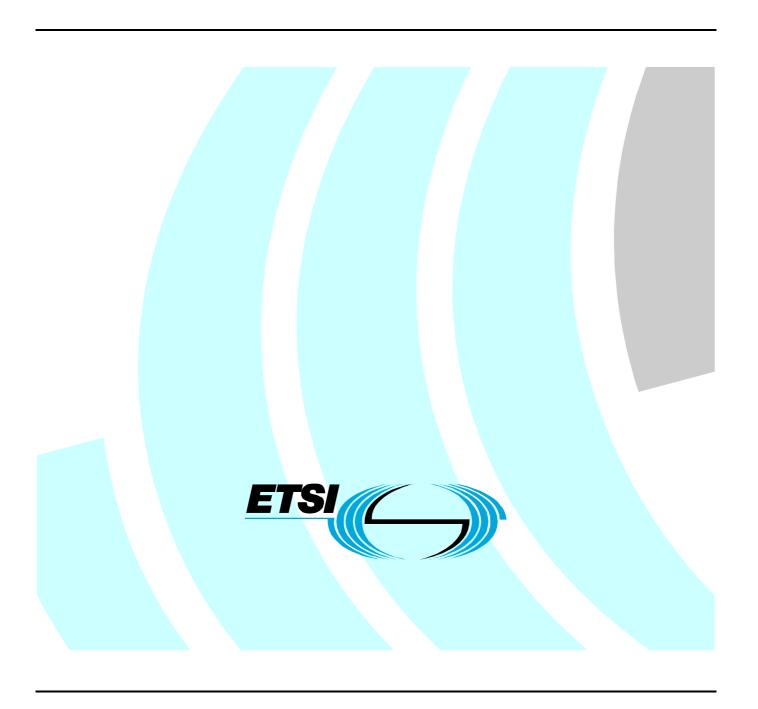# ETSI TS 100 347 V1.2.2 (2002-04)

Technical Specification

**Services and Protocols for Advanced Networks (SPAN);
V5.2 interface for the support of Access Network (AN);
Release notes for V5.2**

ETSI

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Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Services and Protocols for Advanced Networks (SPAN).

Introduction

The present document keeps track of ETSI-approved enhancements of the V5.2 interface standard, starting after the publication of version (1999-12). Through the present document, ETSI provides an actual view on the evolution of the standard.

1 Scope

The present document keeps track of enhancements to the V5.2 standard, starting after the published version (1999-12).

Only those modifications are collected, which have been agreed upon within SPAN13 (former SPAN9) sessions. As a reference to the source of these agreed modifications, relevant parts of the meeting reports are copied into an annex.

The present document is applicable to EN 300 347-1 [1] and EN 300 347-2 [2].

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication and/or edition number or version number) or non-specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies.

[1]   ETSI EN 300 347-1 (V2.2.2): "V interfaces at the digital Local Exchange (LE); V5.2 interface for the support of Access Network (AN); Part 1: V5.2 interface specification".

[2]   ETSI EN 300 347-2 (V2.1.3): "V interfaces at the digital Local Exchange (LE); V5.2 interface for the support of Access Network (AN); Part 2: Protocol Implementation Conformance Statement (PICS) proforma specification".

[3]   ETSI EN 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]".

[4]   ITU-T Recommendation Q.931: "ISDN user-network interface layer 3 specification for basic call control".

[5]   ETSI EN 300 324-2 (V2.1.1): "V interfaces at the digital Local Exchange (LE); V5.1 interface for the support of Access Network (AN); Part 2: Protocol Implementation Conformance Statement (PICS) proforma specification".

3 Approved modifications (EN 300 347-1)

3.1 Editorial changes

Editorial comments on **V5.2 - EN 300 347-1 [1]**; these are to be included in the next version of the standard.

Table 9a (page 44)

- The reference to "… EN 300 347 [11] Amendment A1…" should be changed to "… ETS 300 347 [11] Amendment A1…".

Clause 2

- The reference [11] in clause 2 should be ETS 300 347-1/A1 and not EN 300 347-1.

Clause 17.1 and the part Audit process, paragraph 7 from end of page 67

- Change "2 Mbit/s" to be read "2 048 kbit/s".

Table 9a (page 44)

- Note 4 to read: " …. in clause 3.1 **of V5.1 [8]**".

Tables 29, 32, 35, 36, 37, 40, M.2

- Replace "ISDN port **channel** … " by "ISDN Port **Time Slot** … ".

3.2 Updated value of BCC timer Tbcc1

Table 46, Timer Tbcc1

- Replace current 'Timeout value' by "0,5 to 30 seconds; the default value shall be 1 500 ms".

- Replace current note (Tbcc1 only) by a new note 2: "The **sum** of the values of Tbcc1 and the V5.1 PSTN protocol timer T1 shall not exceed 30 s."

3.3 Information Transfer Capability Information Element

3.3.1 Add provisioning requirement

In clause 7.2.2, append item 12:

12) Q_{LE} may be used to provision the sending of the Information Transfer Capability IE.

