TE000008

S/T interface for ISDN basic access

Scope:

Specify characteristics of interfaces

Applicability:

Document for CETIN, property only.

Process:

Technologie hlasových a mob.sítí a služeb, CETIN

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1 Initial provisions

1.1 Scope

The purpose of this document is to specify characteristics of interfaces to be used between AN and TEs on one side and between AN and SNs (LE, LL, DN, ...) on the other side, in the access network of the company Česká telekomunikační infrastruktura a.s.

1.2 Validity and obligation

The document is according to the Directive SM000786 a valid recommendation of the company Česká telekomunikační infrastruktura a.s. If needed, the validity and obligation for external subjects is to be set by an appropriate clause of the contract. The document is valid from the date of approval (see the first page).

1.3 Document history

Example:

Ver.	Date	Title	Note
1	03/2016	S-T Interface for ISDN Basic Access	New document
2			
2			

1.4 Definitions

-not used-

1.5 Abbreviations

ANE	Access Network Element
APS	Auxiliary Power Supply
DDI	Direct dialling in
DLL	Digital Local Line
DN	Data Network
DTS	Digital Transmission System
EOC	Embedded Operations Channel
IPS	Internal Power Supply
ITS 2M	Integral Transmission System with 2084 kbitps bit rate
LE	Local Exchange
LL	Leased Line
LT	Line Termination
LTU	Line Termination Unit
PABX	Private Automatic Branch Exchange
PSTN	Public Switching Telephone Network
R	Resistance
SN	Service Node
SNI	Service Node interface
TS	64 kbps Time Slot
UOA	DLL-Only-Activation
UNI	User Network Interface

1.6 Records

This document does not require records in the sense of the Directive SM000796, it has the nature of a recommendation and/or technical information.

1.7 Reference

1.7.1 Replaced and withdrawn documents (if any)

1.7.2 Related internal documents (if any)

TR000006 - Zákaznický rozbočovač xDSL - (int. publ. Česká telekomunikační infrastruktura a.s.)

1.7.3 Related external documents (if any)

ITU-T Q.512	Exchange interface for subscriber access; 1989
ITU-T Q.522	Transmission characteristics at 2-wire analogue interfaces of digital exchange; 1988
ITU-T I.411	ISDN user-network interfaces-reference configurations; 1988
ITU-T I.430	Basic user-network interface layer 1 specification; 1988
ITU-T I.431	Primary Rate User-Network Interface Layer 1 Specification; 1988
ITU-T G.703	Physical/Electrical characteristics of hierarchical digital interfaces; 1988
ITU-T G.704	Synchronous frame structures used at primary and secondary hierarchical level; 1988
ITU-T G.706	Frame alignment and cyclic redundancy check (CRC) procedures relating to basic frame structures defined in recommendation G.704; 1988
ITU-T G.712	Transmission performance characteristics of pulse code modulation; 1992
ITU-T X.21	Interface between Data Terminal Equipment and Data Circuit Terminating Equipment for synchronous operation on Public Data Networks; 1992
ITU-T G.823	The control of jitter and wander within digital networks which are based on the 2048 kbit/s hierarchy; 1993
ETS 300 001	Attachments to Public Switched Telephone Network (PSTN); General technical requirements for equipment connected to an analogue subscriber interface in the PSTN; 1992
ETS 300 011	Integrated Services Digital Network; Primary rate usernetwork interface Layer 1 specification and test principles; 1992
ETS 300 011/A1	Integrated Services Digital Network; Primary rate usernetwork interface Layer 1 specification and test principles;1992
ETS 300 012	Integrated Services Digital Network (ISDN); Basic usernetwork interface Layer 1 specification and test principles; April 1992
ETS 300 125	Integrated Services Digital Network (ISDN); User-network interface data link layer specification. Application of ITU-T Recommendations Q.920/I.440 and Q.921/I.441; 1991
ETS 300 324	Signalling protocol and Switching (SPS);V interfaces at the digital Local Exchange (LE) V 5.1 interface for the support of Access Network (AN); 1994
ETR 080	Transmission and Multiplexing (TM); ISDN basic rate access; Digital transmission system on metallic local lines; July 1993

2 Access Network Interfaces

The following Figure 1 describes the generic structure of an ANE.

