ITU Telecommunication Standardization Sector
Study Group 15
Experts Group for Video Coding and Systems
in ATM and Other Network Environments

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ITU- Telecommunications Standardization Sector **T D**
SG 11 - Working Party 2 Interim meeting on B-ISDN Signalling
Helsinki, July 24--28, 1995

Question: 15/11 (DSS 2)
22/11 (for information)

SOURCE: B. Petri, Siemens PN
TITLE: Proposed Liaison Response to ITU-T SG 15 (Q.2/15)

Contact: Bernhard Petri, Siemens PN
Tel: +49.89.722-34578 , Fax: -32495
Internet: Bernhard.Petri@zfe.siemens.de

Abstract:

Based on the results of the meeting at Thursday, 4 p.m., this document contains a proposal for a liaison response to ITU-T Q.2/15. The liaison response addresses the questions and proposals of SG 15 raised in their liaison to the Helsinki meeting (TD 68), and in their liaison to the Melbourne meeting (UM 83).

With regard to the terminal protocol identification, the proposals of SG 15 are accepted as proposed, but with the following modifications:

- codepoints are allocated as requested, but within the B-HLI (instead of the B-LLI)
- the requested session/correlation ID is not included, instead a reference to the new <name=tbd> information element on session id / resource number is made
- the table of allowed combinations of terminal protocols and multiplexing capabilities is not included in the B-HLI. Instead, a simple reference is made to the SG 15 terminal protocol specifications itself.

As an attachment to the liaison, the modified B-HLI information element is included. This new structure should be included within the living document for Q.2931.

LIAISON STATEMENT

TO: **ITU-T Q.2/15**

SOURCE: **ITU-T Q.15/11 (DSS2) (Helsinki, July 24-28, 1995)**

TITLE: **Proposed Liaison Response to ITU-T SG 15 (Q.2/15)**

Contact: Bernhard Petri, Siemens PN
Tel: +49.89.722-34578 , Fax: -32495
Internet: Bernhard.Petri@zfe.siemens.de

Q.15/11 of ITU-T SG 11 has discussed your liaison statement with the title "suggestion for handling the SG 15 liaison regarding the terminal information exchange during the call set-up" at its meeting in Helsinki, July 24-28,1995, in conjunction with the original earlier liaison. We regret that, due to lack of time, we could not respond to your previous liaison statement at an earlier point of time.

With regard to the various items of your liaison, we would like to respond as follows (numbering corresponds to the numbering of your questions/requests):

1.1 Delay for QOS Renegotiation

The current signalling protocols of Q.15/11 only allow for the indication of a single QOS class ("unspecified QOS class") which does not provide any specific quality of service. Liaisons to SG 13 are pending requesting the specification of further QOS classes or QOS parameters. Such parameters would be included in the new draft Rec. Q.2961.2.

With regard to the ATM traffic descriptor information element, current drafting activities include the specification of negotiation procedures during call establishment (Draft Rec. Q.2962), and of modification during the active phase of a call (Q.2963). Further, a draft Rec. Q.2964 (network-initiated look-ahead), and user-user prenegotiation capabilities will be specified. Look-ahead will allow the network to check compatibility and busy-state of the called user prior to call establishment; user-user prenegotiation will allow the users to prenegotiate all communication parameters before connection establishment.

Specific considerations related to the delay for negotiation functions have not been made yet by Q.15/11, and a call-establishment time (including negotiation) below 10 sec. cannot be guaranteed. However, the current drafts only allow the exchange of 2 end-to-end signalling messages for negotiation capabilites (for modification: possibly 3). A "re-negotiation" (=second negotiation of the result of the first negotiation) is not allowed, and the delay therefore restricted.

1.2.a) Common routing of connections to minimize differential delay

Capabilities for common routing of connections are under study in conjunction with Draft Rec. Q.298x on multiconnection calls. According to the current approach, the network will provide a "best effort approach" for the common routing capability, i.e. to try to route the connections along the same route as far as possible; however, no mechanisms are currently provided for the user to enforce common routing. Such enforcing mechanisms are under study.

Q.15/11 would appreciate the view of Q.2/15 on whether such mechanisms for common routing are needed, or whether a guarantee of the network to keep the differential delay below a certain threshold value would be regarded as being sufficient.

1.2.b) Fast establishment of subsequent connections

In your liaison to indicate a need to establish additional connections in significantly less time than the call.

