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the Integrated Services Digital Network (ISDN);
Part 1: ETS 300 075 Protocol Implementation Conformance
Statement (PICS) proforma

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European Telecommunications Standards Institute

ETSI Secretariat

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Contents

Foreword

Part 1 of this final draft Interim European Telecommunication Standard (I-ETS) has been produced by the Terminal Equipment (TE) Technical Committee of the European Telecommunications Standards Institute (ETSI), and is now submitted for the Voting phase of the ETSI standards approval procedure.

An ETSI standard may be given I-ETS status either because it is regarded as a provisional solution ahead of a more advanced standard, or because it is immature and requires a "trial period". The life of an I-ETS is limited to three years after which it can be converted into an ETS, have its life extended for a further two years, be replaced by a new version, or be withdrawn.

This is part 1 of an I-ETS which comprises three parts as follows:

Terminal Equipment (TE); Conformance testing for file transfer over the Integrated Services Digital Network (ISDN):

Part 1: **ETS 300 075 Protocol Implementation Conformance Statement (PICS) proforma;**

Part 2: ETS 300 075 Test Suite Structure and Test Purposes (TSS&TP);

Part 3: Conformance testing for ETS 300 075 restricted by ETS 300 383 - Abstract Test Suite (ATS).

Proposed announcement date	
Date of latest announcement of this I-ETS (doa):	3 months after ETSI publication

Introduction

To evaluate the conformance of a particular implementation, a statement of which capabilities and options have been implemented for a given specification is needed. Such a statement is called a Protocol Implementation Conformance Statement (PICS).

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1 Scope

Part 1 of this Interim European Telecommunication Standard (I-ETS) provides a Protocol Implementation Conformance Statement (PICS) proforma for the Telesoftware Data Unit (TDU) layer protocol requirements of ETS 300 075 [1], in compliance with the relevant requirements, and in accordance with the relevant guidance, given in ISO/IEC DIS 9646-7 [4].

2 Normative references

Part 1 of this I-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 hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this I-ETS only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

[1]   ETS 300 075 (1994): "Terminal Equipment (TE); Processable data, File transfer".

[2]   ISO/IEC 9646-1 (1994): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts".

[3]   ISO/IEC 9646-2 (1994): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 2: Abstract Test Suite specification".

[4]   ISO/IEC DIS 9646-7 (1993): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statements".

[5]   ITU-T Recommendation T.51 (1993): "Coded character sets for telematic services".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of this part of the I-ETS, the definitions in ETS 300 075 [1] and ISO/IEC DIS 9646-7 [4] apply along with the following terms defined in ISO/IEC 9646-1 [2]:

Protocol Implementation Conformance Statement (PICS): An Implementation Conformance Statement (ICS) for an implementation or system claimed to conform to a given protocol specification.

PICS proforma: An ICS proforma for a protocol specification.

3.2 Abbreviations

For the purposes of this I-ETS, the following abbreviations apply:

BK   Basic Kernel
ICS   Implementation Conformance Statement
ISDN   Integrated Services Digital Network
IUT   Implementation Under Test
PDU   Protocol Data Unit
PICS   Protocol Implementation Conformance Statement
SCS   System Conformance Statement
Spt   Support
SS or Sym. Service   Symmetrical Service
Sts   Status
SUT   System Under Test
TDU   Telesoftware Data Unit
TE   Terminal Equipment
TTCN   Tree and Tabular Combined Notation

4 Conformance requirement concerning PICS

The supplier of a protocol implementation which is claimed to conform to ETS 300 075 [1] shall complete a copy of the PICS proforma provided in annex A and shall provide the information necessary to identify both the supplier and the implementation.

Annex A (normative):   PICS proforma for ETS 300 075

The following table of contents refers to the location of the tables containing the indexed questions of annex A.

Questions

A.1   Instructions for completing the PICS proforma

A.1.1   Purposes and structure

The purpose of this PICS is to provide a mechanism whereby a supplier of an implementation of the requirements of ETS 300 075 [1] may provide information in a standard form.

The PICS proforma is subdivided into clauses for the following categories of information:

-       implementation details;
-       protocol details;
-       overall conformance claim;
-       static requirements:
        1)   roles;
        2)   major capabilities;
        3)   negotiation capabilities;
        4)   Protocol Data Units (PDU);
        5)   Protocol Data Units parameters.
-       timer;
-       supplementary services;
-       dynamic requirements.

A.1.2   Symbols, abbreviations and conventions

The PICS proforma contained in this annex is comprised of information in a tabular form in accordance with the guidelines presented in ISO/IEC DIS 9646-7 [4].

References within tables are to ETS 300 075 [1], except where explicitly stated.