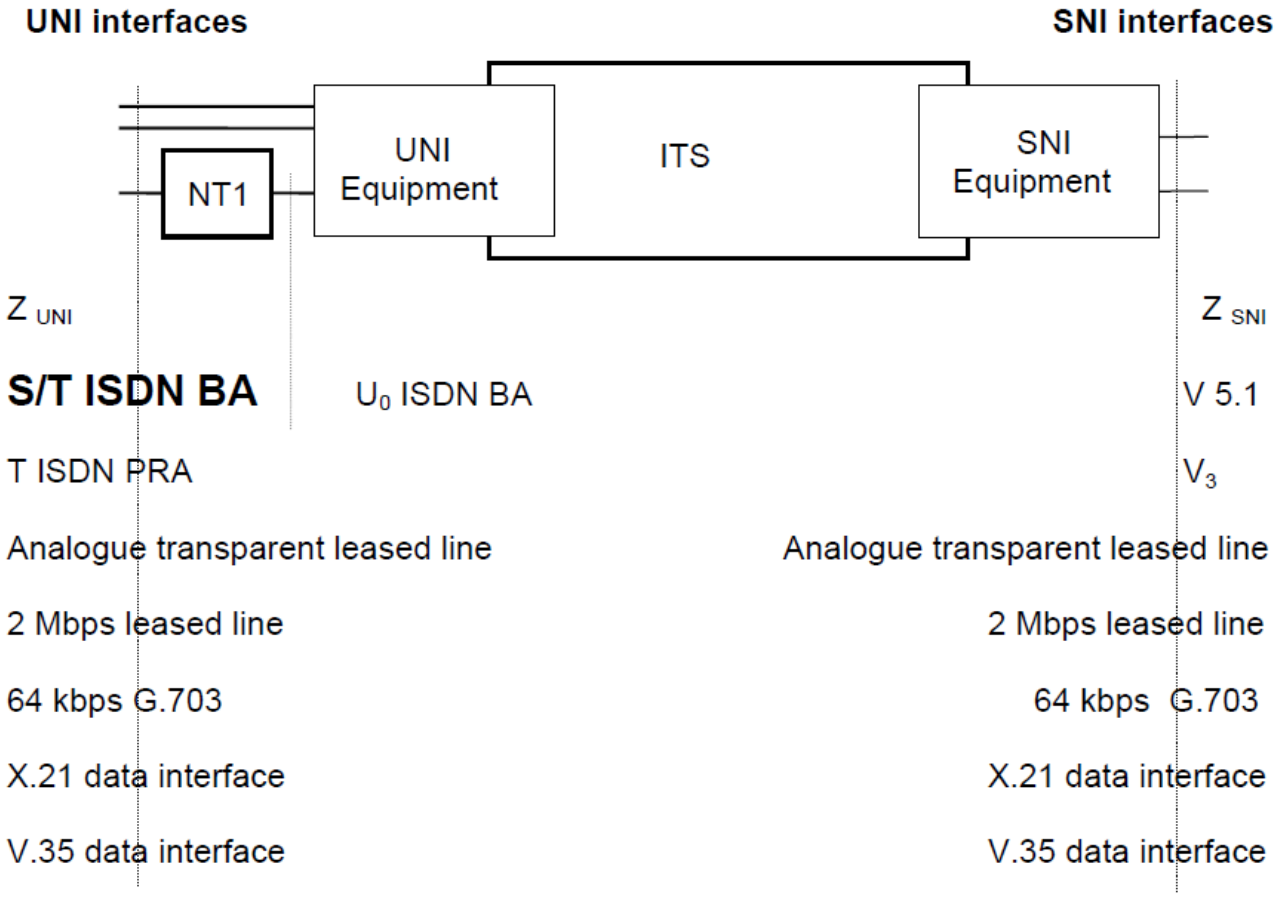

Figure 1: Generic structure of ANE

3 S/T interface for ISDN Basic Access

3.1 General requirement

NT1 parameters shall comply with ETS 300 012 with the following specified Options.

3.2 ETS 300 012, clause 7.1.4.4.2

TE connection surge capability

3.2.1 The maximum number of terminals to be fed from Power Source 1 (normal mode) is 4 of 1 W each.

3.2.2 The NT1 shall provide at least 4.4 W (4 W multiplied by 1.1 bus-wiring minimum loading factor).

3.3 ETS 300012, clause 7.3.1

Power available for an APS
Not applicable.

3.4 ETS 300 012, clause 7.4

Additional requirements for NT1 restricted mode source for compatibility with an APS
Not applicable (see 3.2.3 above).

3.5 ETS 300 012, clause A.4.5

NT and TE associated wiring
The terminating resistors of 100 Ω at the NT1 side shall be connected internally to the NT1. It shall be possible to switch on or off the terminating resistor connection (user accessible parts).

3.6 ETS 300 012, clause A.6.2.4.1

Activating/deactivating NTs
The value of timer T2 is in range 25 ms to 100 ms.

3.7 ETS 300 012, clause A.8.6.2

The NT1 complies with all possible wiring configurations, except the NT1 STAR configuration acc. to figure A-4/I.430.
Selection of the applicable wiring configurations takes place by means of miniswitches.

3.8 ETS 300 012, clause A.8.6.3

NT1 receiver input delay characteristics
The NT1 accommodates round trip delays for all possible wiring configurations, except the NT1 STAR configuration acc. to figure A-4/I.430.
The delay is dependent on the selected wiring configuration.

3.9 ETS 300 012, clause A.9.1.

Reference configuration
NOTE 4: The provision of Power Source 2 is not required.
NOTE 5: The remote powering of the NT1 from a TE via the interface (power sink 3) shall not be possible.
NOTE 6: Not applicable.

3.10 ETS 300 012, clause A.9.1.2

Provision of Power Sources and sinks.

3.10.1 The capability of the provision of Power Source 1 normal , shall be possible by means of an Internal Power Supply (IPS as an integral part of the NT1).

3.10.2 The provision of Power Source 2: is not required

3.10.3 Power Sinks 1 and 2: Not applicable.

3.11 ETS 300 012, clause A.9.2.1

Power Source 1 normal and restricted power conditions
Power Source 1 shall provide both normal and restricted power conditions.

3.12 ETS 300 012, clause A.9.2.3

Minimum voltage of Power Source 2
Not applicable.

3.13 ETS 300 012, clause A.9.3.2

Power Source 2 - optional third pair
Not applicable.

4 Conclusive statements

Published as an internal technical standard by Česká telekomunikační infrastruktura a.s.

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