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Broadband Integrated Services Digital Network (B-ISDN);
Digital Subscriber Signalling System No. two (DSS2) protocol;
B-ISDN user-network interface layer 3
specification for basic call/bearer control;
Part 1: Protocol specification

[ITU-T Recommendation Q.2931 (1995), modified]

ETSI

European Telecommunications Standards Institute

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Foreword

This final draft European Telecommunication Standard (ETS) has been produced by the Signalling, Protocols and Switching (SPS) Technical Committee of the European Telecommunications Standards Institute (ETSI), and is now submitted for the Voting phase of the ETSI standards approval procedure.

This ETS is part 1 of a multi-part standard covering the specification of the Broadband Integrated Services Digital Network (B-ISDN) user-network interface layer 3 protocol for basic call/bearer control of Digital Subscriber Signalling System No. two (DSS2) as described below:

Part 1: **"Protocol specification [ITU-T Recommendation Q.2931 (1995), modified]";**

Part 2: "Protocol Implementation Conformance Statement (PICS) proforma specification".

> NOTE: Further parts covering conformance testing will be identified later.

Proposed transposition dates	
Date of latest announcement of this ETS (doa):	3 months after ETSI publication
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	6 months after doa
Date of withdrawal of any conflicting National Standard (dow):	6 months after doa

Endorsement notice

The text of ITU-T Recommendation Q.2931 (1995) was approved by ETSI as an ETS with agreed modifications as given below.

> NOTE: New or modified text is indicated using sidebars. In addition, underlining and/or strike-out are used to highlight detailed modifications where necessary.

Whilst every care has been taken in the preparation and publication of this document, errors in content, typographical or otherwise, may occur. If you have comments concerning its accuracy, please write to "ETSI Editing and Committee Support Dept." at the address shown on the title page.

Page 1, clause 1

Replace clause 1 (excluding subclauses 1.1 to 1.3) by:

1   Scope

This European Telecommunication Standard (ETS) specifies the stage three of on-demand connection-oriented release 1 basic telecommunication services for the pan-European Broadband Integrated Services Digital Network (B-ISDN) as provided at the T_B reference point or coincident S_B and T_B reference point (as defined in ITU-T Recommendation I.413 [19]) by means of Digital Subscriber Signalling System No. two (DSS2). Stage three identifies the protocol procedures and switching functions needed to support a telecommunications service (see CCITT Recommendation I.130 [59]).

In addition, this ETS specifies the protocol requirements at the T_B reference point where the service is provided to the user via a private B-ISDN.

>   NOTE 1:   Procedures at the T_B reference point, to support the access of a private B-ISDN to the public B-ISDN, are **not** explicitly identified in this ETS, however, some procedures are applicable only at the T_B reference point.

This ETS also specifies the particular features required to provide 64 kbit/s based circuit-mode ISDN services in B-ISDN and to support access interworking between B-ISDN and N-ISDN.

A basic telecommunications service is a fundamental type of service. It forms the basis on which supplementary services may be added.

>   NOTE 2:   Specific requirements of individual B-ISDN connection-oriented basic telecommunication services are not covered by this ETS.

Further ETSs (or further parts of this ETS) provide the method of testing and detailed application specific requirements to determine conformance to this ETS.

This ETS is applicable to equipment supporting connection-oriented basic B-ISDN telecommunication services, to be attached at either side of a T_B reference point or coincident S_B and T_B reference points when used as an access to the public B-ISDN.

Page 1, subclause 1.1

Replace the text of subclause 1.1 by:

1.1.1   Definitions and abbreviations

Definitions and abbreviations are provided in clauses J.1 and J.2, respectively.

1.1.2   Normative references

This ETS incorporates by dated and undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed in clause J.3 and continued hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this ETS only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

[59]   ITU-T Recommendation I.130 (1988): "Method for the characterization of telecommunication services supported by an ISDN and network capabilities of an ISDN".

[60]   ETS 300 402-2: "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Data link layer; Part 2: General protocol specification [ITU-T Recommendation Q.921 (1993), modified]".

