



**E**UROPEAN  
**T**ELECOMMUNICATION  
**S**TANDARD

**ETS 300 771-1**

September 1997

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Source: SPS

Reference: DE/SPS-05085-1

ICS: 33.020

**Key words:** B-ISDN, DSS2, UNI, layer 3, basic

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

**[ITU-T Recommendation Q.2971 (1995), modified]**

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## Foreword

This European Telecommunication Standard (ETS) has been produced by the Signalling Protocols and Switching (SPS) Technical Committee of the European Telecommunications Standards Institute (ETSI).

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 point-to-multipoint call/bearer control of Digital Subscriber Signalling System No. two (DSS2) as described below:

- Part 1:** "Protocol specification [ITU-T Recommendation Q.2971 (1995), modified]";
- Part 2: "Protocol Implementation Conformance Statement (PICS) proforma specification";
- Part 3: "Test Suite Structure and Test Purposes (TSS&TP) specification for the user";
- Part 4: "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification for the user";
- Part 5: "TSS&TP specification for the network";
- Part 6: "ATS and partial PIXIT proforma specification for the network".

NOTE: The final structure of the parts containing the test specifications is currently under study.

| <b>Transposition dates</b>  |                  |
|---|------------------|
| Date of adoption:   | 5 September 1997 |
| Date of latest announcement of this ETS (doa):  | 31 December 1997 |
| Date of latest publication of new National Standard or endorsement of this ETS (dop/e): | 30 June 1998     |
| Date of withdrawal of any conflicting National Standard (dow):                          | 30 June 1998     |

## Endorsement notice

The text of ITU-T Recommendation Q.2971 (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.

Page 1, clause 1

Replace clause 1 by:

## 1 Scope

This European Telecommunication Standard (ETS) specifies the stage three of on-demand connection-oriented point-to-multipoint unidirectional single bearer connection 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 [2]) by means of the Digital Subscriber Signalling System No. two (DSS2) protocol. Stage three identifies the protocol procedures and switching functions needed to support a telecommunication service (see CCITT Recommendation I.130 [1]).

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: 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.

A basic telecommunication service is a service to which supplementary services may be added.

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 point-to-multipoint single connection 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.

The provision of this service to the leaves requires the support of the protocol for basic point-to-point call/bearer connection as defined in ETS 300 443-1 [4].

Page 1, clause 2

Replace clause 2 by:

## 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 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.

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

[2] ITU-T Recommendation I.413 (1993): "B-ISDN user-network interfaces".

[3] 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]".

- [4] ETS 300 443-1: "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]".
- [5] ETS 300 661-1: "Broadband Integrated Services Digital Network (B-ISDN); Digital Subscriber Signalling System No. two (DSS2) protocol; Direct Dialling In (DDI) supplementary service; Part 1: Protocol specification [ITU-T Recommendation Q.2951, clause 1 (1995), modified]".
- [6] ETS 300 662-1: "Broadband Integrated Services Digital Network (B-ISDN); Digital Subscriber Signalling System No. two (DSS2) protocol; Multiple Subscriber Number (MSN) supplementary service; Part 1: Protocol specification [ITU-T Recommendation Q.2951, clause 2 (1995), modified]".
- [7] ETS 300 663-1: "Broadband Integrated Services Digital Network (B-ISDN); Digital Subscriber Signalling System No. two (DSS2) protocol; Calling Line Identification Presentation (CLIP) supplementary service; Part 1: Protocol specification [ITU-T Recommendation Q.2951, clause 3 (1995), modified]".
- [8] ETS 300 664-1: "Broadband Integrated Services Digital Network (B-ISDN); Digital Subscriber Signalling System No. two (DSS2) protocol; Calling Line Identification Restriction (CLIR) supplementary service; Part 1: Protocol specification [ITU-T Recommendation Q.2951, clause 4 (1995), modified]".
- [9] ETS 300 665-1: "Broadband Integrated Services Digital Network (B-ISDN); Digital Subscriber Signalling System No. two (DSS2) protocol; Connected Line Identification Presentation (COLP) supplementary service; Part 1: Protocol specification [ITU-T Recommendation Q.2951, clause 5 (1995), modified]".
- [10] ETS 300 666-1: "Broadband Integrated Services Digital Network (B-ISDN); Digital Subscriber Signalling System No. two (DSS2) protocol; Connected Line Identification Restriction (COLR) supplementary service; Part 1: Protocol specification [ITU-T Recommendation Q.2951, clause 6 (1995), modified]".
- [11] ETS 300 667-1: "Broadband Integrated Services Digital Network (B-ISDN); Digital Subscriber Signalling System No. two (DSS2) protocol; Subaddressing (SUB) supplementary service; Part 1: Protocol specification [ITU-T Recommendation Q.2951, clause 8 (1995), modified]".
- [12] ETS 300 668-1: "Broadband Integrated Services Digital Network (B-ISDN); Digital Subscriber Signalling System No. two (DSS2) protocol; User-to-User Signalling (UUS) supplementary service; Part 1: Protocol specification [ITU-T Recommendation Q.2957, clause 1 (1995), modified]".
- [13] ETS 300 685-1: "Broadband Integrated Services Digital Network (B-ISDN); Usage of cause and location in Digital Subscriber Signalling System No. two (DSS2) and Signalling System No.7 B-ISDN User Part (B-ISUP) [ITU-T Recommendation Q.2610 (1995), modified]".
- [14] ETS 300 770-1: "Broadband Integrated Services Digital Network (B-ISDN); Digital Subscriber Signalling System No. two (DSS2) protocol; Closed User Group (CUG) supplementary service; Part 1: Protocol specification [ITU-T Recommendation Q.2955.1, modified]".

