

ETSI TS 100 324 V1.2.2 (2002-04)

Technical Specification

**Services and Protocols for Advanced Networks (SPAN);
V5.1 interface for the support of Access Network (AN);
Release notes for V5.1**



Reference

RTS/SPAN-130301

Keywords

AN, LE, PICS, V Interface, V5 Interface

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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 V5.1 interface standard, starting after the publication of version V2.1.1 (2000-04). 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 V5.1 standard, starting after the published version V2.1.1 (2000-04).

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 the V5.1 base standard [1] and PICS [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 300 324-1 (V2.1.1): "V interfaces at the digital Local Exchange (LE); V5.1 interface for the support of Access Network (AN); Part 1: V5.1 interface specification".

[2] 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

3.1 Modifications to Part 1

3.1.1 Extended range for LE PSTN Timer T1

Clause 13.6, table 28

- Change the LE Time out value for Timer number T1 from "2 s" to be read "2-30 s". The default value should be 2 s (the functionality is then unchanged for conformance testing).

3.1.2 Solicited Disconnect Mode (after SABME)

Clause 10.4.5.1.2, paragraph 4

- Change the full sentence to read:

"If the data link layer entity is unable to enter the multiple-frame-established state, it shall **ignore** the SABME command."

Clause 10.4.11.2, last paragraph

- Append new text:

" - in table D-1.2, row 'SABME P=1, UNABLE TO ENTER STATE 7.0', column 'TEI ASSIGNED': replace the action 'TX DM F=1' with '-' (no action, no state change)."

3.1.3 Editorial changes

Editorial comments on **V5.1 - EN 300 324-1 [1]** (V2.1.1 / 2000-04); these are to be included in the next version of the standard.

- **Clause 8.6** - Change the title to read:
"Layer 3 (L3) multiplexing".
- **Clause 8.7.3** - Change the title to read:
"Layer 2 (L2) multiplexing".
- **Clause 9.1.7** - Change the title to read:
"Frame Check Sequence (FCS)".
- **Clause 9.2.2.2** - Change text in 2nd paragraph:
Replace "...L2 entity to a L3 ..." by "...layer 2 entity to a layer 3 ...".
- **Clause 10.3.2.3 and table 1**
The bar to the right of the text **Bits** is missing. Bits only correspond to the range of bits between 8 to 1.
- **End of line (page 76) before the figure 30b**
Wrong references are given to the tables 26c and 26d: should be 26d and 26e.
- **Table 30, end of page and first row on next page (page 101 and 102)**
One line is missing in the table that separates the primitives FE-line_signal_request and FE-protocol_parameter_request. The page break should be before the primitive FE-protocol_parameter_request. Note that for state LE4 the 2nd cell shall be split between the two primitives.
- **Annex D, clause D.3.6.5, 3rd paragraph**
Change the wording in the third paragraph to be read "...except for dialled pulses that should...".

3.2 Modifications to Part 2

3.2.1 Editorial PICS changes

Editorial comments on **V5.1 - EN 300 324-2 [2]** (V2.1.1 / 2000-04); these are to be included in the next version of the PICS.

- **Table 12, Page 17**
The introduction of the Enable Metering Information Element changed the PICS tables for the AN but did not modify the tables for the LE in the same way. The changes to table 12 and later table 14 are to correct this.
Replace table 12 with the following (indexes in last 2 rows changed).

Table 12

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U1.51	steady signal: Normal polarity?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.52	steady signal: Reversed polarity?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.53	steady signal: Battery on c-wire?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.54	steady signal: No battery on c-wire?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.55	steady signal: Off hook?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.56	steady signal: On hook?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.57	steady signal: Battery on a-wire?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.58	steady signal: A-wire on earth?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.59	steady signal: No battery on a-wire?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.60	steady signal: No battery on b-wire?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.61	steady signal: Reduced battery?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.62	steady signal: No battery?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.63	steady signal: Alternate reduced power/no power?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.64	steady signal: Normal battery?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.65	steady signal: Stop ringing?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.66	steady signal: Start pilot frequency?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.67	steady signal: Stop pilot frequency?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.68	steady signal: Low impedance on b-wire?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.69	steady signal: B-wire connected to earth?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.70	steady signal: B-wire disconnected from earth?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.71	steady signal: Normal battery on b-wire?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U1.72	steady signal: Low loop impedance?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.73	steady signal: High loop impedance?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.74	steady signal: Anomalous loop impedance?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.75	steady signal: A-wire disconnected from earth?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.76	steady signal: C-wire on earth?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.77	steady signal: C-wire disconnected from earth?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.97	steady signal: Signal: Ramp to Reversed Polarity?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.98	steady signal: Signal: Ramp to Normal Polarity?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No

