ITU Telecommunication Standardization Sector
Study Group 15
Experts Group for Video Coding and Systems in
ATM and Other Network Environments

Document AVC-659
July 6th, 1994

SOURCE : Japan
TITLE : A plan of H.32X hardware interconnection experiment in Japan
PURPOSE : Information

---

AV&ATM Picture Coding Subcommittee in Japan has started planning of H.32X hardware interconnection experiment to verify Rec.H.32X, etc. This document aims to inform members of our plan and to ask advice in this experts group.

1. Scope

The aim of this plan is to verify whether the recommendations have enough description of specification to give reliable interconnection ability for the equipment based on the draft recommendations.

This experiment is planned to discover potential problems in draft recommendations if any, and to improve the draft recommendations by reflection of the experiment result.

Relevant recommendations : H.262, H.222.0, H.222.1, H.32X, H.24X

2. Schedule

| **Date** | **working plan** |
|---|---|
| Jun.1994 | Foundation of working group<br>Start working<br>A study on network used in experiment |
| Jul. Experts Group Meeting | Drawing up specifications of experiment hardware |
| Aug. ~ Oct. | Decision of experiment schedule<br>A study on experiment items<br>Decision of experiment network |
| Nov. Experts Group Meeting | Decision of hardware specifications and experiment items |
| Dec. ~ Jan. | Reflection of hardware specifications to draft recommendations<br>A study on details of experiment items |
| Feb. 1995 SG15 | Progress Report, Freezing of draft recommendations |

Mar.(?) Experts Group Meeting
Decision of details of experiment items

Apr. ~ May
Making guideline of experiment
Preparation for experiment

Jun. ~ Oct. (exact period of experiment needs for the study)
Perform an experiment

Jul.(?) Experts Group Meeting
Progress report on the experiment

Aug.
Collection of experiment result
A Study on discovered problems
Drawing up modification to the draft recommendation

Nov. SG15
Standardization (Res.1 approval)

3. Hardware specifications for experiment

The hardware for experiment must have specifications to enable basic video transmission on ATM network described in section 6(Experiment items).

3.1 Video

Based on H.262

{Profile and level used in hardware must be decided. It also must be decided how interconnection of 525/625 is tested.}

3.2 Audio

{Is MPEG-1 Audio enough for our purpose? Should we use MPEG-2 Audio?}

3.3 Data

{Do we need Data transmission for our experiment purpose?}

3.4 Multimedia multiplex

H.222.0 Program Stream/Transport Stream

{Which should be used PS or TS or both? Functions in H.222.0 should be selected to satisfy our needs.}

3.5 AAL

AAL 1/2/5

error control

{AAL1, AAL2 or AAL5? What kind of error control method should be employed?}

3.6 Communication procedure, Control protocol

{Does experiment hardware need such a procedure and protocol? If those are needed, what kind of communication procedure and control protocol should be employed?}

3.7 User-network signalling

{PVC or SVC? What protocols in case of SVC?}

3.8 Others

Extra functions beyond basic video transmission

{Interconnection with H.320, H.32Y, H.32Z, H.32P; Conditional access

Are those needed?}

4. Network for experiment

ATM experiment network of telecommunication carrier

ATM-LAN

{Preliminary analysis indicates that the specifications of experiment hardware can be common to both networks.}

5. Testing tool

5.1 Tester

A work station that stores a valid H.222.0 bit stream is connected to ATM-LAN. Then ATM cell is transmitted to Decoder through ATM-LAN or ATM network.

{Is there ATM card for WS supporting AAL1?}

5.2 Measurement tool

5.3 Network impairment emulator

{Intentional introduction of bit error, cell loss, and cell delay variation is helpful for experiment on high quality ATM network.

6. Testing items

- Verification of correct working of equipment based on recommendations (back-to-back base)
- Verification of correct working of equipment based on recommendations on real ATM network
- Verification of correct clock recovery at a decoder
- Inspection of influence of cell delay variation and cell loss
- Verification of preservation of inter-media synchronization (ex. video and audio)

END