



ITU-T Workshop

“Opportunities and Challenges in Home Networking”

GENEVA, 13-14 OCTOBER 2005

Introduction

Home Networking is the linking of all types of electronic devices for applications such as entertainment, telecommunication, home automation systems and telemetry (remote control and monitoring systems). And given the wide range of previously unrelated technologies involved, standards that allow for interoperability are seen as key to the successful marketing of the concept.

The event is organized by ITU-T **Study Group 9**, in cooperation with several other ITU-T study groups and various organizations outside of ITU. It follows the **Workshop on Home Networking and Home Services** held 17-18 June 2004, Tokyo.

Study Group 9 has been working on standardization in home networking systems for more than four years. It has already approved three ITU-T Recommendations in the field. A current focus is a new Recommendation that will specify ways to bridge conditional access systems (that ensure payment in pay TV for example) to digital rights management (DRM) systems, an important step toward smooth operation of fully integrated home networking.

This workshop will bring together experts from all over the world who are pushing forward the frontiers of this fast-moving field. It will provide an overview of the technology as well as an examination of standards that address access, services, performance, Quality of Service, electromagnetic interference and security issues. The workshop will deal with current technology and future trends to provide a framework for moving forward standardization work. Attention will be given to both the technology and service aspects of this new technology.

Objectives

The specific objectives of this workshop include:

- Presenting current and planned activities for the integration of the Internet, multimedia services and applications, interactive broadcasting, telephony, domestic appliances and telemetry into home networks
- Outlining the service and business models for Home Networking
- Considering the support of Home Networking in Next-Generation Networks
- Reviewing the existing international standardization framework and promoting its applications in the deployment of home networking solutions
- Identifying future requirements for international standardization and collaboration with ITU-T/R study groups, ISO/IEC, standards development organizations (SDOs), forums, etc.

Exhibition

A small exhibition will also be hosted during this event in the Salle des Pas Perdus in the second basement of the ITU Tower building.

For a live audio webcast of this workshop, please see:
www.itu.int/ibs/ITU-T/homenetwork05/index.html

For more information and online registration, please go to the workshop website at:
<http://www.itu.int/ITU-T/worksem/homenetworking/index.html>

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Programme

DAY 1, THURSDAY 13 OCTOBER 2005

09:30–11:00 SESSION 1: WORLDWIDE STATUS OF HOME NETWORKING

Chairman: Charles Sandbank (Vice-Chairman of SG 9, Chairman of the Workshop Steering Committee)

Objectives: This session will provide an introduction to the workshop and give an overview of the current developments in Home Networking in the Asia-Pacific region, the Americas and Europe. It will also provide details of standards development in ISO/IEC and ITU.

- Welcome address – **Houlin Zhao** (TSB Director)
- Status Introduction from:
 - *Current Developments in Home Networking in Japan* – **Kazuhiro Taguchi** (National Institute of Information and Communications Technology (NICT), Japan)
 - *Home Networking: USA Status* – **Ralph Brown** (CableLabs, USA)
 - *European Perspective in Home Networking* – **Dominique Roche** (France Télécom)
 - *Standards for the Networked Home Challenge ISO/IEC and ITU* – **Walter Pattay** (ISO/IEC JTC 1/SC 25)

11:00–11:30 COFFEE BREAK

Sponsored by: BT, Deutsche Telekom, France Télécom, Telecom Italia and Telefónica

11:30–13:00 SESSION 2: HOME NETWORK ARCHITECTURE AND TECHNOLOGIES

Chairman: Yoichi Maeda (Chairman of SG 15)

Objectives: This session will discuss networking architectures and technologies for home and access networks, as well as bridging these two networks. The technologies include not only the various transmission media technologies such as cable, metallic twisted pairs, optical fibres, power-line and wireless, but also plug-and-play technologies for seamless connection in the home as well as the integration of consumer electronics (CE) and terminal devices into the home network.

- *Access and Home Network Architectures, and Bridging the Two* – **Christele Bouchat** (Alcatel, Belgium)
- *Transport Technologies in the Home, Current and Future* – **Stephen Palm** (Broadcom, USA)
- *Integrating CE Devices and Terminal Equipment into the Home Network* – **Mayumi Matsumoto** (NEC, Japan)
- *Seamless Home Networking Using UPnP and DLNA Technologies* – **Toby Nixon** (UPnP Forum)

13:00–14:00 LUNCH BREAK

14:00–16:00 SESSION 3: HOME NETWORKING SERVICES AND BUSINESS MODELS

Chairman: Pierre-André Probst (Chairman of SG 16)

Objectives: This session will review the services and applications foreseen by telecommunication service providers, the broadcasting community and the home-appliance industry. The focus will be on the interworking aspects of service capabilities and on business models. In addition, the requirements for the home networking architecture and for interworking devices (e.g. home gateways) will be addressed.

