SLOVENSKI STANDARD
SIST ETS 300 012/A2 E1:2003

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Digitalno omreģje z integriranimi storitvami (ISDN) ï Osnovni vmesnik uporabnik-omreģje ï Specifikacija prve plasti in naļ ela preskuģanja

Integrated Services Digital Network (ISDN); Basic user-network interface; Layer 1 specification and test principles

Ta slovenski standard je istoveten z: ETS 300 012/A2 Edition 1

ICS:

33.080	Digitalno omrežje z integriranimi storitvami (ISDN)	Integrated Services Digital Network (ISDN)

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AMENDMENT

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A2

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This amendment A2 modifies
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Integrated Services Digital Network (ISDN); Basic user-network interface; Layer 1 specification and test principles

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Foreword

This amendment to ETS 300 012 (1992) has been produced by the Transmission and Multiplexing (TM) Technical Committee of the European Telecommunications Standards Institute (ETSI).

This second amendment incorporates the changes introduced by Amendment 1 (1994) to ETS 300 012. Newly introduced modifications are indicated by a revision bar located at the left margin.

This second amendment adds a new annex F and related references, definitions and abbreviations to ETS 300 012.

Transposition dates	
Date of adoption of this ETS:	22 September 1995
Date of latest announcement of this ETS (doa):	30 June 1996
Date of latest publication or endorsement of this amendment (dop/e):	31 December 1996
Date of withdrawal of any conflicting National Standard (dow):	31 December 1996

Amendments

Page 12, clause 2

Add the following references to the Normative references clause (clause 2):

[17] CCITT Recommendation I.112 (1988): "Vocabulary of terms for ISDNs".

[18] CCITT Recommendation Q.9 (1988): "Vocabulary of switching and signalling terms".

[19] ISO/IEC 9646-1 (1991): "OSI Conformance Testing Methodology and Framework Part 1: General Concepts".

[20] ISO/IEC 9646-5 (1991): "OSI Conformance Testing Methodology and Framework Part 5: Requirements on test laboratories and clients for the conformance assessment process".

Page 13, clause 3

Add the following definitions to the definitions clause (clause 3):

Integrated Services Digital Network (ISDN): See CCITT Recommendation I.112 [17], § 2.3, definition 308.

basic access: See CCITT Recommendation Q.9 [18], § 1, definition 1551.

Protocol Implementation Conformance Statement (PICS): See ISO/IEC 9646-1 [19], § 3.4.6.

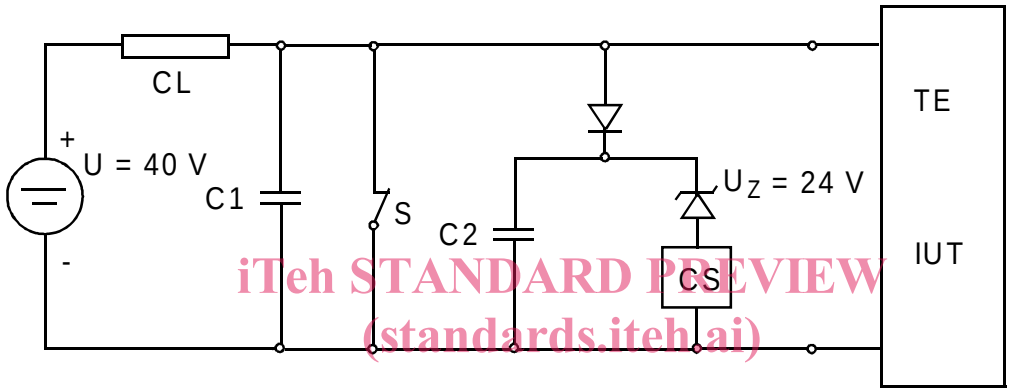
Page 14, clause 4

Add the following abbreviations to the abbreviations clause (clause 4):

