INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

Final Report

Joint ITU-T Workshop and IMTC Forum 2006 on "H.323, SIP: is H.325 next?"

(San Diego, CA, USA, 9-11 May 2006)

Executive Summary

ITU-T and the IMTC (International Multimedia Telecommunications Consortium) jointly organized an ITU-T workshop and the IMTC Forum 2006 on "H.323, SIP: is H.325 next?" in San Diego, California, USA, from 9 to 11 May 2006 inclusive.

Experts from ITU-T and IMTC believe that the rollout of NGN will bring multimedia communications into a new era of and with that a need to consider updating or replace the currently used H.323 and SIP multimedia protocols. The question is whether to pursue development of a new protocol and a new generation of multimedia communication systems, or define new multimedia capabilities and functionality for existing protocols. Perhaps some consideration needs to be given to service control interface specifications. With work already underway in ITU on a new protocol dubbed H.325, the industry must decide whether to invest more time and resource into this pursuit.

This IMTC Forum and ITU-T Workshop addressed various aspects of this fundamental question including: market acceptance, market need and benefit to end users / service providers / enterprise information technology (IT) staff. Additionally, new developments of video codecs following H.264, audio/speech codec and MPEG standards, web applications, IPTV, mobile network aspects and utilization of NGN capabilities in multimedia communication systems were also addressed.

More than 60 participants from 10 countries attended this workshop. Workshop conclusions and recommendations include:

- o Bandwidth is getting cheaper quickly, therefore:
    - Compression is till important for video, but less so than it used to be
    - Compression for audio is already adequate, focus now is on features, quality, etc
    - Flexibility and interoperability becoming key. Security, rate adaptation, complexity/power and error robustness, etc are the future.
- o IPTV deployment is real and it is happening. If current trend continues, it will catch up with digital cable and satellite in few years.
- o IPTV enablers include:
    - High coding efficiency of AVC/H.264
    - Increased capacity of the network
    - Cost effective solutions are becoming real
- o Challenges that IPTV is facing:
    - Lack of standardization at all the levels of the system. DVB, DSL-Forum, DLNA, CEA, IETF and other SDOs are addressing this issue.

Good opportunities for ITU & IMTC to take lead in addressing some of the issues

- - DRM: fragmented DRM islands and strategies
    - Meta-Data: Lack of common standardized interfaces makes searching difficult.
    - Availability of content
    - Quality of content
    - Quality of service/experience
- o Evolution is happening at the S+A levels, therefore
    - MM systems will have to be able to support the rapid evolution of MM services and applications. Present trends include NRFID, GRID, IPTV, Web services.
    - Concept of evolutionary capabilities needs to be further defined
    - Consider both enterprise (segmentation!) and residential markets
- o Limitations of existing protocols (2nd generation):
    - Poor or complex capability exchange

- Poor error handling and fault management
- Poor separation between service logic and call processing
- No clear separation of UNI and NNI
- Interoperability issues abound
- SIP and H.323 are problematic for mobile systems; operators have adopted H.324M
- Little consideration given to NAT/FW and other IP network issues
- Important aspects, such as QoS, security, lawful interception, emergency services, provisioning, and management were considered later, resulting in less-than-ideal solutions
- Do not take full advantage of IP networks (e.g., downloadable codecs that plug-in on demand)
- Operator and enterprise IT requirements neglected
- Designers wanted intelligence in the endpoints
- Operators and enterprise IT want to manage and control services

There is a need to start to think about a new generation of MM protocols!

o Different scenarios have to be considered:
  - Short term: improvements and extensions to existing protocols (2nd Generation):
    — H.323: ongoing activities in SG16
    — H.323/SIP interworking is a work item in SG16
    — SIP:
      → Who defines the requirements?
      → Who develop the improvements and the extensions?
      → How can SG16 help to progress this work?

  - Lo…..ng term: 3rd Generation of protocols
    — Project H.325 in SG16
  - Migration SIP/H323 → H.325

What actions to take next?
o Identify limitations of existing protocols*:*
  - Continue to discuss the list
  - Produce a living document
o H.325 Project:
  - Progress the work on requirements
  - Discuss and Integrate the workshop material into the requirements
  - Increase the visibility of the work
  - Improve communication, in particular on the objective and the timeframe

All presentations and a list of participants of this event are also available at the event website at:
http://www.itu.int/ITU-T/worksem/h325/200605/index.html.