- *A Broadcasting Industry Vision: Home Networking from a PVR Viewpoint* – **Simon Parnall** (TV-Anytime Forum)
- *Telecom Italia Experience on Home Networking for Delivery Triple Play Services* – **Carlo Cori** (Telecom Italia)
- *Different Rooms Different Views: The Evolving Home Networking Landscape* – **Mark Francisco** (COMCAST)
- *Home Networking from a PVR Viewpoint* – **Yun Sik Kwak** (Chairman ISO TC215 “Health Informatics”, Korea)
- *Metadata Role at Home Networking Service* – **Jay Kishigami** (NTT Japan)

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16:00–16:30 COFFEE BREAK

Sponsored by: BT, Deutsche Telekom, France Télécom, Telecom Italia and Telefónica

16:30–17:30 SESSION 4: SECURITY AND DIGITAL RIGHTS MANAGEMENT

Chairman: **Heung Youl Youm** (SG 17)

Objectives: This session will discuss the security infrastructure required for remote access in home networks, how to adopt the existing security technologies into home networks, digital rights management, and content protection for home networks. The technologies will focus on authentication, authorization, content filtering, secure tunnelling, copy protection, and digital rights management technologies for home networks.

- *Security Framework for Remote Access in the Home Network* – **Hyung Kyu Lee** (ETRI, Korea)
- *Protecting Broadcast Television in Home Networks* – **Mark Jeffrey** (Microsoft)
- *Digital Rights Management (DRM) Standards Development Considering the Harmonization with Holders* – **Makoto Yoshioka** (Fujitsu Software Technologies, Japan)

18:00 COCKTAIL

Sponsored by: BT, Deutsche Telekom, France Télécom, Telecom Italia and Telefónica

DAY 2, FRIDAY 14 OCTOBER 2005

09:00–10:30 SESSION 5: QUALITY OF SERVICE IN THE HOME NETWORK

Chairman: **Jean-Yves Montfort** (Chairman of SG 12)

Objectives: This session will focus on the residential gateway and integrating the home network into an end-to-end Quality of Service (QoS) network solution. The session will examine QoS control in relation to new services (such as triple play and multiservice distribution), and links with NGN QoS architecture. In addition, it will cover the latest developments in home-networking QoS.

- *A New Paradigm of Quality Improvement Method for Non-QoS Guaranteed Video* – **Satoshi Miyaji** (KDDI, Japan)
- *End-to-end QoS on a Cable and Home Network* – **Amol Bhagwat** (CableLabs, USA)
- *Managing QoS in the Home Environment for Multiservices Distribution* – **Jean-François Cadiou** (France Télécom)
- *CPE QoS Model for Triple Play Differentiated Services Support* – **Ilario Gregori** (Telecom Italia)

10:30–11:00 COFFEE BREAK

Sponsored by: BT, Deutsche Telekom, France Télécom, Telecom Italia and Telefónica

11:00–12:30 SESSION 6: ELECTROMAGNETIC INTERFERENCE IN THE HOME ENVIRONMENT

Chairman: **Roberto Pomponi** (Chairman of SG 5)

Objectives: This session will present the installation techniques required to achieve equipment protection and user safety of the home environment. The session will also discuss electromagnetic compatibility (EMC), security and regulatory issues associated with the wireline and wireless technologies used in the home environment.

- *Protection and Safety in the Home Network* – **Ahmed Zeddami** (France Télécom)
- *EMC and Regulatory Issues in the Home Networking Environment* – **Ryuichi Kobayashi** (NTT, Japan)
- *Electromagnetic Security in Home Networking Environments* – **Benjamin Barlaud** (France Télécom)
- *Using a Coexistence Framework to Manage Powerline Networks* – **Andreas Schwager** (Sony Deutschland gmbH)

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12:30-14:00 LUNCH BREAK

14:00–15:30 SESSION 7: The Home Networking Future: Efforts and Challenges

Chairman: Steve Saunders (Associate Rapporteur SG 9)

Objectives: Home networking is rapidly evolving from both a technical perspective and a service perspective. Many great opportunities lie ahead. In order for these opportunities to become a reality, a number of interesting challenges will have to be met. This session examines the challenges and issues that face home networking moving forward, as well as the efforts that are emerging to address these challenges.

- *Common Communication Protocol (CCP)* – **Jae-Young Lee** (Korea Technology Institute (KETI))
- *Home Network Requirements from a Video Service Provider Perspective* – **Ralph Brown** (CableLabs, USA)
- *Interaction between A&V Equipment and Home Apparatus* – **Akira Toba** (Technical Committee of ECHONET Consortium, Toshiba, Japan)
- *Technological Challenges in the Home Platforms Area: The EU Networked Audiovisual and Home Platforms Projects Portfolio* – **Julián Seseña** (European AVISTA project)

15:30-16:00 COFFEE BREAK

Sponsored by: BT, Deutsche Telekom, France Télécom, Telecom Italia and Telefónica

16:00–17:30 SESSION 8: PANEL – WRAP-UP

Session Chairman: Charles Sandbank (Vice-Chairman of SG 9)

Objectives: This session will give an overview of the workshop by drawing the main conclusions and messages from the various sessions of the workshop and in particular examine what is required in order to put an overall system in place and what new standards may be needed. It will also provide a final opportunity for questions and comments from the workshop participants.

The members of the panel will be the Chairmen of the previous sessions in the workshop.

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

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