APS	Auxiliary Power Source
HDLC	High level Data Link Control
IUT	Implementation Under Test
PCTR	Protocol Conformance Test Report
PICS	Protocol Implementation Conformance Statement
PIXIT	Protocol Implementation Extra Information for Testing
RSE	Remote Single layer Embedded
SCS	System Conformance Statement
SCTR	System Conformance Test Report

Page 18, figure 3

Replace figure 3 with the following figure:

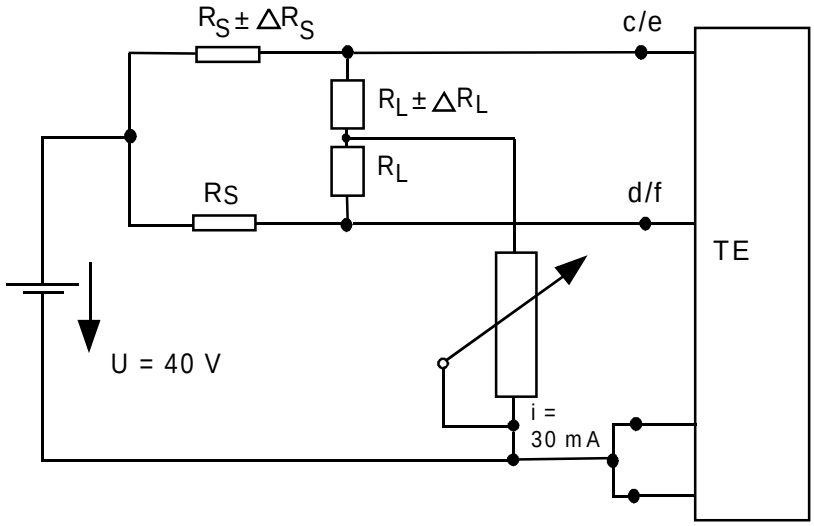


U_Z: Zener voltage

Figure 3: Power start up test for TE

Page 22, figure 7

Replace figure 7 with the following figure:



R_S = 6 Ω	ΔR_S = 360 m Ω
R_L = 5 Ω	ΔR_L = 300 m Ω

$$X = \frac{\Delta R_S}{2 R_S} = \frac{\Delta R_L}{2 R_L}$$

Figure 7: Test circuit for applied current unbalance

Page 26, table A.1, table entry A.5.3.2

Replace the table entry A.5.3.2 with the following:

A.5.3.2	TEs not powered across the interface <The following text is added: A TE using the automatic assignment procedure shall implement the disconnect detector for detection of power source 1 or 2 to establish the connection status.>	

Page 29, table A.1, table entry A.6.2.6.1

Replace the final paragraph for table entry A.6.2.6.1 with the following:

	<In both paragraphs the term "INFO2" shall be replaced (four times) by: "INFO2 or INFO4">	

Page 31, table A.1, table entry A.8.5.4

The statement ("St.-ment") for table entry A.8.5.4 shall be changed to "I" (Informative), as follows:

Clause/ subclause	Title <Comment>	St.- ment
A.8.5.4	Pulse unbalance <The text under this subclause is replaced by:	I

Page 46, subclause D.1.4.4

Replace the fourth instance of "N/R" with "D.3.2.2.1.1", producing a table as follows:

Modes	**Clause/ subclause**	**Test defined in Clause/subclause**
Types of wiring configuration	A.4	N/R
Point-to-point configuration	A.4.1	N/R
Point-to-multipoint configuration	A.4.2	N/R
Polarity Integrity (figure 2/I.430 [2])	A.4.3	D.3.2.2.1.1
Interface Ia	A.4.4	N/R
TE associated wiring	A.4.5	N/R

Page 50, subclause D.1.4.11

Replace the final instance of "N/R" with "D.5.1.4.1" and add test for annex B, clause B.6, producing a table as follows:

Requirements	**Clause/ subclause**	**Test defined in Clause/subclause**
Test loopbacks defined for the basic user-network interface	Annex A App. I	N/R
Additional requirements applicable to the explicit S reference point	B.1 to B.5 B.6	N/R D.5.1.4.2
TE design to minimise power disturbance	Annex C	D.5.1.4.1

