The ATM Forum
Technical Committee

PICS Proforma for the 25.6 Mb/s over Twisted Pair Cable Physical Layer Interface

af-test-0051

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1. Introduction

Prior to the conformance testing and the interoperability testing of IUTs, it is necessary to have the PICS (Protocol Implementation Conformance Statement) documents for both implementations.

This particular PICS deals with the implementation of the 25.6 Mb/s over Twisted Pair Cable.

1.1 Scope

This document provides the PICS proforma for the Mid-range Physical Layer Interface as described in the Physical Interface Specification for 25.6 Mb/s over Twisted Pair Cable [1], in compliance with the relevant requirements, and in accordance with the relevant guidelines, given in ISO/IEC 9646-2 [2].

1.2 Normative References

[1] AF-PHY-0040.000, “Physical Interface Specification for 25.6 Mb/s over Twisted Pair Cable”, June 11,1995.

[2] ISO/IEC 9646-2 1990, Information technology - Open systems inter-connection - Conformance testing methodology and framework - Part 2: Abstract test suite specification. (See also ITU-TS Recommendation X.290 (1991)).

[3] IEC 603-7, “Connectors for Frequencies Below 3 Mhz for Use with Printed Boards Part 7: Detail Sepcification for Connectors, 8-Way, Including Fixed and Free Connectors with Common Mating Features First Edition” (1993).

[4] EIA/TIA, "Commercial Building Telecommunications Cabling Standard, TIA/EIA-568-A", Draft Version, July, 1991.

1.3 Definitions

ATM	Asynchronous Transfer Mode
HEC	Header Error Control
IUT	Implementation Under Test
M	Mandatory
O	Optional
O.<n>	Optional, but, if chosen, support is required for either at least one or only one of the options in the group labelled by the same numeral <n>
P	Prohibited
PMD	Physical Media Dependent
S.<i>	Supplementary information number i
TC	Transmission Convergence
X.<i>	Exceptional information number i

1.4 Conformance Statement

The supplier of a protocol implementation which is claimed to conform to the Physical Interface Specification for 25.6 Mb/s over Twisted Pair Cable is required to complete a copy of the PICS proforma provided in Section 3 and is required to provide the information necessary to identify both the supplier and the implementation.

2. Identification of the Implementation

Implementation Under Test (IUT) Identification

IUT Name: ____

____

IUT Version: ____

____

System Under Test (SUT)

SUT Name: ____

____

Hardware Configuration: ____

____

____

Operating System: ____

Product Supplier

Name: ____

Address: ____

____

Telephone Number: ____________________

Facsimile Number: ____________________

E-mail Address (optional): ____

Additional Information: ____

Client

Name: ____

Address: ____

____

Telephone Number: ____________________

Facsimile Number: ____________________

E-mail Address (optional): ____________________________________

Additional Information: _______________________________________

PICS Contact Person

Name: ____

Address: ____

____

Telephone Number: ____________________

Facsimile Number: ____________________

E-mail Address (optional): ____________________________________

Additional Information: _______________________________________

PICS PICS-System Conformance Statement

Provide the relationship of the PICS with the System Conformance Statement for the system:

____

____

____

Identification of the protocol

This PICS proforma applies to the following document:

AF-PHY-0040.000, “Physical Interface Specification for 25.6 Mb/s over Twisted Pair Cable”.

3. PICS Proforma

3.1 Global Statement of Conformance

The implementation described in this PICS meets all of the mandatory requirements of the reference protocol.

___Yes

___No

Note: Answering "No" indicates non-conformance to the specified protocol. Non-supported mandatory capabilities are to be identified in the following tables, with an explanation in the comments section of each table of why the implementation is non-conforming.

3.2 Instructions for Completing the PICS Proforma

The PICS Proforma is a fixed-format questionnaire. Answers to the questionnaire should be provided in the rightmost columns, either by simply indicating a restricted choice (such as Yes or No), or by entering a value or a set of range of values.

