

Source: Australia

Title: Concern Regarding MPEG-2 Systems and ATM/AAL Functionality

Status: Proposal

Background

Australia notes that TSS SG15 has expressed a desire to use the MPEG2 "Systems" specification for audiovisual services on the B-ISDN as far as is practical to avoid interworking difficulties. This was expressed in the liaison from WPXV/1 to MPEG, November 1992. It is noted that the ATM Experts Group did not have the opportunity to discuss and influence this decision. This is regrettable, since many of the relevant technical issues had been discussed in this forum and it is the most appropriate source of expertise on B-ISDN audiovisual services.

The terms of reference of this Group include the study of "the relationships between video coding algorithm and network parameters" and to investigate "potential applications for ATM coding systems ... and network-related constraints on potential system performance" (extracts from the WPXV/1 report of July 1990). AAL functionality for audiovisual services support, which is highly relevant to MPEG-2 Systems, is also identified among the important "open issues" by the group for completion during 1993.

Relationship between MPEG-2 Systems and B-ISDN.

Australia is concerned that, since the MPEG-2 Systems specification is still evolving, an expression of intent to use that specification is premature. It is yet to be determined whether that specification will satisfy the requirements of TSS. In particular, potential overlapping of functionality between MPEG2 Systems and the ATM & AAL functions in B-ISDN could lead to unnecessary complexity, duplication of functions and inefficiency if the MPEG-2 Systems specification is to be used over that network. For example, B-ISDN transport of the MPEG-2 Systems "Transport Stream", as currently defined, appears to require two stages of segmentation; one to obtain transport stream packets and another to generate cells. Another important issue is timing recovery, a function that should be part of a generic AAL, and yet is also obviously included in MPEG-2 Systems.

Recommendation and Conclusion

The definition of AAL Type 2 is therefore a matter of urgency and one which the ATM Experts Group should undertake at the earliest possible time. The objectives should include recommendations to TSS SG13 of functionality for a generic AAL Type 2 (ie. not just for MPEG-2/H.26X) that allows the functionality available from the network to be exploited fully, while still working with MPEG-2 Systems in a simple, efficient manner.