With regard to this need, two scenarios have to be distinguished:

a) establishment of a single additional connection: in this case, the mechanisms to establish the additional connections are similar to those for the establishment of the call; therefore, no significant decrease of the establishment delay can be expected

b) estalblishment of more than one additional connection: mechanisms will be provided to establish multiple additional connections simultaneously, so that the establishment delay for multiple additional connections will not be significantly higher than the delay for one additional connection.

1.2 (add) Availability / Timeframe for Negotiation Specifications

Final approval for these specifications is scheduled for the ITU-T SG 11 meeting in Jan. 1996.

2. Terminal Protocol Identification

With regard to the requested terminal protocol identification within ITU-T Rec. Q.2931, we have tentatively agreed to provide additional codepoints within the Broadband high layer information (B-HLI) of Q.2931 for this request as specified in the Attachment to this liaison. The allocation of these codepoints exactly follows your proposals with one exception: for the requested session / correlation ID, a more generic solution has

been specified using a new information element of Q.2931. This solution is illustrated in a companion liaison statement.

The extension of the B-HLI includes a generic escape mechanism for the indication of ITU-T SG 15 Recommendations, which may also be used for the indication of future specifications you complete. The restrictions for the allowable combinations of terminal protocols and multiplexing capabilities are not documented within the B-HLI, since it is assumed that those are specified within the SG 15 terminal protocols itself.

The extensions of the B-HLI for SG 15 terminal protocol indications (and the new information element related to session / correlation Id.s) will be documented within the living document for Q.2931 extensions on a provisional basis, i.e. they may still be changed based on your comments. We would appreciate your view whether this solution complies with your requirements.

We also like to thank you for your offer to "ask back". At the moment, we would like to ask two questions for information:

- What is the timeframe and availability for draft Recommendations H.310 and H.321 ? (The reason for this question is that typically codepoints in signalling protocols can only be finally allocated if the referred Recommendations have been frozen or approved.)
- What is the relation of the SG 15 Recommendations on Terminal Protocols to the Service Specifications of ITU-T SG 1, e.g. F.722 / F.732 on B-ISDN Videotelephony and B-ISDN Videoconference? (The reason for this question is that in the past, an explicit reference to the H.series Recommendations was often not needed since those were implicitly identified by an indication of a SG 1 Recommendation.)

We hope that the offered solutions are useful for you and wish you fruitful meetings in October and November 95.

Attachment: Suggested extensions of the Broadband high layer information of Q.2931 for the identification of ITU-T SG 15 terminal protocols

4.5.8 Broadband high layer information (B-HLI)

The purpose of the Broadband high layer information IE is to provide a means which should be used for compatibility checking by an addressed entity (e.g., a remote user, an interworking unit or a high layer function network node addressed by the calling user). The Broadband high layer information IE is transferred transparently by a B-ISDN between the call originating entity (e.g., the calling user) and the addressed entity.

The Broadband high layer information IE is coded as shown in Figure 4-15/Q.2931 and in Table 4-9/Q.2931. The maximum length of this information element is 13 octets.