- **Table 14, Page 19**

The introduction of the Enable Metering Information Element changed the PICS tables for the AN but did not modify the tables for the LE in the same way. The changes to table 12 and later table 14 are to correct this.

Replace table 14 with the following (U1.96 added).

Table 14

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U1.91	suppression indicator?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	[] Yes [] No
U1.92	acknowledge request indicator?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	[] Yes [] No
U1.93	suppression indicator?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.7	[] Yes [] No
U1.94	acknowledge request indicator?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.7	[] Yes [] No
U1.95	digit acknowledge request indicator?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.5	[] Yes [] No
U1.96	repetition indicator?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.11	[] Yes [] No

- **Table 19, Page 21**

Rows containing Indexes M421, M422, M423, M431, M432, M433, M441, M442, M443, M451, M452, M453 appear twice in the table. The second instance of each index shall be deleted.

The "Conditions for status" for rows containing Indexes M423, M433, M443, M452, M453 shall be corrected.

The new table 19 is as follows.

Table 19

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
M1	ISDN ports?		O.1	6.1.2	<input type="checkbox"/> Yes <input type="checkbox"/> No
M2	PSTN ports?		O.1	6.1.1	<input type="checkbox"/> Yes <input type="checkbox"/> No
M3	semi-permanent leased lines?		O	6.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
M4	communication channel time slot allocation?		M	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M41	communication path for control functions on TS 16?		M	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M411	communication channel on TS16?		M	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M412	communication channel on TS15?	MX1 NOT MX1	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M413	communication channel on TS31?	MX1 NOT MX1	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M421	communication path for P-type data on TS 16?	M1 NOT M1	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M422	communication path for P-type data on TS 15?	M1 and M412 NOT (M1 AND M412)	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M423	communication path for P-type data on TS 31?	M1 AND M413 NOT (M1 AND M413)	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M431	communication path for F-type data on TS 16?	M1 NOT M1	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M432	communication path for F-type data on TS 15?	M1 and M412 NOT (M1 and M412)	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M433	communication path for F-type data on TS 31?	M1 AND M413 NOT (M1 AND M413)	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M441	communication path for D-channel signalling on TS 16?	M1 NOT M1	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M442	communication path for D-channel signalling on TS 15?	M1 and M412 NOT (M1 AND M412)	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M443	communication path for D-channel signalling on TS 31?	M1 AND M413 NOT (M1 AND M413)	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M451	communication path for PSTN signalling on TS 16?	M2 NOT M2	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M452	communication path for PSTN signalling on TS 15?	M2 and M412 NOT (M2 AND M412)	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M453	communication path for PSTN signalling on TS 31?	M2 and M413 NOT (M2 AND M413)	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M51	allocation of bearer channels to user ports by provisioning?	MX.4 NOT MX.4	M O	7.2.2	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
M52	allocation of EFaddr to ISDN user ports by provisioning?	M1 AND MX.4 M1 AND NOT MX.4 NOT M1	M O N/A	7.2.2	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
M53	allocation of L3addr to PSTN user ports by provisioning?	M2 AND MX.4 M2 AND NOT MX.4 NOT M2	M O N/A	7.2.2	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
M6	envelop function?		M	9	<input type="checkbox"/> Yes <input type="checkbox"/> No
M7	permanent line capability?		O	6.2, 14.1	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Predicated imaginary features to main features				
MX.1	If required by the network operator		O		
MX.2	If required by the national PSTN protocol		O		
MX.3	If required by the network operator for AN with separate NT1		O		
MX.4	If not equipment for which exception has been accepted, see EN 300 324-1 [1], clause 7.2.2, item 1)		O		
O.1 = Support of at least one of these items is required					

- **Table 24, Page 24**

Add the missing index "**P4.11**" in the first cell in the first row of the table.

History

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