

JCA Home Networking

Jean-Yves Monfort, FTR&D

ITU-T SG12 Chairman

Jeanyves.monfort@orange-ft.com



What is JCA HN, and what for?

ITU-T

- A Joint Coordination Activity on Home Networking (JCA-HN) was established in March 2006, approved by TSAG
- Andrew Nunn (BT, UK) is the Convenor of this activity.

The scope of the JCA-HN was decided following a meeting held immediately after the ITU-T workshop Opportunities and Challenges in Home Networking, 13 - 14 October 2005.

<http://www.itu.int/ITU-T/worksem/homenetworking/index.html>

JCA-HN will:

- Co-ordinate the Home Network Initiative activity across ITU-T Study Groups
- Seek cooperation from external bodies working in the field and disseminate information received from these bodies to the relevant ITU-T Study Groups.
- Identify what should be standardized by ITU-T
- Prepare a roadmap for this standardization activity



The task forces in JCA HN

ITU-T

- o Task Forces have been set up under the JCA-HN on HN architecture and QoS and Terminology.
 - The Task Force on Home Networking Architecture will operate as a group of experts from the relevant ITU-T Study Groups. The convenor is Mr. Istvan Sebestyen (Siemens).
 - The Task Force on Home Networking QoS and Terminology will be open to "nominated" members of relevant outside bodies.
- o A web site is available
<http://www.itu.int/ITU-T/special-projects/jca-hn/index.phtml>

- What was the mandate of the wrap-up session, during the October 2005 Workshop :
 - Objective 1 : Could we find a unique/common QoS Terminology for Home Networking? An definition of the associated concepts.
 - a better understanding and so a better cooperation process.
 - Objective 2 : To be a place to share the progress and the results (e.g. QoS requirements from HGI, final choice between the scenarios presented by Cablelabs, ...)

Some of the definitions on which common approach should be appropriate, inside the Task Force

- QoS prioritized (or priority based QoS) / QoS parameterized (parameter based QoS)
 - Parameterized QoS = Guaranteed QoS ?
 - Definition from a presentation given by in the Workshop HN, 2004 (see <http://www.itu.int/ITU-T/worksem/hnhs/programme.html>)
 - Prioritized: Differentiated/Preferential access to the media, no QoS parameter guarantees
 - Parameterized: Planned access to media, QoS parameter guarantees
 - Another definition given at the same workshop
 - Prioritized : differentiated access/queuing
 - Parameterized : planned access/queuing
 - In parallel, it should be appropriate to check if the parameters are defined similarly in different Bodies.
- Static QoS / Dynamic QoS

- Is there an opportunity to define a reference for QoS architecture, between the different Standardisation Bodies and Fora ?
- QoS per session, per flow, per class? Is there a common understanding of these concepts from the different Standardisation Bodies and Fora ? If not, could we indentify the differences?
- What are more appropriate solutions to "mix" the QoS in the different networks (access, Home network, Gateways,...)?

Supplementary subjects (from a Contribution to ITU-T : D543 to SG15)

- o The domain to standardize in home networking
- o When we study end-to-end QoS, we must keep in mind that there are various kinds of Access Network technologies, such as FTTx, xDSL, wireless, and so on. This issue also applies to Home Network. Session 5 "QUALITY OF SERVICE IN THE HOME NETWORK" in ITU-T Workshop on Opportunities and Challenges in Home Networking addresses the QoS aspect of Home Network. According to the presentation "Managing QoS in the home environment for multiservices distribution", one of the main objectives for a Telco is to manage QoS from end to end including home networks. Home network technologies are available but the problem is the heterogeneity in terms of:
 - Media (phonelines, powerlines, RF, UTP cables, InfraRed, IEEE1394, USB,...)
 - Topologies (point to point, shared bus, hybrid topologies, ...)
 - Reliability, such as variable bit rate, jitter, delays, as a function of the physical environment (propagation issues), EMC environment,
 - It will be better to standardize IPcable2Home Domain in Figure 1 from the above perspectives for the purpose of guaranteeing end-to-end QoS.
 - The candidate interfaces to standardize may be the two HA interfaces; the so called TPDN and TCN. This is because TPDN is the interface that allows HA to interconnect with various kinds of Access Networks, while TCN is the interface that allows HA to interconnect with various kinds of Home Networks.