Page 57, subclause D.3.2.1

Replace the table in subclause D.3.2.1 with the following table (modifying states 9, 16, 22, 40 and 46 and adding NOTE 9):

Table to subclause D.3.2.1

STATE NO	CURRENT STATE	STIMULUS	NOTE	NEXT STATE	INFO SENT	COMMENT
1	F1	Power	1	F2	I0	Detection of power
2	F1	T3 expires	2/6	F1	I0	No action
3	F2	Loss of Power		F1	I0	Return to inactive state
4	F2	Rx INFO 0	4	F3	I0	Assume deactivated state
5	F2	Rx INFO 2		F6	I3	Synchronised state
6	F2	Rx INFO 4		F7	I3	Activated
7	F2	Rx any signal	3	F2	I0	No action
8	F2	T3 expires	6	F2	I0	No action
9	F3	Loss of Power	9	F1	I0	Return to inactive
10	F3	PH-AR		F4	I1	Initiate activation & T3
11	F3	Rx INFO 0	4	F3	I0	No action
12	F3	Rx INFO 2		F6	I3	Synchronised state
13	F3	Rx INFO 4		F7	I3	Activated
14	F3	Rx any signal	3	F3	I0	No action
15	F3	T3 expires	2	F3	I0	No action
16	F4	Loss of Power	9	F1	I0	Return to inactive state
17	F4	Rx INFO 0	4	F4	I1	No action
18	F4	Rx INFO 2	7	F6	I3	Synchronised
19	F4	Rx INFO 4	7	F7	I3	Active
20	F4	Rx any signal	3	F5	I0	Detection of signal
21	F4	T3 Expires	2	F3	I0	Deactivated
22	F5	Loss of Power	9	F1	I0	Return to inactive
23	F5	Rx INFO 0	4	F5	I0	No action
24	F5	Rx INFO 2		F6	I3	Synchronised
25	F5	Rx INFO 4		F7	I3	Activated
26	F5	Rx any signal	3	F5	I0	No action
27	F5	T3 Expires	2	F3	I0	Deactivated
28	F6	Loss of Power	8	F1	I0	Return to inactive
29	F6	Lost Framing		F8	I0	Loss of framing signals
30	F6	PH-AR		F6	I3	No action
31	F6	Rx INFO 0	4	F3	I0	Deactivated
32	F6	Rx INFO 2		F6	I3	No action
33	F6	Rx INFO 4		F7	I3	Activated
34	F6	T3 Expires	2	F6	I3	Synchronised
35	F7	Loss of Power	8	F1	I0	Return to inactive
36	F7	Lost Framing		F8	I0	Loss of framing
37	F7	Rx INFO 0	4/5	F3	I0	Deactivated
38	F7	Rx INFO 2		F6	I3	Synchronised
39	F7	Rx INFO 4		F7	I3	No action
40	F8	Loss of Power	9	F1	I0	Return to inactive
41	F8	PH-AR		F8	I0	No action
42	F8	Rx INFO 0	4/5	F3	I0	Deactivation
43	F8	Rx INFO 2		F6	I3	Synchronised
44	F8	Rx INFO 4		F7	I3	Activated
45	F8	Rx any signal	3	F8	I0	No action
46	F8	T3 expires	2	F3	I0	Assume deactivated state

NOTE 1: Because the IUT can be powered in different ways, it is useful to test this IUT with the possible power it is able to detect (PS1, PS2, local power).

NOTE 2: T3 = Implementation dependent, not to exceed 30 sec.

NOTE 3: "Any signal" is simulated by any bit pattern on which the IUT conforming to subclause A.6.3.1.2, ETS 300 012 is not able to synchronise.

NOTE 4: For testing purposes INFO 0 is simulated by a sinusoidal signal having a voltage of 100 mV peak to peak (with a frequency in the range of 2 kHz to 1000 kHz). The TE shall react by transmitting INFO 0 within a period time 250 µs to 25 ms.