NOTE 1: ETS 300 402-2 is the successor to ETS 300 125 (1991) which is based on CCITT Recommendations Q.920 and Q.921 (1988).

[61] ETS 300 403-1: "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Signalling network layer for circuit-mode basic call control; Part 1: Protocol specification [ITU-T Recommendation Q.931 (1993), modified]".

NOTE 2: ETS 300 403-1 is the successor to ETS 300 102-1 (1990) which is based on CCITT Recommendation Q.931 (1988).

[62] ETS 300 436-1: "Broadband Integrated Services Digital Network (B-ISDN); Signalling ATM Adaptation Layer (SAAL); Service Specific Connection Oriented Protocol (SSCOP); Part 1: Protocol specification [ITU-T Recommendation Q.2110 (1995), modified]".

[63] ETS 300 437-1: "Broadband Integrated Services Digital Network (B-ISDN); Signalling ATM Adaptation Layer (SAAL); Service Specific Co-ordination Function (SSCF) for support of signalling at the User-Network Interface (UNI); Part 1: Specification of SSCF at UNI [ITU-T Recommendation Q.2130 (1995), modified]".

[64] ETS 300 486-1: "Broadband Integrated Services Digital Network (B-ISDN); Meta-signalling protocol; Part 1: Protocol specification [ITU-T Recommendation Q.2120 (1995), modified]".

Throughout the text of ITU-T Recommendation Q.2931

Replace references as shown in the following table.

Reference in ITU-T Recommendation Q.2931	Modified reference
ITU-T Recommendation Q.921	ITU-T Recommendation Q.921 as modified by ETS 300 402-2 [60]
ITU-T Recommendation Q.931	ITU-T Recommendation Q.931 as modified by ETS 300 403-1 [61]
ITU-T Recommendation Q.2110	ITU-T Recommendation Q.2110 as modified by ETS 300 436-1 [62]
ITU-T Recommendation Q.2120	ITU-T Recommendation Q.2120 as modified by ETS 300 486-1 [64]
ITU-T Recommendation Q.2130	ITU-T Recommendation Q.2130 as modified by ETS 300 437-1 [63]

Page 13, table 3-8/Q.2931, note 5

Add the following text to note 5:

The maximum length of this information element is 25 octets.

Page 14, table 3-8/Q.2931, note 7

Add the following text to note 7:

Not included in the network-to-user direction for basic call control, but may be included for some supplementary services. The maximum length of this information element is 26 octets.

Page 14, table 3-8/Q.2931, note 8

Add the following text to note 8:

Not included in the network-to-user direction for basic call control, but may be included for some supplementary services.

Page 14, table 3-8/Q.2931, note 13

Replace note 13 by:

13: It is mandatory for the user to include the Broadband sending complete information element when *en bloc* sending procedures are used. On its receipt, the network shall apply the *en bloc* sending procedure.

It is mandatory for the network to include the Broadband sending complete information element. If the Broadband sending complete information element is not included, the called user shall not apply the missing mandatory element error handling procedures.

Page 23, table 3-19/Q.2931, note 2

Add the following text to note 2:

The maximum length of this information element is 25 octets.

Page 23, table 3-19/Q.2931, note 4

Add the following text to note 4:

Not included in the network-to-user direction for basic call control, but may be included for some supplementary services. The maximum length of this information element is 26 octets.

Page 23, table 3-19/Q.2931, note 5

Add the following text to note 5:

Not included in the network-to-user direction for basic call control, but may be included for some supplementary services.

Page 49, subclause 4.5.6, second paragraph

Insert the following note after the second paragraph:

NOTE: When the user requires the use of end-to-end OAM F5 flows, it is recommended that this is declared explicitly within the OAM traffic descriptor information element (see subclause 4.5.4) in order to enable the network to identify the actual user plane information rates. Currently this is needed when the user expects the separate policing and shaping functions (when applied as a network option) of the user plane information flow and of the end-to-end user originated OAM F5 flow to be performed by the network. Other cases may be identified in the future.

