

Source: RAPPORTEUR (S. OKUBO)
Title: CORRESPONDENCE BETWEEN RAPPORTUERS FOR Q.10/8 AND Q.2/15
Purpose: Discussion

TD 49 (1/15) revised

ANNEX

Questions: 2/15, 10/8
TO: Correspondence to Study Group 8
SOURCE: ITU-T Study Group 15, WP1/15, Q.2/15
TITLE: Comments to SG8 regarding a possible audiographic conferencing profile for B-ISDN
FOR: Comment
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We appreciate your comments on the subject matter as in "Report of meeting 21-25 March 1994 in Vienna, Australia and T.123 errata". After the September 1993 meeting of SG15, the Experts Group for Video Coding and Systems in ATM and Other Network Environments met twice and produced the sixth progress report as attached to SG15 which met during 16-27 May, 1994

The updated protocol model is in Figure 3 of the sixth progress report together with additional information in its Annex 2. Generally, we have use of multiple VCs as well as use of single VC in our scope as indicated in the figure and §4 of Annex. It is noted that the choice of single VC or multiple VCs for audiovisual communication involves not only technical but also tariff considerations, though the latter is beyond competence of the technical experts.

We wish to further communicate toward the harmonized development of audiovisual communication Recommendations.

As to the particular items raised in your statement, we provide some comments based on the current understanding.

A) Use of multiple VCs

Multiple VCs provide the best service quality but not necessarily cost effective. There may be two directions; i) two VCs, one for H.22X, and one for the X.214 COTS service, ii) one VC. H.22X provides a transparent channel for the X.214 COTS service. We take into account both possibilities.

Another factor to be considered is required synchronization between different media. Audio and video should obviously be synchronized for their presentation. Some data should also be synchronized with audio and/or video; in that case H.22X is needed for data as well. Other data may have no time relevance to audio or video; in that case multiple VCs may be a choice.

B) Transparency of data channel

For purposes of the protocol the H.22X data channel could be made to look transparent, though it may not be that simple.

C) Cost of H.22X multiplex

The Program Stream in H.22X is not expensive to implement because it can be handled by software. The Transport Stream in H.22X needs hardware processing thus is thought to be more expensive than Program Stream at the moment, but it is expected that its cost will be rapidly reduced due to wide support of it from various applications and industries. H.22X could be supported by Class C AAL service, where the data carried is time insensitive.

D) AAL Type 5

Your view that AAL 5 is in any case necessary for signaling is agreed and has been recognized by the SG15 Experts Group.

E) H.24X vs Q.2931 to set up data channel

It is believed that Q.2931 takes no part in setting up application multiplex channels within a VC.

END

Attachment: The sixth progress report of the Experts Group, TD36 revised (1/15), May 1994

ITU – Telecommunication Standardization Sector

Q10/8 Audiographic Conferencing

Vienna, 21-25 March 1994

SOURCE: SG 8 Question 10 Rapporteur

TITLE: **Liaison Statement to Study Group 15 Questions 2 and 3**
concerning audiovisual communication terminal and system
recommendation of the Experts Group for ATM video coding

Response requested
by 21 June 1994

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Q10/8 shares responsibility for defining protocols used in audiovisual conferencing, specifically protocols that operate in a data channel for the exchange of telematic information and for high-level audio-video control.

In T.123 we have specified lower layer protocol stacks for several networks of interest whose purpose is to provide a X.214 transport level interface. This supports a new layer of Multipoint Communications Service (MCS) as specified in T.122 and T.125. We are working to complete an architecture of generic conference control and a suite of application protocols to take advantage of this infrastructure. We assume that SG15 recognizes the usefulness of the T.120 multilayer protocol and intends to support it in future specifications.

Q10/8 is also studying the extension of T.123 to include a protocol stack for B-ISDN. To fit with existing recommendations, this protocol stack must offer X.214 connection oriented transport services (COTS).