3.3.2 ALLOCATION message

Clause 17.3.1 of EN 300 347-1 [1] is modified as follows:

17.3.1 ALLOCATION message

This message is used by the local exchange to request from the access network the allocation of one or multiple bearer channels to a particular user port by the identification and use of a particular V5 time slot within the V5.2 interface.

Table 29: ALLOCATION message content

Message Type: ALLOCATION

Direction: LE to AN

Information element	Reference	Direction	Type	Length
Protocol Discriminator	13.2.1	LE to AN	M	1
BCC Reference Number	17.4.1	LE to AN	M	2
Message Type	17.3	LE to AN	M	1
User Port Identification	17.4.2.1	LE to AN	M	4
ISDN Port Channel Identification	17.4.2.2	LE to AN	C (see note 1)	3
V5-Time Slot Identification	17.4.2.3	LE to AN	C (see note 2)	4
Multi-Slot Map	17.4.2.4	LE to AN	C (see note 3)	11
Information Transfer Capability	17.4.2.8	LE to AN	C (see note 4)	3

NOTE 1: The ISDN Port Channel Identification information element has to be included when allocating a single time slot in order to support a bearer channel related to an ISDN Port and shall be handled as a mandatory information element. This information element shall specify the user port time slot within the ISDN user/network interface (basic or primary) to which the bearer channel has to be through-connected.

NOTE 2: The Time Slot Identification information element has to be included when allocating a single time slot in order to identify the relevant V5.2 interface time slot and shall be handled as a mandatory information element.

NOTE 3: The Multi-Slot Map information element has to be included when allocating multiple time slots in order to support multirate (n x 64 kbit/s) ISDN bearer services and shall be handled as a mandatory information element. This information element shall also specify the user port time slots within the ISDN user/network interface (basic or primary) to which the bearer channel has to be through-connected.

NOTE 4: The Information Transfer Capability shall be included when the User Port Identification information element identifies an ISDN port.

In the case of bearer channel allocations to an ISDN port for the purpose of through-connection, the local exchange shall also indicate the user port time slot in the ISDN interface to be used.

This message also allows the in-block allocation of multirate bearer channels (multiple V5 time slots) to support multirate (n x 64 kbit/s) services.

3.3.3   BCC information element definition, structure and coding

Clause 17.4 of EN 300 347-1 [1] is modified as follows:

17.4   BCC information element definition, structure and coding

This clause defines the coding of the information elements that are specific for the BCC protocol, being used within the BCC protocol specific messages. For each of the information elements, the coding of their different fields is provided.

The BCC protocol specific information elements are listed in table 40 which also gives the coding of the information element identifier.

Table 40: BCC protocol specific information elements

Bits								Information element	Reference
8	7	6	5	4	3	2	1		
0	–	–	–	–	–	–	–	VARIABLE LENGTH INFORMATION ELEMENTS	
0	1	0	0	0	0	0	0	User port identification	17.4.2.1
0	1	0	0	0	0	0	1	ISDN port channel identification	17.4.2.2
0	1	0	0	0	0	1	0	V5-time slot identification	17.4.2.3
0	1	0	0	0	0	1	1	Multi-slot map	17.4.2.4
0	1	0	0	0	1	0	0	Reject cause	17.4.2.5
0	1	0	0	0	1	0	1	Protocol error cause	17.4.2.6
0	1	0	0	0	1	1	0	Connection incomplete	17.4.2.7
0	1	0	0	0	1	1	1	Information Transfer Capability	17.4.2.8
NOTE: All other values are reserved									

3.3.4   Information Transfer Capability information element

A new clause 17.4.2.8 is added to EN 300 347-1 [1] as follows:

17.4.2.8   Information Transfer Capability information element

The purpose of the Information Transfer Capability information element is to indicate to the access network the Information transfer capability requested for a given ISDN bearer channel on a given ISDN user port.

The Local Exchange shall have the possibility to enable or disable the use of this information element by means of provisioning.

The content of this information element is a subset of the Bearer capability information element present within DSS1.

The length of the Information Transfer Capability shall be 3 octets.

The structure of the Information Transfer Capability information element shall be as indicated by figure 23a.

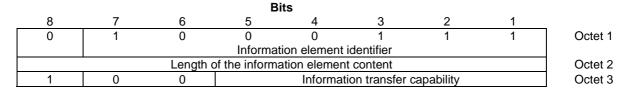|			**Bits**					
8	7	6	5	4	3	2	1	
0	1	0	0	0	1	1	1	Octet 1
Information element identifier								
Length of the information element content								Octet 2
1	0	0	Information transfer capability					Octet 3

Figure 23a: Information Transfer Capability information element

The coding of octet 3 is identical to the coding of octet 3 in the bearer capability information element in DSS1 messages (see ITU-T Recommendation Q.931 [4] as endorsed by EN 300 403-1 [3], figure 4-11).

