The ATM Forum
Technical Committee

PICS Proforma for the 100 Mbps Multimode Fibre Physical Layer Interface

af-test-0025.000

September, 1994

PICS Proforma for the 100 Mbps Multimode Fibre Physical Layer Interface

Version 1.0

September, 1994

Acknowledgement

The assistance of Mustapha Aissaoui and Fai Fan who provided source material for this document is appreciated. Without their efforts this document could not have been assembled.

Walter Buehler, Editor

Table of Contents

1. Introduction

Prior to the conformance testing and the interoperability testing of two 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 100 Mbps Multimode Fibre Physical Layer Interface

1.1 Scope

This document provides the PICS proforma for the 100 Mbps Multimode Fibre Physical Layer Interface as described in Section 2.3 of the ATM User-Network Interface Specification Version 3.0 [1], in compliance with the relevant requirements, and in accordance with the relevant guidelines, given in ISO/IEC 9646-2 [3].

1.2 Normative References

[1] ATM Forum, "ATM User-Network Interface Specification Version 3.0", 1993.

[2] ISO/IEC 9646-1 1991, Information technology - Open systems interconnection - Conformance testing methodology and framework - Part 1: General Concepts. (See also ITU-T Recommendation X.290 (1991)).

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

[4] ITU-T, "Integrated Services Digital Network (ISDN): Overall Network Aspects and Functions, ISDN User-Network Interfaces, B-ISDN User-Network Interface Physical Layer Specification, Recommendation I.432", 3/93.

[5] ISO/IEC 9314-3 1993, "Information Processing System - Fibre Distributed Data Interface (FDDI) - Part 3: Physical Layer Medium Dependent (PMD) First Edition".

1.3 Definitions

ATM	Asynchronous Transfer Mode
CS	Convergence Sublayer

HEC	Header Error Control
IUT	Implementation Under Test
LOS	Loss of Signal
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
PDU	Protocol Data Unit
S.<i>	Supplementary information number i
SAR	Segmentation and Reassembly (Sublayer)
SDU	Service Data Unit
X.<i>	Exceptional information number i

1.4 Conformance Statement

The supplier of a protocol implementation which is claimed to conform to the 100 Mbps Multimode Fibre Physical Layer Interface is required to complete a copy of the PICS proforma provided in Section 3.0 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 Name: _____

_____

Hardware Configuration: _____

_____

_____

Operating System: _____

Product Supplier

Name: _____

Address: _____

_____

Telephone Number: _____

Facsimile Number: _____

Additional Information: _____

Client

Name: _____

Address: _____

_____

Telephone Number: _____

Facsimile Number: _____

Additional Information: _____

PICS Contact Person

Name: _____

Address: _____

_____

Telephone Number: _____

Facsimile Number: _____

Additional Information: _____

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:

ATM Forum, "ATM User-Network Interface Specification Version 3.0", 1993.

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 exception and supplementary information are 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 Medium Characteristics

Item	Protocol Feature	Status Pred.	Spec. Ref.	Support
3.3.1	Does the optical output interface and the active input interface adhere to to the specification in [5]?	M	2.3.1.1	Yes_ No_ X__ S__
3.3.2	Is the fibre connector used the MIC duplex connector specified for FDDI in [5]?	M	2.3.1.1	Yes_ No_ X__ S__
Comments:				

3.4 Line Coding

Item	Protocol Feature	Status Pred.	Spec. Ref.	Support
3.4.1	Does the implementation use the 4B/5B coding as described in [1]?	M	2.3.1.2	Yes_ No_ X__ S__
3.4.2	Does the IUT support the defined control codes listed in Figure 2-13 of [1]?	M	2.3.1.2	Yes_ No_ X__ S__
Comments:				

3.5 Line Rates and Bit Timing

Item	Protocol Feature	Status Pred.	Spec. Ref.	Support
3.5.1	Does the physical layer operate at the nominal rate of 125 Mbaud line rate?	M	2.3.1.3	Yes_ No_ X__ S__
Comments:				

3.6 Idle Line

Item	Protocol Feature	Status Pred.	Spec. Ref.	Support
3.6.1	While data or control codes are not being sent, does the IUT transmit the "JK" idle code continuously?	M	2.3.2.1	Yes_ No_ X__ S__
Comments:				

3.7 Cell Delineation

Item	Protocol Feature	Status Pred.	Spec. Ref.	Support
3.7.1	Is each cell transmitted by the IUT preceded by a "TT" code (start of cell code)?	M	2.3.2.2	Yes_ No_ X__ S__
3.7.2	Is there at least of 1 "JK" symbol pair transmitted on the link every 0.5 second?	M	2.3.2.2	Yes_ No_ X__ S__
3.7.3	Are the 54 symbol pairs (53 symbol pairs representing 53 bytes plus the start of cell code) transmitted contiguously on the line?	M	2.3.2.2	Yes_ No_ X__ S__
Comments:				

3.8 HEC Generation/Verification

Item	Protocol Feature	Status Pred.	Spec. Ref.	Support
3.8.1	Does the IUT implement the HEC error detection as defined in [4] Section 4.3.1?	M	2.3.2.3	Yes_ No_ X__ S__
3.8.2	Does the IUT generate the HEC byte as described in [4] Section 4.3.2?	M	2.3.2.3	Yes_ No_ X__ S__
3.8.3	Does the implementation discard the cell upon detection of a header error?	M	2.3.2.3	Yes_ No_ X__ S__
Comments:				