



# Session 1: Invited papers Summary

Chairman: Tohru Asami (The University of Tokyo, JP)

**NGN architecture evolution: A New Generation Network – Beyond NGN**, Tomonori Aoyama, Keio University, Japan

**Applications and services over the NGN: Evolution of Open IPTV Standards and Services**, Martin Körling, Ericsson Research, Sweden

**Social, economic and policy issues in the ubiquitous societies: Open Standards: a Call for Action**, Ken Krechmer, University of Colorado, USA

# NGN architecture evolution: A New Generation Network – Beyond NGN,

Tomonori Aoyama

- A bird's eye view of research directions and activities of new generation networks (NWGN) , coming after NGN currently driven by ITU-T: FIND,GENI,FP7,AKARI
- NWGN known as a clean-slate design for the future network architecture in 2020's.
- 8 requirements for NWGN: Switching and Transmission Capacity, Power Consumption, Ubiquity, Mobility Support, Connectivity for Versatile Appliances, Security, Reliability and Social Safety
- The detailed research profiles of Japanese governmental projects such as AKARI project are introduced with possible future applications (LONG TAIL APPLICATIONS)
- Research collaborations on going in Long Tail Applications such as CineGrid



# Applications and services over the NGN: Evolution of Open IPTV Standards and Services, Martin Körling

- IP-based TV services bring opportunities for interactivity and personalization into the TV experience
- IPTV services are addressed by a landscape of different standardization bodies complement each other to achieve a complete system.
- Open standards are essential to ensure market success but also to enable innovation of future services and applications
- The Open IPTV Forum is an attempt to build an architectural framework including several roles in the value chain. The focus lies on the interface between the user equipment and the network.



## **Social, economic and policy issues in the ubiquitous societies: Open Standards: a Call for Action, Ken Krechmer**

- Standardization and intellectual property process must continue to address the broad changes as standards evolve from similarity to compatibility to adaptability.
- This necessitates the further evolution of the policies and procedures of all the organizations that are involved
- Changes to standardization organizations:
  - Support open interfaces (adaptability standards) as a requirement with all compatibility standards using microprocessor controlled interfaces with changeable software.
  - Only allow IPR as an option in compatibility standards.
  - Standardization of adaptability standards to be addressed only in world-wide standardization organizations, especially ITU.



# Conclusions and Recommendations

- 8 requirements for new generation networks (NWGN) : Switching and Transmission Capacity, Power Consumption, Ubiquity, Mobility Support, Connectivity for Versatile Appliances, Security, Reliability and Social Safety
- World-wide research collaborations necessary
- Open standards are essential for IPTV to ensure market success but also to enable innovation of future services and applications
- ITU must address standardization of adaptability as a world-wide standardization organization.