4 Approved PICS modifications (EN 300 347-2)

4.1 Information Transfer Capability Information Element

Replace table 23 with the following (V7.30 added):

Table 23

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support (Yes/No)
V7.21	BCC reference number?		M	17.4.1	[ ]Yes [ ]No
V7.22	Message type?		M	17.3	[ ]Yes [ ]No
V7.23	User port identification?		M	17.4.2.1	[ ]Yes [ ]No
V7.24	ISDN port time slot identification?	N11 OR N12 NOT (N11 OR N12)	M N/A	17.4.2.2	[ ]Yes [ ]No
V7.25	V5 Time slot identification?		M	17.4.2.3	[ ]Yes [ ]No
V7.26	Multi slot map?	N8 NOT N8	M N/A	17.4.2.4	[ ]Yes [ ]No
V7.27	Reject cause?		M	17.4.2.5	[ ]Yes [ ]No
V7.28	Protocol error cause?		M	17.4.2.6	[ ]Yes [ ]No
V7.29	Connection incomplete?		M	17.4.2.7	[ ]Yes [ ]No
V7.30	Information Transfer Capability?	N11 OR N12 NOT (N11 OR N12)	M N/A	17.4.2.8	[ ]Yes [ ]No

Replace table 49 with the following (V7.30 added):

Table 49

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support (Yes/No)
V7.21	BCC reference number?		M	17.4.1	[ ]Yes [ ]No
V7.22	Message type?		M	17.3	[ ]Yes [ ]No
V7.23	User port identification?		M	17.4.2.1	[ ]Yes [ ]No
V7.24	ISDN port time slot identification?	N11 OR N12 NOT (N11 OR N12)	M N/A	17.4.2.2	[ ]Yes [ ]No
V7.25	V5 Time slot identification?		M	17.4.2.3	[ ]Yes [ ]No
V7.26	Multi slot map?	N8 NOT N8	M N/A	17.4.2.4	[ ]Yes [ ]No
V7.27	Reject cause?		M	17.4.2.5	[ ]Yes [ ]No
V7.28	Protocol error cause?		M	17.4.2.6	[ ]Yes [ ]No
V7.29	Connection incomplete?		M	17.4.2.7	[ ]Yes [ ]No
V7.30	Information Transfer Capability?	N11 OR N12 NOT (N11 OR N12)	M N/A	17.4.2.8	[ ]Yes [ ]No

4.2 Editorial changes

4.2.1 Correction of errors

The following editorial changes shall be applied to EN 300 347-2 [2]:

- **Table 28, Page 25;**

  In the row for Index N417 "C-path for protection" change the Reference from "8.1.4 h)" to " **8.4.1 h)**".

- **Table 30, Page 26;**

  In the row for Index R2.18 "envelope address value for protocol protection" change the Reference from "9.2.2.2 [1]" to "**10.3.2.3**".

4.2.2   Alignment of LE and AN

The following editorial changes shall be applied to EN 300 347-2 [2]:

- **Table 3, Page 13;**

   This table shall align with the AN equivalent, table 30. The intention has been that Indexes in tables 3 and 30 shall where possible be common with the Indexes used in V5.1 PICS [5]. The changes relate to Indexes P2.15 and R2.16. The resultant table 3 is as follows:

Table 3

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support (Yes/No)
P2.11	frame structure for peer to peer communication?		M	9.1 [1]	[ ]Yes [ ]No
P2.12	format of fields for data link envelop?		M	9.2 [1]	[ ]Yes [ ]No
P2.13	envelope address value for control protocol?		M	10.3.2.3	[ ]Yes [ ]No
P2.14	envelope address value for PSTN protocol?	M2 NOT M2	N/A	10.3.2.3	[ ]Yes [ ]No
P2.15	envelope address values for ISDN ports?	N11 OR N12 NOT (N11 OR N12)	M N/A	9.2.2.2 [1]	[ ]Yes [ ]No
R2.16	envelope address value for BCC protocol?		M	10.3.2.3	[ ]Yes [ ]No
R2.17	envelope address value for protection protocol?	N9 NOT N9	M N/A	10.3.2.3	[ ]Yes [ ]No
R2.18	envelope address values for link control protocol?		M	10.3.2.3	[ ]Yes [ ]No
P2.2	data link sublayer of LAPV5 for control protocol?		M	10 [1]	[ ]Yes [ ]No
P2.3	data link sublayer of LAPV5 for PSTN protocol?	M2 NOT M2	M N/A	10 [1]	[ ]Yes [ ]No
R2.4	data link sublayer of LAPV5 for bearer connection control protocol?		M	10	[ ]Yes [ ]No
P2.4	frame relay function in the AN	N11 OR N12 NOT (N11 OR N12)	M N/A	11	[ ]Yes [ ]No
R2.5	data link sublayer of LAPV5 for protection protocol?	N9 NOT N9	M N/A	10	[ ]Yes [ ]No
R2.6	data link sublayer of LAPV5 for link control protocol?		M	10	[ ]Yes [ ]No

History

Document history		
V1.1.1	January 2001	Publication
V1.2.2	April 2002	Publication