We have concerns about some points made in the fifth progress report of the Experts Group for ATM video coding, submitted to the September 1993 meeting of SG15. Section 4.1 of that report appears to show a configuration of an audiovisual terminal in which audio, video, and data are multiplexed together by the procedure of H.22X and presented for transport in a single VC (using one type of AAL). While this may be a natural extension of H.221, we believe it is not an optimal way to handle the data stream. We wish to offer these comments on Figure 3:

A) Conveying audio and video information through ATM requires class A or B services (AAL type 1 or type 2). However, for the support of bursty, non-realtime data, such as control signalling and telematic information, the intended service is class C (AAL type 3/4 or 5). Using a mismatched service could entail higher costs in equipment adaptation and network traffic (under-utilization of a constant bit rate).

B) The elements needed to derive an X.214/COTS interface from AAL type 5 are being specified by Q6/13, with the target date of July 1995 for a Service Specific Coordination Function. It is unclear what level of OSI functionality would be provided by an H.22X data channel as the alternative to a separate VC. We are concerned that we may need to enhance the data channel to achieve X.214. We would rather apply available solutions, like that of Q6/13, than invent new convergence protocols.

C) We believe there will be a continuing need for audiographic information exchange, excluding motion video, even as B-ISDN makes higher bit rates possible. We are concerned that the H.22X multiplex may be too expensive for terminals that intend to handle only audio and graphic image exchanges. The transport of such media by separate AAL types could be more cost effective.

D) AAL type 5 is needed in any case to support Q.2931 B-ISDN signalling protocols for VC connection establishment and termination.

E) We are concerned that "end-to-end signalling H.24X" may be made a prerequisite to set up a data channel under H.22X. Compared to the use of a familiar specification like Q.2931 to set up VCs, this could introduce complexity and confusion in data conferencing applications.

Appended below is a figure from the draft revision of T.123 to be voted under Resolution 1 by SG8 at the meeting of 21-30 June 1994. Figure III.1 is relegated to a non-binding appendix, because the protocols it cites are not all completed yet. However, it shows the direction of current thinking, and we hope to confirm quickly the choice of a B-ISDN profile.

We want to begin a dialogue that will lead to better coordination of our mutual work in this area. We solicit your response to the comments offered above and your opinion of the alternative protocol stack shown in Figure III.1/T.123. We envision that continuing collaboration will allow us to produce a better specification of the new recommendation T.AVC for high-level audio-video control.

A possible profile for Broadband ISDN

The definition of B-ISDN profiles for the audiographic conference service is a matter of current study. Figure III.1 shows a candidate protocol stack, in outline only.

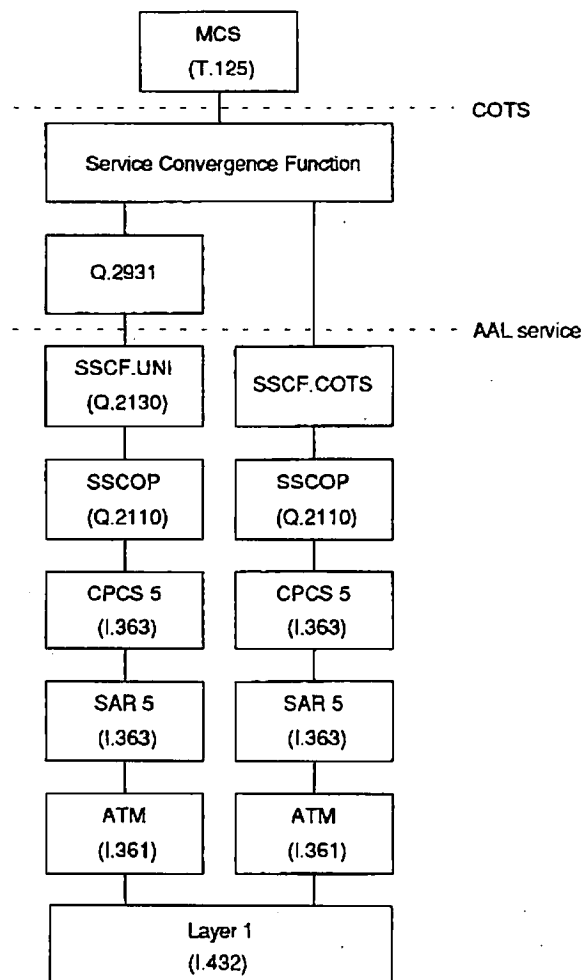


FIGURE III.1/T.123

A possible profile for Broadband ISDN