**Throughout the text of ITU-T Recommendation Q.2971**

Replace references as shown in the following table:

| Reference in ITU-T Recommendation Q.2971 | Modified reference  |
|--|---|
| ITU-T Recommendation Q.2130              | ITU-T Recommendation Q.2130 as modified by ETS 300 437-1 [3]    |
| ITU-T Recommendation Q.2610              | ITU-T Recommendation Q.2610 as modified by ETS 300 685 [13]     |
| ITU-T Recommendation Q.2931              | ITU-T Recommendation Q.2931 as modified by ETS 300 443-1 [4]    |
| ITU-T Recommendation Q.2951.1            | ITU-T Recommendation Q.2951.1 as modified by ETS 300 661-1 [5]  |
| ITU-T Recommendation Q.2951.2            | ITU-T Recommendation Q.2951.2 as modified by ETS 300 662-1 [6]  |
| ITU-T Recommendation Q.2951.3            | ITU-T Recommendation Q.2951.3 as modified by ETS 300 663-1 [7]  |
| ITU-T Recommendation Q.2951.4            | ITU-T Recommendation Q.2951.4 as modified by ETS 300 664-1 [8]  |
| ITU-T Recommendation Q.2951.5            | ITU-T Recommendation Q.2951.5 as modified by ETS 300 665-1 [9]  |
| ITU-T Recommendation Q.2951.6            | ITU-T Recommendation Q.2951.6 as modified by ETS 300 666-1 [10] |
| ITU-T Recommendation Q.2951.8            | ITU-T Recommendation Q.2951.8 as modified by ETS 300 667-1 [11] |
| ITU-T Recommendation Q.2955.1            | ITU-T Recommendation Q.2955.1 as modified by ETS 300 770-1 [14] |
| ITU-T Recommendation Q.2957.1            | ITU-T Recommendation Q.2957.1 as modified by ETS 300 668-1 [12] |

**Page 2, clause 3**

Add the following note:

NOTE: ITU-T Recommendations frequently use 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 3, subclause 5.2, first paragraph**

Replace "(see 1.5/Q.2931)" by "(see 1.3/Q.2931)".

**Page 3, subclause 5.3, fourth paragraph**

Modify the fourth paragraph as follows:

Multiple add party requests pending at the same time are allowed (e.g. the root node does not need to wait for a response related to one add party request before issuing the next one).

**Page 10, table 8-10/Q.2971, notes 1, 2 and 3, third sentence, respectively**

Replace the third sentence in notes 1 to 3, respectively, by:

Must be the same as the one negotiated during the initial call setup, but is not checked by the network.

**Page 11, subclause 8.2.1, first paragraph, first sentence**

Replace the first sentence by:

The purpose of the Endpoint reference information element is to identify the individual endpoints of a point-to-multipoint call to which the particular message applies and can be used to indicate that parties other than the first party cannot negotiate (see subclause 9.1.1).

**Page 14, figure 8-1/Q.2971, octets 6 and 6.1**

Replace "Endpoint reference identifier value" by "Endpoint reference value".

**Page 14, figure 8-1/Q.2971**

After figure 8-1/Q.2971, insert a header for the codepoints table:

**Table 8-15a/Q.2971: Endpoint reference information element**

In the two sentences below that table, replace "reference identifier" by "reference".

**Page 15, figure 8.2/Q.2971, octet 5**

Replace "Endpoint reference party state" by "Endpoint party state".

