

Q.22/XVIII

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SOURCE : SWP ~~XVIII/8-3~~ WPXVIII/8 (general meeting, 19-28 January 1993)
TITLE : ~~Proposed~~ Liaison to IVS Groups (SG XV-ATM Video Experts Group,
CMTT/2 and 3, CCITT SG 11B and TG 11/4, ISO/IEC SC29/MPEG and
MHEG)
SUBJECT : IVS Baseline Document (for information)
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The IVS Baseline Document, Jan. 1993 updated version, is attached which incorporates the latest results of SG XVIII studies of relevance to IVS and comments made by IVS groups.

ANNEX : IVS Baseline Document [to be attached]

(2)

-3-

g. 2, 13/XVII)

~~APPENDIX~~

SOURCE : ~~SWP XVIII/8-3~~ WP XVIII/8 (Geneva meeting, 19-28 January 1993)
TITLE : ~~Proposed~~ Liaison to SG XV (ATM Video Coding Experts Group)
(for information and action)
SUBJECT : Support of H.320 in B-ISDN
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Considering information exchanged between SG XV ATM Video Coding Experts Group and SWP XVIII/8-3, SWP XVIII/8-3 at its Geneva Jan. 1993 meeting is beginning to initiate a study of forward error correction method in AAL type1 in order to support H.320 video codecs in B-ISDN environment. Such method will be capable of correcting cell losses occurring in the ATM network, but may require additional delay for processing.

Before starting a study on a specific method, requirements from H.320 are necessary. SG XV ATM Video Coding Experts Group's input on maximum tolerable delay allowed to the AAL is important since this delay requirement may make error correction processing delays (to account for lost cells) unacceptable for low speed services. For low speed services, the mean time between lost cells may be such that error correction may not be necessary. For example, for 64 kbit/s circuit transport, the mean time between cell losses is approximately one day and 100 days for CLR=10⁻⁷ and CLR=10⁻⁹, respectively.

9.2, 13/XVIII

-8-

CCITT Study Group XVIII
Geneva, 19-29 January 1993

SOURCE: WP XVIII/8 (General meeting,
19-29 January 1993)

Temporary Document (XVIII/8)

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Source: Rapporteur on I.371

5

Object: Liaisons to other Study Groups

Study Group XV (TD 5)

Subject: VBR video coding advantages vs UPC time constant
Purpose: answer to SG XV (for action)
Contact: —

I.371 provides for an algorithmic way to check compliance with the Peak Emission Interval traffic parameter. That is slightly different from defining a parameter in an algorithmic way. However, the difference is small and some contributions propose to actually define possible additional traffic parameters in terms of an algorithm that could be used for ensuring compliance at the user side and for checking compliance by UPC/NPC at the network side.

There are currently no traffic parameters for average cell rates agreed. Therefore, no time scales are considered yet. Procedures and parameters for performing statistical multiplexing will be on the workplan of SG XVIII for the next Study Period.

Inputs from SG XV are welcome and will be considered in our discussions. However, SG XV should also consider that there is a set of issues to be addressed when assessing Variable Bit Rate multiplexing schemes, e.g. the expected effect on network efficiency while still meeting Network Performance objectives in terms of Cell Loss Ratio, delay and delay variation. Evaluation of the expectable statistical gain in case of video coding and possible effect on other connections Quality of Service should therefore be assessed as well.

The current SG XVIII understanding is that, within the generic set of parameters which may be provided in the future by SG XVIII in order to be used by Variable Bit Rate Services in addition to Peak Cell Rate, video experts will define parameter values that fit with their requirements. It is noted that the final impact on resource allocation might still depend on the multiplexing efficiency when using such values.

In this respect, it is felt for the moment that long term actions in the range of seconds or more could have a negative impact on Network Performance and be not compatible with delay requirements from the network viewpoint.

SG XV concerns are reflected in the following item currently under study within Study Group XVIII.

Add to this Liaison Title and Content of the Item 4 of the I.371 Living List.

6

Ad hoc CCIR/CCITT Experts Group on ISDN Satellite Matters (TD 11)

Subject: Congestion Control problems due to Satellite Propagation Delays
Purpose: for information
Contact: —

Study Group XVIII thanks the Expert Group for its input on the efficiency of Congestion Notification in case of use of satellite links.

This input highlights the fact that there is a need to agree on reference connections in B-ISDN in order to be able to evaluate the efficiency of control protocols before agreeing any of them.

