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

Document # AVC-589
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**SOURCE:** Japan
**TITLE:** Field Trial of H.32X ATM Video Codec Interconnection
**PURPOSE:** Proposal

## 1 Background and proposal

In AVC-566 at Brussels meeting, we proposed a field trial of H.32X video codec interconnection through ATM transmission facilities in the middle of 1995 for verifying related draft recommendations and for encouraging early development of ATM video codec products. In order to make the field trial effective, it is very important that many companies participate in the trial.

In this document, we propose that many members in the experts group should give their planned specifications of the experimental codecs for the basis of further discussions.

## 2 Requirements for experiment

Here are the points that we think are required for the experiment.

1. The experimental codecs should have the specification similar as possible to those of video codecs which will appear on the market in the near future.

2. In the field trial, the codec connection should be performed through some ATM transmission equipments which conform to the ATM recommendations as much as possible. In the case of delay in any standardization, some special test tools which provide the standard's functionality would be required.

3. Cell loss emulation/measurement and bit error emulation/measurement will be indispensable.

The above is described in AVC-566, and other proposals or requests on the requirements for the experiment are welcome.

## 3 Example of codec specification

An example of the codec specification considering the above requirements is attached in the annex. Please note that the attached specification is just an example, and other specification proposals are most welcome.

## 4 Conclusion

We hope that many members in the experts group will give their planned specifications of the experimental video codecs for the field trial of ATM transmission.

## References

[1] AVC-566, "Proposal for Field Trial of H.32X ATM Video Codec," August 1993, Japan.

[2] AVC-283, "Hardware Verification of H.26X Specifications," June 1992, Japan.

## ANNEX to AVC-589

Here is an example of the experimental codec specification.

### Input and output signals

Considering the hardware simplicity, just the standard TV of CCIR Rec.601 is the input and the output. For the problem of different formats of 525/60 and 625/50, one of the following methods can be taken.

- Format conversion at the decoder.
- Decoders do not convert the format but display the video to such an extent that the transmission errors would be recognized.

### Video Coding

Video coding conforms to main profile and main level of MPEGII, considering the typical usage in the standard.

### Bit rate

15Mbit/s maximum. Both CBR and VBR should be supported.

### Prediction mode

Pure field and Dual prime for simplicity and effectiveness. Backward prediction may be optional.

### Audio coding

Audio coding conforms to MPEG layer 2.

### ATM network interface

The interface may be AAL type 5 for both CBR and VBR, or AAL type 1 for CBR and AAL type 2 for VBR. In case of delay in standardization of AAL type 2, some certain method with its functionality should be taken.

### Cell loss resilience

For AAL type 1, interleaving must be performed. Other methods for error resilience should also be tested.

END