**Page 15, figure 8.2/Q.2971**

After figure 8-2/Q.2971, insert header for the codepoints table:

**Table 8-15b/Q.2971: Endpoint state information element**

In first line of that table, replace "reference party state" by "party state".

**Page 16, subclause 8.2.4**

Insert a header for the cause value table:

**Table 8-16a/Q.2971: Additional causes**

Add the following row to that table:

|    |                                  |                |      |           |
|----|----------------------------------|----------------|------|-----------|
| 89 | Invalid endpoint reference value | Not applicable | DSS2 | 9.5.3.2.3 |
|----|----------------------------------|----------------|------|-----------|

**Page 20, subclause 9.3.3.2, first paragraph**

Delete "9.3.2 and".

**Page 21, subclause 9.3.3.2, note 2**

Delete note 2.

**Page 23, subclause 9.5.3.2.1, item d)**

Replace the reference "5.6.7.2/Q.2931" by "5.6.7.1/Q.2931".

**Page 24, subclause 9.5.3.2.3, item a)**

Insert "CALL PROCEEDING, ALERTING, CONNECT, " after "except SETUP, ".

**Page 27, subclause 9.5.10, note**

Move the note to the end of item b).

**Page 31, subclause 10.3.2**

Insert the following item after item b):

- c) On receipt of an ADD PARTY REJECT message, the recipient shall enter the Null party state. If all parties associated with the call are in the Null, Drop Party Initiated, or Drop Party Received party state, a RELEASE message shall be returned with cause #31 "normal, unspecified".

**Page 35, clause 12**

Add the following text:

**Interaction with the CUG supplementary service:**

ETS 300 770-1 [14] shall apply.

**Page 35, table 13-1/Q.2971**

Row T397, column "Cause for start", replace "ADD PARTY ALERTING" by "PARTY ALERTING".

**Page 36, table 13-2/Q.2971**

Row T397, column "Cause for start", replace "ADD PARTY ALERTING" by "PARTY ALERTING".

Row T397, column "Normal Stop", insert "CONNECT or".

Row T399, column "Normal Stop", insert "CONNECT, ".

**Page 36, annex A**

Delete annex A. It does not form part of this ETS.

**Page 37, annex B**

Annex B has the status of a normative annex.

**Page 37, annex C**

Annex C has the status of a normative annex.

**Page 46, annex D**

Annex D has the status of a normative annex.

**Page 51, annex E**

Annex E has the status of a normative annex.

**Page 53, annex F**

Annex F has the status of an informative annex.

**Page 85, Call-Control-N (sheet 28 of 39)**

Replace "RELEASE req." by "Release req.".

**Page 86, Call-Control-N (sheet 29 of 39), state N11**

At the "yes" branch of the "CS=0" decision box, the Release conf. primitive shall be sent to the AP process before the Call-Control-N process is terminated.

**Page 88, Call-Control-N (sheet 31 of 39), state N12**

At the "yes" branch of the "CS=0" decision box, the Release conf. primitive shall be sent to the AP process before the Call-Control-N process is terminated.



**Page 104, Party-Control-N (sheet 9 of 13), states PN1, PN2, PN3, PN4, PN6 and PN7**

The DROP PARTY message shall only be able to be received by a Party-Control-N process in the states PN2, PN3, PN4, PN7.

**Page 142, Call-Control-U (sheet 29 of 39), state U11**

At the "yes" branch of the "CS=0" decision box, the Release conf. primitive shall be sent to the AP process before the Call-Control-U process is terminated.

**Page 143, Call-Control-U (sheet 30 of 39), state U12**

At the "yes" branch of the "CS=0" decision box, the Release conf. primitive shall be sent to the AP process before the Call-Control-U process is terminated.

**Page 161, Party-Control-U (sheet 9 of 13), states PU1, PU2, PU3, PU4, PU6 and PU7**

The DROP PARTY message shall only be able to be received by a Party-Control-U process in the states PU2, PU3, PU4, PU7.

**Page 167, appendix I**

Appendix I has the status of an informative annex.

**Page 170, appendix II**

Appendix II has the status of an informative annex.

## History

| Document history |                |         |                          |
|------------------|----------------|---------|--------------------------|
| October 1996     | Public Enquiry | PE 116: | 1996-10-21 to 1997-02-14 |
| June 1997        | Vote           | V 9735: | 1997-06-17 to 1997-08-29 |
| September 1997   | First Edition  |         |                          |
|                  |                |         |                          |
|                  |                |         |                          |