) and their combined services such as time shift service (pause-live, catch-up, and start-over)*

■ *Standard based system*

- *ITU-T IPTV standards and de-facto standard, IETF HLS, compliant*

■ *Large scale system*

- *It supports distributed VOD system for large scale system*



Contents for Showcasing

1. LOCAL

1. VOD and linear TV (ITU-T H.264, H.265, H.721 Rev.1)

- ◆ Sapporo snow festival 2013 by HTB
- ◆ Greetings from Director of ITU-T by ITU-T
- ◆ Others

2. LIME application (ITU-T H.762)

- ◆ Lime application by Ateneo Univ.
- ◆ Health condition visualization (E-Health (ITU-T H.810))

2. ITU IPTV IPv6 Global Testbed (I3GT)

1. VOD

- ◆ The same as the above local “VOD”



Thank you

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