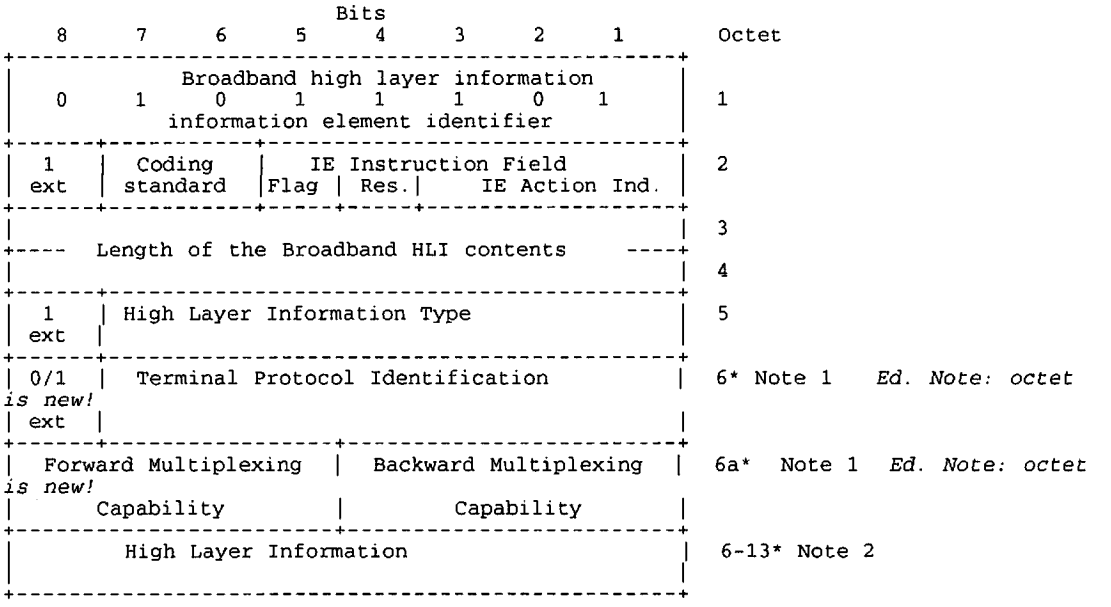

Figure 4-15/Q.2931
Broadband high layer information

Note 1: This octet may be present only if octet 5 indicates the SG 15 terminal protocol high layer information type

Note 2: Used as defined by the specific high layer information types.

Table 4-9/Q.2931 (Sheet 1 of 2):
Broadband high layer information

- High Layer Information Type (octet 5)

Bits 7 6 5 4 3 2 1	
0 0 0 0 0 0 0	ISO/IEC (Note 1)
0 0 0 0 0 0 1	User specific (Note 2)
0 0 0 0 0 1 1	Vendor-Specific Application Identifier (Note 3)
0 0 0 0 1 0 0	Reference to ITU-T SG 1 B-ISDN teleservice recommendation (Note 4)
0 0 0 0 1 0 1	Reference to ITU-T SG 15 terminal protocol Recommendation (Note 5)

Other values reserved

Note 1: This codepoint is reserved for use as specified in ISO/IEC standards.

Note 2: The exact coding of octets 6-13, when this higher layer information type is used, is user-defined. The use of this codepoint requires bilateral agreement between the two end users.

Note 3: When this high layer information type is used, octets 6-12 are coded as follows:
octets 6-8 contain a globally-administered Organizationally Unique Identifier (OUI) (as specified in
IEEE 802-1990; section 5.1); octet 0 of the OUI is mapped to octet 6 of the B-HLI, and so on; the LSB of
the OUI is mapped to Bit 8 of the B-HLI, the MSB of the OUI is mapped to Bit 1 of the B-HLI; Bit 7 of
octet 6 is always set to "0";
octets 9-12 contain an application identifier which is administered by the vendor identified by the OUI.
Octet 13 is not used for this high layer information type.

Note 4: Codepoints for these recommendations will be indicated in octet 6. The specific codepoints will be
added at the time when SG 1 has completed the corresponding recommendations.

Note 5: Codepoints for these recommendations are indicated in octet 6; other codepoints are added
at the time when SG 15 has completed the corresponding recommendations.

- High Layer Information (octets 6-13 for high layer information types 0, 1, 3, 4)
The contents of these octets depends on the High Layer Information Type

- Terminal Protocol Identification (octet 6 for SG 15 terminal protocol identification)

Bits 7 6 5 4 3 2 1	
0 0 0 0 0 0 1	H.310 Receive Only Terminal (ROT) & Send Only Terminal (SOT) (Note)
0 0 0 0 0 1 0	H.310 Receive And Send Terminal (RAST)
0 0 0 0 0 1 1	H.321 (H.320 emulation for ATM)
0 0 0 0 1 0 0	H.320 (N-ISDN videophone)

all other values are reserved

Note: In case of this indication, an additional resource number may be indicated in the <tbd> information element.

Table 4-9/Q.2931 (Sheet 2 of 2):
Broadband high layer information

- Forward (bits 8-5) / Backward (bits 4-1) Multiplexing Capability (octet 6a for SG 15 terminal protocol identification) (Note)

Bits 8 7 6 5		Bits 4 3 2 1	
0 0 0 0	No multiplex	0 0 0 0	No multiplex
0 0 0 1	Transport stream (TS)	0 0 0 1	Transport stream (TS)
0 0 1 0	TS with FEC	0 0 1 0	TS with FEC
0 0 1 1	Program stream (PS)	0 0 1 1	Program stream (PS)
0 1 0 0	PS with FEC	0 1 0 0	PS with FEC
0 1 0 1	ITU-T Rec. H.221	0 1 0 1	ITU-T Rec. H.221

all other values are reserved

Note: For the combination of these codepoints with the terminal protocol identifications of octet 6,
restrictions apply. These restrictions are specified within the terminal protocol specifications.