

SOURCE: NTT, KDD
TITLE : STUDY ON ATM-CODEC

1. Introduction

We propose to initiate standardization activities in a specialists group level on video coding for Asynchronous Transfer Mode which is being studied and standardized as one of the most promising implementations of Broadband ISDN.

The purpose of this document is to point out the necessity of study, encouraging the consideration of concerned organizations.

2. Backgrounds

- 1) Broadband ISDN has been studied as a next generation network to efficiently transport large capacity multi-media signals, integrating audio, video, data, etc. Standardization is also in progress. It is envisaged that Broadband ISDN will become available in the near future.
- 2) Video coding technology is progressing, backed with software and hardware studies.
- 3) Standardization on the low bit rate (px64 kbit/s) coding is expected to finish in this Specialists Group in 1989.
- 4) Standardization can be efficient if it is started at the time when the service is in a preliminary and formative stage.

3. Study Categories

Studies on ATM-codec may be categorized as follows depending on the service and quality;

- 1) HDTV service - more than 100 Mbit/s on average
- 2) Broadcast quality service - several tens Mbit/s on average
- 3) Audiovisual service including picture data retrieval - several Mbit/s on average

4. Study Items

- 1) Highly efficient coding algorithm: Hierarchical DCT, Vector Quantization, sub-band coding, etc.
- 2) Model for the information generation source to facilitate network designing

- 3) Network characteristics which affect the video coding: cell loss, cell delay and its jitter, etc.
- 4) Compensation of the cell loss: hierarchical coding, re-transmission, use of interleaved error correction
- 5) Compatibility with existing systems: narrowband ISDN etc.

It is noted that some of these study items have already been listed up in the text of Question 3/XV. See § 3.2 of "Points for study" in COM XV-1-E.

5. Liaison with Other Groups

Liaison with CCIR, ISO, CCITT SGXVIII, etc. should be taken into account.

6. Work Plan

A possible work plan may be as follows;

- 1) Initiate the study: late 1989 or early 1990
- 2) Formulate the guidelines: 1992
- 3) Complete Recommendation: 1994 (middle of the next study period)

END