Page 54, subclause 4.5.9, third paragraph

Insert after the third paragraph:

Octet groups 5 (layer 1 id), 6 (layer 2 id) and 7 (layer 3 id) of the Broadband low layer information element are not position independent, but if present at all, shall be sent in the order as specified in figure 4-16/Q.2931.

Page 60, subclause 4.5.11, third paragraph

Replace the third paragraph by:

The maximum length of this information element is 25 octets.

Page 61, figure 4-18/Q.2931, note 2

Delete note 2 related to "NSAP address octets". This field is not supported.

Page 62, table 4-12/Q.2931, note 2

Replace note 2 by:

> NOTE 2:   The type of number "unknown" is used when the user or the network have no knowledge of the type of number (e.g. international number, national number, etc.). In this case, the number digits field is organized according to the network dialling plan; e.g. prefix or escape digits might be present.

Page 62, table 4-12/Q.2931, "Addressing/numbering plan (octet 5)"

Change codepoint "0 0 1 0" to "reserved" and delete the related note 9.

Page 64, subclause 4.5.13, second paragraph

Replace the second sentence by:

The maximum length of this information element is 26 octets.

Page 65, figure 4-20/Q.2931

Delete note 2 related to "NSAP address octets". This field is not supported.

Page 66, table 4-14/Q.2931, note 2

Replace note 2 by:

> NOTE 2:   The type of number "unknown" is used when the user or the network have no knowledge of the type of number (e.g. international number, national number, etc.). In this case, the number digits field is organized according to the network dialling plan; e.g. prefix or escape digits might be present.

Page 66, table 4-14/Q.2931, "Addressing/numbering plan (octet 5)" and note 9

Change codepoint "0 0 1 0" to "reserved" and delete the related note 9.

Page 77, subclause 4.5.24, first paragraph

Insert the following note after the first paragraph:

> NOTE: Future enhancements to this ETS may lead to extensions to this information element (or the definition of other means) to allow explicit declaration of end-to-end user originated OAM F5 flow to accommodate other user management requirements.

Page 81, clause 5, note

Delete the note. Annex H does not form part of this ETS.

Page 86, subclause 5.2.1, second paragraph

Replace the second sentence by:

In this case, the SETUP message shall contain the Broadband sending complete information element.

Page 86, subclause 5.2.1, fourth paragraph

Replace the fourth paragraph by:

If the SETUP includes the Broadband sending complete information element, the *en bloc* receiving procedure shall be followed. Therefore, on its receipt, the user shall apply the *en bloc* receiving procedure.

Page 110, table 7-3/Q.2931, T301

The implementation of user side timer T301 shall be optional.

Page 118, annex A

Annex A has the status of a normative annex.

The user side SDL extensions for symmetric call operation are not supported.

The network side SDL extensions for symmetric call operation are not supported.

Page 207, annex B

Annex B has the status of a normative annex.

Page 208, annex C

Annex C has the status of a normative annex.

Page 210, annex D

Annex D has the status of a normative annex.

Page 211, annex E

Annex E has the status of a normative annex.

Page 218, annex F

Annex F has the status of a normative annex.

Page 220, annex G

Delete Annex G. It does not form part of this ETS.

Page 221, annex H

Delete Annex H. It does not form part of this ETS.

Page 221, annex I

Annex I has the status of a normative annex.

Page 222, annex J

Annex J has the status of a normative annex.

Page 222, clause J.1

Add the following note:

> NOTE: ITU-T Recommendation Q.2931 frequently uses the term "connection". ETSI has decided to use the term "bearer" instead (i.e. if this term is used in the context of a bearer for a connection-oriented bearer service).

Page 229, annex K

Annex K has the status of a normative annex.

Page 231, annex L

Annex L has the status of an informative annex.

Page 234, appendix I

Appendix I has the status of an informative annex.

Page 236, appendix II

Appendix II has the status of an informative annex.

Page 238, appendix III

Delete appendix III. It does not form part of this ETS.

History

Document history			
August 1994	Public Enquiry	PE 68:	1994-08-08 to 1994-12-02
February 1996	Vote	V 97:	1996-02-05 to 1996-03-29