CCITT SGXV
Working Party XV/1
Experts Group for ATM Video Coding

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TITLE : Requirements for SGXVIII
PURPOSE : Proposal

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1. Introduction

We sent some requests and questions to SGXVIII. In addition to these, we think that the following items are also important. Therefore, we propose to send them to SGXVIII as a liaison.

2. Requests

(1) Video clock transmission

In some applications, we should keep away from skipping or freezing video frames to realize high quality video transmission. The sender and the receiver should be synchronous each other for this purpose.

(a) If network clocks are always guaranteed to be identical in every network not only at T_B point but also at S_B point, we can use the network clock as a reference at the both sides.

(b) If network clocks are not guaranteed to be identical, some function for transmitting the clock is required in AAL. We already required the commonality of AAL for CBR and VBR video. Therefore, a clock transmission method should be selected from this point.

Note 1 : We understand that SGXVIII is now considering two methods, time stamp and SFET, for frequency transmission. In our understanding, time stamp is preferable because it is applicable to VBR.

Note 2 : It is for further study what kind of video clock is required ;
- video source sampling frequency (13.5MHz), or
- video frame frequency

(2) Definition of standard QOS for international connection

ATM can provide many kinds of QOS (Quality Of Service ; cell loss ratio, delay and delay duration, usage of CLP). Therefore, several types of networks can exist. We think a definition of standard QOS for international connection is required. Otherwise, user should be prepared for the worst case. For example ; if the usage of CLP (tagged cell / high cell loss ratio service/ VBR service) is not unique, we can not use the function of CLP. What is the standard for international connection?

3. Questions

(1) UPC method

SGXVIII already agreed that UPC mechanism is not a standardizing item. However, if our understanding is not wrong, the meaning of average is different to video coding between sliding window and leaky bucket. In leaky bucket, we can always send the information at average cell rate. On the other hand, we can not practically send the information at a declared average cell rate in sliding window due to its finite size. Therefore, UPC mechanism has an influence on video coding bit rate control. What situation should we expect?

Note : We know that the network resources required to transmit the same coded data may be equal regardless of UPC method. What we are concerned with is the mechanism of video coding bit rate control required at the terminal.

(2) Negotiation

If each medium is transmitted in one VC in multimedia communications such as video conference, the receiver should know the relation between VCI and medium at call setup phase. In other words, a sender should transmit some information specifying the medium at the call setup phase. What kind of function does SGXVIII provide for this purpose? The function must be mandatory if multimedia communication uses multiple VCIs.

4. Conclusion

Several requests and questions related to B-ISDN are listed. We propose to send it to SGXVIII as a liaison for our better understanding.