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**Network Aspects (NA);
Metropolitan Area Network (MAN)
Physical Layer Convergence Procedure (PLCP) for 622,080 Mbit/s
CCITT Recommendations G.707, G.708 and G.709
SDH based systems
Protocol Implementation Conformance Statement (PICS)**

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Foreword

This European Telecommunication Standard (ETS) has been prepared by the Network Aspects (NA) Technical Committee of the European Telecommunications Standards Institute (ETSI).

This ETS details the Protocol Implementation Conformance Statement (PICS) for the Physical Layer Convergence Procedure (PLCP) for a European Metropolitan Area Network (MAN) based on the Distributed Queue Dual Bus (DQDB) access method as defined in ETS 300 212 [2] operating at a transmission rate of 622,080 Mbit/s in accordance with ETS 300 276 [1].

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1 Scope

This European Telecommunication Standard (ETS) defines the Protocol Implementation Conformance Statement (PICS) for the Physical Layer Convergence Procedure (PLCP) at 622,080 Mbit/s for use in the context of a subnetwork of a Metropolitan Area Network (MAN) as defined in ETS 300 276 [1].

2 Normative references

This ETS incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed below. For dated references, subsequent amendments to or revisions 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] ETS 300 276: "Network Aspects (NA); Metropolitan Area Network (MAN) Physical layer convergence procedure for 622,080 Mbit/s CCITT G.707-9 SDH based systems".
- [2] ETS 300 212: "Network Aspects (NA); Metropolitan Area Network (MAN) Media access control layer and physical layer specification".
- [3] IEEE Standard 802.6 (1990): "Distributed Queue Dual Bus (DQDB) Subnetwork of a Metropolitan Area Network (MAN)".
- [4] CCITT Recommendation I.432 (1991): "B-ISDN user-network interface - Physical layer specification".

3 Definitions

For the purposes of this ETS, the definitions as defined in IEEE Standard 802.6 [3] shall apply.

4 Symbols and abbreviations

For the purposes of this ETS, the symbols and abbreviations as defined in IEEE Standard 802.6 [3] shall apply.

Additionally, for this PICS proforma, the following abbreviations are used in defining the support type of a feature, parameter or capability.

m	mandatory
o	optional
c	conditional
d	default value defined
n/a	not applicable

When used in the column labelled "Value" the following abbreviations are defined.

xx - yy	from number xx to number yy
xx/yy	either number xx or number yy applies, depending on the actual conditions

For each of the conditional items, an explanation of the parameter or capability under which the feature, parameter or capability is mandatory is given in the Clause or subclause in which the conditional items appear.

The notation X_ in the column "Support" means that numbers may be entered in this place pointing to notes which indicate deviation from the standard.

For ease of reference, the numbering of the following Clauses is identical to that contained in ETS 300 276 [1].

5 PICS for ETS 300 276

An implementation is required to conform to the functional models defined in ETS 300 276 [1] with regard to all of the externally observable effects.

5.1 CCITT Recommendation I.432 relationship to the PLCP

See also CCITT Recommendation I.432 [4].

Table 1

Item	Feature	Reference	Status	Predicate	Value	Support
5.1	General mapping	5.1	m			Y[] N[] X_

5.2 The PLCP frame format

Table 2

Item	Feature	Reference	Status	Predicate	Value	Support
5.1	Format per figures 1 and 2	5.2	m			Y[] N[] X_

5.3 PLCP path overhead field definitions

Table 3

Item	Feature	Reference	Status	Predicate	Value	Support
5.1	Path trace octet	5.3.1	m			Y[] N[] X_
5.2	Bit interleaved parity	5.3.2	m			Y[] N[] X_
5.3	Signal Label	5.3.3	m		00010100	Y[] N[] X_
5.4	G1 octet FEBE	5.3.4	m			Y[] N[] X_
5.5	G1 octet FERF	5.3.4	m			Y[] N[] X_
5.6	Default code for G1 reserved bits	5.3.4	m,d		000	Y[] N[] X_
5.7	Multiframe indicator	5.3.5	m			Y[] N[] X_
5.8	LSS in H4 octet	5.3.5	m			Y[] N[] X_
5.9	M1 and M2 octets	5.3.6	m			Y[] N[] X_
5.10	Z4,Z5 octets	5.3.7	m,d		0000 0000	Y[] N[] X_

5.4 PLCP behaviour during faults

This subclause provides an overview of the behaviour of the PLCP layer during transmission system faults, PLCP faults, and DQDB layer faults. Details of the behaviour of the PLCP are given in subclause 5.6.

Table 4

Item	Feature	Reference	Status	Predicate	Value	Support
5.1	Transmission of void slots	5.4	m		Repeating 00000000 octets	Y[] N[] X_
5.2	Transmission of rx_link_dn	5.4 5.6.3	m			Y[] N[] X_
5.3	Transmission of LSS code hob_incapable	5.4 5.6.3	m			Y[] N[] X_
5.4	Timer P_x reset and started when Out-Of-Frame or Out-Of-Slot-Delineation detect	5.4	m		1 ms ± 10 µs	Y[] N[] X_
5.5	Timer P_x expires	5.4	m			Y[] N[] X_
5.6	Stopping of Timer_P_x	5.4	m			Y[] N[] X_

5.5 PLCP behaviour during DQDB layer out of service

Table 5

Item	Feature	Reference	Status	Predicate	Value	Support
5.1	PLCP continues normal operation	5.5	m			Y[] N[] X_
5.2	M1, M2 octets relayed unmodified	5.5	m			Y[] N[] X_

5.6 PLCP operation

5.6.1 Receiver operation

This subclause describes details of the receiver operation.

Table 6

Item	Feature	Reference	Status	Predicate	Value	Support
5.1	Bus A and Bus B slot delineation state machines provided for HCS method	5.6.1	m			Y[] N[] X_
5.2	Bus A and Bus B framing state machines provided	5.6.1 figure 7	m			Y[] N[] X_

5.6.2 Transmitter operation

This subclause describes details of the transmitter operation.

Table 7

Item	Feature	Reference	Status	Predicate	Value	Support
5.1	125 µs frame generation	5.6.2	m			Y[] N[] X_
5.2	Transmission of Void slots	5.6.2	m,d		0000 0000	Y[] N[] X_
5.3	H4 pointer	5.6.2	m			Y[] N[] X_
5.4	Addition of 01010101 to HCS	5.6.2	m			Y[] N[] X_

5.6.3 Link status signal operations table

Table 8 describes the behaviour of the PLCP in each state of the framing state machine; this information is in addition to requirements in subclause 11.3.1 of IEEE Standard 802.6 [3].

Table 8

Item	Feature	Reference	Status	Predicate	Value	Support
5.1	LSS operations	5.6.3 table 2	m			Y[] N[] X_

5.6.4 Physical layer frame timing operations table

This subclause supplements the timing source information of tables 10.10(b), 10.11, and 10.12 of IEEE Standard 802.6 [3] and details the physical layer frame timing operations.

Table 9

Item	Feature	Reference	Status	Predicate	Value	Support
5.1	Frame timing operations	5.6.4 table 3	m			Y[] N[] X_

History

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