There is neither agreement yet on the necessity of Backward Congestion Notification, nor on the way to do that, within SG XVIII. This is partly because the relative efficiency was doubted, as it may raise implementation problems in the ATM layer entities.

However, SG XVIII will take care of the impact of satellite links when this issue will be addressed.

4 - Interworking Issues when using CLP bit and Resource Allocation options	Under study
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Current text of the recommendation

I.371 sections 1.5, 2.3.2, 2.4.1.1, 3.2.2.3, 3.2.3.7, 3.2.4 and 3.3.1.2.

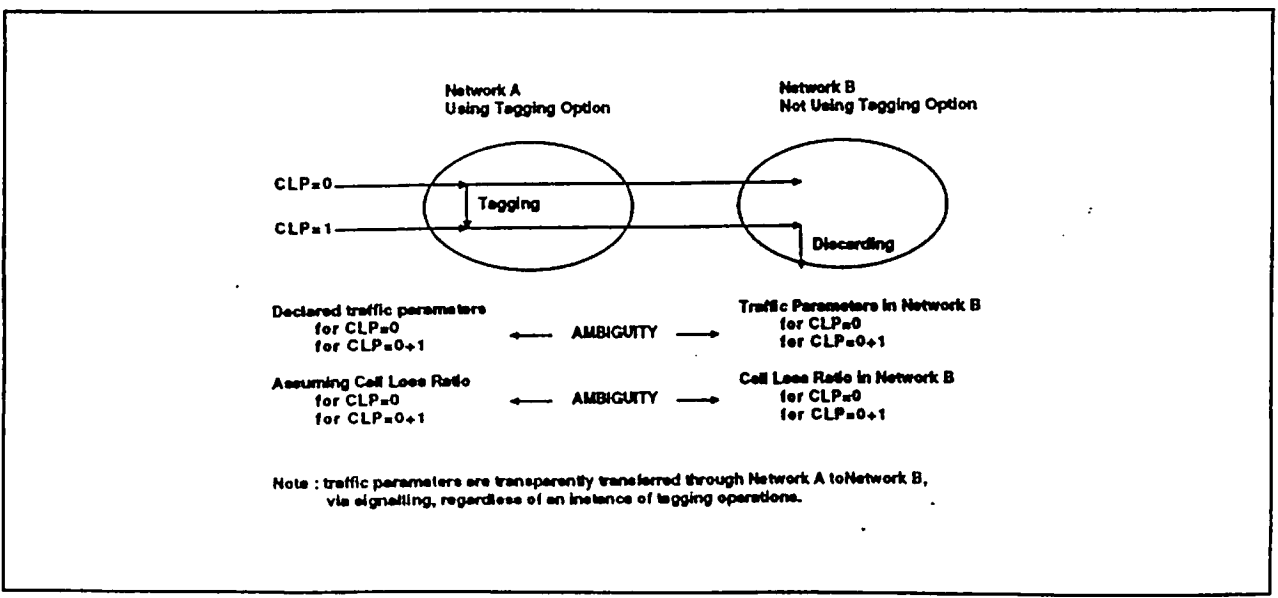
Description of the problem

When different options are used by network operators as for resource allocation for CLP=0 and CLP=1 flows, UPC and NPC algorithms and violation tagging, the effect on the Network Performance provided to an ATM connection crossing different networks is not clear.

As an example, the result of violation tagging is to merge part of the CLP=0 non-complying traffic into CLP=1 traffic. Depending on how resources are allocated in the subsequent networks, e.g. separately to CLP=0 and CLP=1 flows, this might result in undue impairments in the downstream network. Also, the possibility for the user to declare a CLP=0 and an aggregate CLP=0+1 traffic descriptor may cause problems.

The other ambiguity is such that from user's point of view, there is an instance of discarding low priority cells due to excess of high priority cells. In addition, there is no knowledge for the user about whether tagging is operated or not on an end-to-end basis. Issues tabled here may not be a mechanism of CLP or tagging, but a clear definition of Network Performance. This is because CLP operation seems to imply clear distinction of two levels of cell loss ratios, each corresponding to CLP=0 and CLP=0+1.

The situation above may not be desirable because of ambiguity and uncertainty of Network Performance implications for users.



Although it is noted that tagging actions, if applied, only occur in case of contract violation, the ambiguity on the exact meaning of the CLP bit, Network Performance attached to this bit and how it is handled by the subsequent subnetworks is a concern for experts from the application side.

It may therefore be needed to pass the information that the tagging option is used through subnetworks on an end-to-end basis via signalling.