NOTE 5: The PH-DI corresponding to the reception of INFO 0 shall be delivered to Layer 2 only if Layer 1 does not re-enter an active state before the expiration of a timer of which the value is in the range of 500 ms to 1 s.

NOTE 6: Applicable only for TEs which are locally powered and able to detect PS1 or PS2.

NOTE 7: If INFO 2 of INFO 4 is not recognised within 5 ms after the appearance of a signal, TE shall go to F5. The result is to be tested 5 ms after generation of the stimulus.

NOTE 8: For TEs which are locally powered and able to detect PS1 or PS2, at the event "disappearance of power" in states F6 or F7, no state change shall be observed.

NOTE 9: Locally powered TEs with disconnected detector shall not assume disconnection and shall not take any action until the voltage of the interface has remained below 24 V for at least 500 ms (refer to subclause 7.1.1).

Page 58, subclause D.3.2.2.1.1

Replace the title of subclause D.3.2.2.1.1 with the following title:

D.3.2.2.1.1 Test A, in state F3 (subclauses A.4.3 and A.6.2.6.1, ETS 300 012)

Page 58, subclause D.3.2.2.1.1

Replace the paragraph "Stimulus:" with the following text:

Stimulus: INFO 2 type frames from the network. This test shall be performed with both normal and reversed polarity of the interchange circuit (NT to TE direction).

Page 68, subclause D.3.3

Replace the results and notes 3 and 4 with the following:

Results:

	STIMULUS	RESULTS	COMMENTS
a)	1 bad frame	INFO 3	No loss of framing
b)	5 bad frames	INFO 0	Framing lost
c)	2 good frames	INFO 0	Framing not regained
d)	6 good frames (note 3)	INFO 3	Framing regained within 5 frames

NOTE 3: Before the test, the TE shall be in state F8. The input shall be applied with "Any signal". Multiframing is not covered by this test.

Page 73, subclause D.4.2

Replace the first paragraph of subclause D.4.2, with a subclause heading as follows:

D.4.2.1 TE jitter measurement characteristics (test A) (subclause A.8.2.2, ETS 300 012)

Page 84, subclause D.4.5.2, "System state:"

Replace the "System state:" text with the following:

System state:

a) Deactivated *(state F3)*, then

b) Synchronised *(state F6)*.

IUT transmitting INFO 3 containing all binary ONEs in both B-channels (idle channel code)

Page 95, subclause D.5.1.1

Replace the title of subclause D.5.1.1 with the following title:

D.5.1.1 Normal power conditions (subclauses A.9.3.1.1 and A.9.5.1, ETS 300 012)

Page 100, subclause D.5.1.2

Replace the title of subclause D.5.1.2 with the following title:

D.5.1.2 Restricted power conditions (subclauses A.9.3.1.2 and A.9.5.2, ETS 300 012)

Page 109, subclause D.5.1.4.2

Replace the title of subclause D.5.1.4.2 with the following title:

D.5.1.4.2 Current/time limitation for TE when connecting (subclause 7.1.1, clause B.6, ETS 300 012)

Page 109, subclause D.5.1.4.2, "Stimulus:"

Replace the "Stimulus:" paragraph with the following:

Stimulus: Phantom supply voltage. Restricted mode

U = - 40 V R = 15 Ω

The test setup shall be capable of providing a connection to ground. The measurement shall be done in both wires connecting the power supply to the IUT.

Page 124, subclause E.1.4.4

Replace the fourth instance of "N/R" with "E.3.3.2.1", producing a table as follows:

Modes	Clause/ subclause	Test defined in Clause/subclause
Types of wiring configuration	A.4	N/R
Point-to-point configuration	A.4.1	N/R
Point-to-multipoint configuration	A.4.2	N/R
Polarity Integrity (figure 2/I.430 [2])	A.4.3	E.3.3.2.1
Interface Ib	A.4.4	N/R
NT associated wiring	A.4.5	N/R

Page 137, subclause E.3.3.2.1, Test B

Replace the test name "• **Test B**" with the following:

- **Test B (subclause A.4.3)**

Page 137, subclause E.3.3.2.1, Test B, "Stimulus:"

Replace the "Stimulus:" paragraph with the following:

Stimulus: INFO 3 from the TE simulator.