A supplier may also provide additional information, categorized as exceptional or supplementary information. This additional information should be provided as items labelled X.<i> for exceptional information, or S.<i> for supplemental information, respectively, for cross reference purposes, where <i> is any unambiguous identification for the item. The exceptional and supplementary information is not mandatory and the PICS is complete without such information. The presence of optional supplementary or exception information should not affect test execution, and will in no way affect interoperability verification.

3.3 Physical Media Dependent (PMD) Specification

Item	**Protocol Feature**	**Status Predicate**	**Specification Reference**	**Support**
3.3.1	Does the IUT implement the IEC 603-7 [3] (RJ-45) Media interface connector?	O.1	2.4.1.8 (T2.7)	Yes__No__X__ S__
3.3.2	Does the IUT implement the STP Media connector as specified in EIA/TIA-568-A [4] Section 11?	O.1	2.4.3.4 (T2.8)	Yes__No__X__ S__
3.3.3	Does the IUT transmitter conform to the line and bit rate requirements?	M	2.1.1	Yes__No__X__ S__
3.3.4	Does the IUT transmitter conform to Bit Rate Symmetry?	M	2.1.2	Yes__No__X__ S__
3.3.5	Will the IUT achieve the BER specified under the conditions specified up to 100 meters total?	M	2.1.3, 2.4	Yes__No__X__ S__
3.3.6	Will the IUT transmitter meet Zero-crossing requirements specified?	M	2.2.1	Yes__No__X__ S__
3.3.7	Will the IUT transmitter meet the Duty Cycle Distortion requirements as specified?	M	2.2.1.1	Yes__No__X__ S__
3.3.8	Does the IUT Transmitter meet the Edge Jitter requirements as specified?	M	2.5.4.1	Yes__No__X__ S__
3.3.9	Does the IUT transmitter conform to the Transmitter Waveshapes as specified?	M	2.2.2 (T2.0 thru T2.4)	Yes__No__X__ S__
3.3.10	Does the IUT transmitter conform to the Return Loss?	M	2.2.4	Yes__No__X__ S__
3.3.11	Will the IUT receiver acquire timing as specified?	M	2.3.1	Yes__No__X__ S__
3.3.12	Will the IUT receiver conform to the Return Loss as specified?	M	2.3.2	Yes__No__X__ S__
Comments: O.1: The IUT must support one of these options.				

3.4 Transmission Convergence (TC) Sublayer Functions

Item	**Protocol Feature**	**Status Predicate**	**Specification Reference**	**Support**
3.4.1	Does the IUT scramble and descramble the cells as described?	M	3.1.1	Yes__No__X__ S__
3.4.2	Does the IUT reset the scrambler PRNG as described?	M	3.1	Yes__No__X__ S__
3.4.3	Does the IUT generate the PRNG as described?	M	3.1.1	Yes__No__X__ S__
3.4.4	Does the IUT encode/decode the line symbols as described?	M	3.2	Yes__No__X__ S__
3.4.5	Does the IUT maintain the symbol pair structure and send and receive commands as described?	M	3.2.1	Yes__No__X__ S__
3.4.6	Does the IUT transmitter send the Sync Event Command as described?	O	3.2.3	Yes__No__X__ S__
3.4.7	Will the IUT receiver signal reception of the Sync Event Command for timing reference?	O	3.2.3	Yes__No__X__ S__
3.4.8	Will the IUT receiver accept the Sync Event Commands as described?	M	3.2.3	Yes__No__X__ S__
3.4.9	Does the IUT delineate cells as described?	M	3.2.3	Yes__No__X__ S__
3.4.10	Does the IUT encode/decode the NRZI line signal as described?	M	3.3	Yes__No__X__ S__
3.4.11	Does the IUT generate and verify the HEC byte as described?	M	3.4	Yes__No__X__ S__
Comments: .				