This test shall be performed with both normal and reversed polarity of the interchange circuit (TE to NT direction).

Page 140, subclause E.3.4, "Results:"

Replace the results and remainder of page 140 (bullet points 1 to 5) with the following:

Results:

	STIMULUS	RESULTS	COMMENTS
a)	1 bad frame (see note 3)	INFO 4	No loss of framing
b)	5 bad frames (see note 3)	INFO 2	Framing lost
c)	2 good frames (see note 4)	INFO 2	Framing not regained
d)	6 good frames (see notes 4 and 5)	INFO 4	Framing regained within 5 frames

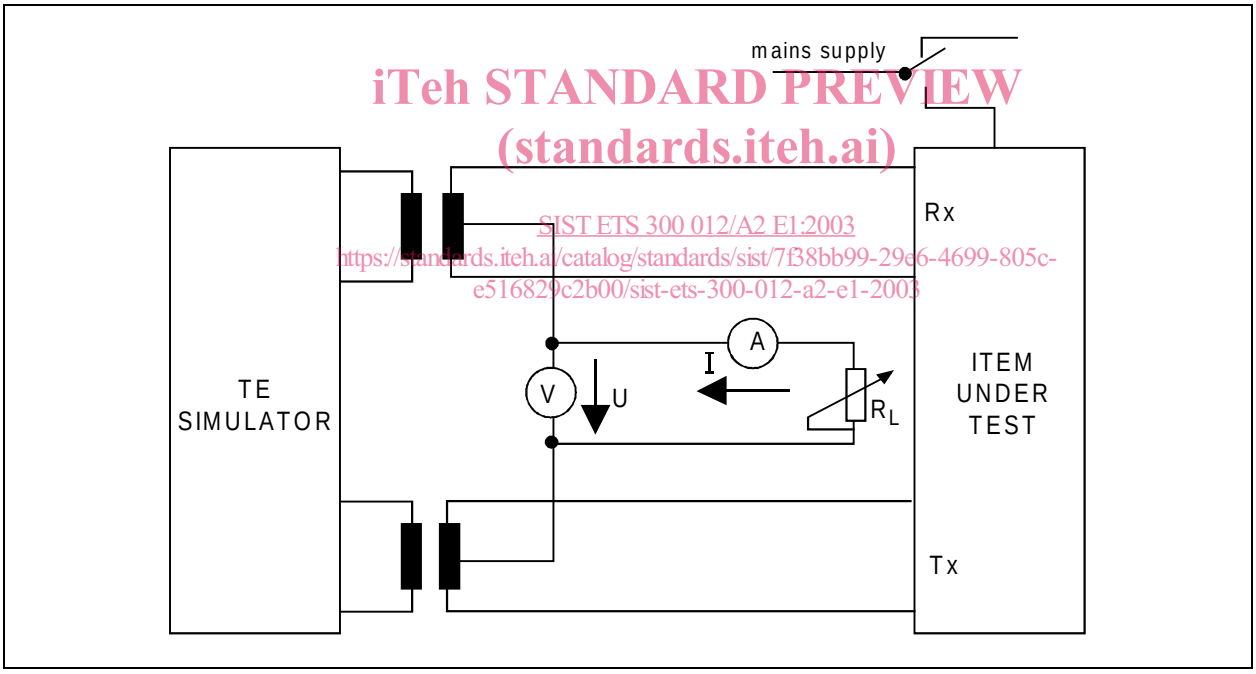
NOTE 3: Before the commencement of the test, the NT shall be in system state G3.

NOTE 4: Before the test, the NT **shall not** be in system state G3.

NOTE 5: Multiframing procedure is not covered by this test.

Page 160, subclause E.5.1.4.3

Replace the figure for the test configuration with the following figure:



Page 164, subclause E.5.1.7

Replace the figure for the test configuration with the following figure (modifying the value of the initial load):