A.1.2.1 Standardized symbols for the status column

The following notations, defined in ISO/IEC 9646-2 [3] are used in the proforma to indicate the status of a question:

- m (mandatory): the capability shall be implemented, in conformance with the protocol standard;

- o (optional): the capability may be implemented, and if it is implemented it shall conform to the protocol specification (cf. ISO/IEC 9646-1 [2], clause A.3);

- o.n (optional): the capability may be implemented, and if it is implemented it shall conform to the protocol specification, and the option is mutually exclusive or selectable among a set (cf. ISO/IEC 9646-1 [2], clause A.3);

- x (prohibited): there is a requirement not to use this capability in a given context;

- c (conditional): the requirement on the capability depends on the selection of other optional or conditional items;

- n/a (not applicable): in the given context the base specification makes it impossible to use this capability.

If appropriate, a "c" followed by an integer is placed in the status column, providing a reference to a conditional status expression defined as a note inside the table. As defined in ISO/IEC DIS 9646-7 [4], this predicate expression is consistent with Tree and Tabular Combined Notation (TTCN) boolean expressions (i.e. IF ... THEN (IF ... THEN ..... ELSE) ELSE .....). In all cases, "ELSE n/a" is implied if an ELSE clause is omitted.

A.1.2.2 Standardized symbols for the support column

To specify the level of support for all entries, the standardized symbols for the support column shall be as follows:

- y (supported): the capability is implemented in conformance with the ETS;

- n (not supported): the capability is not implemented;

- n/a (no answer required): the question has a status value of either not applicable or out of scope.

A.1.2.3 The supported values column

A "supported" values column, if appropriate, in which the values or ranges of values supported can be indicated, as well as type and length, if relevant.

A.1.3 Instructions for completing the PICS

The supplier of the implementation shall enter an explicit statement in each of the boxes provided, using the notation described in subclause A.1.2. A specific instruction is provided in the text which precedes each table.

A.2 Identification of the implementation

A.2.1 Date of statement

....

A.2.2 Implementation Under Test (IUT) identification

IUT name:

....

....

IUT version:

....

A.2.3 System Under Test (SUT) identification

SUT name:

....

....

Hardware configuration:

....

....

....

Operating system:

....

A.2.4 Product supplier

Name:

....

Address:

....

....

....

Telephone number:

....

Facsimile number:

....

Additional information:

....

....

....

A.2.5   Client

Name:

....

Address:

....

....

....

Telephone number:

....

Facsimile number:

....

Additional information:

....

....

....

A.2.6   ICS contact person

Name:

....

Telephone number:

....

Facsimile number:

....

Additional information:

....

....

....

A.3   ICS/System Conformance Statement (SCS)

Provide the relationship of the ICS with the SCS for the system:

    ....

    ....

    ....

    ....

A.4   Identification of the protocol

This PICS proforma applies to the following standard:

- Title of specification: Terminal Equipment (TE); Processable data, File transfer;
- Reference no.: ETS 300 075 [1], 2nd Edition;
- Date of publication: February 1994.

A.5   Global statement of conformance

The implementation described in this PICS meets all the mandatory requirements of ETS 300 075 [1].

[ ] **Yes**

[ ] **No**

    NOTE: Answering "No" to this question indicates non-conformance to the protocol
             specification. Identify non-supported mandatory capabilities in the ICS, with an
             explanation of why the implementation is non-conforming.

A.6   Static requirements

A.6.1   Roles

The supplier of the implementation shall state the support of the roles of the implementation, in the boxes
below.

The support of the implicit role in the table below corresponds to the role assigned at the association
regime establishment.

Table A.1: Implicit roles

Item No.	Role	Ref.	Status	Support
1	Master	4.1.2.2.3	o.1	
2	Slave	4.1.2.2.3	o.1	
o.1	it is mandatory to support at least one of these options.			

The support of the explicit role in the table below corresponds to the role assigned for the access regime
or the transfer regime.

Table A.2: Explicit roles

Item No.	Role	Ref.	Status	Support
1	Master	4.1.2.2.3	o.2	
2	Slave	4.1.2.2.3	o.2	
3	Sender	4.1.2.2.3	o.3	
4	Receiver	4.1.2.2.3	o.3	
o.2	it is mandatory to support at least one of these options.			
o.3	it is mandatory to support at least one of these options.			

A.6.2   Major capabilities

A.6.2.1   Service classes

The supplier of the implementation shall state the support of the service(s) class(es) of the implementation, in the box below.

Table A.3: Service classes

Item No.	Service class	Ref.	Status	Support
1	Basic kernel	4.1.3.1.2.1	o.4	
2	Symmetrical service	4.1.3.1.2.1	o.4	
o.4	it is mandatory to support at least one of the two service classes.			

A.6.2.2   Protocol classes - Regimes

The supplier of the implementation shall state the support of the regimes of the implementation, in the table A.4.

Table A.4: Regimes

Item No.	Regime	Ref.	Status	Support
1	Association	4.1.2.3.2	m	
2	Access	4.1.2.3.3	c1	
3	Transfer	4.1.2.3.4	m	
c1	IF A.3/2 THEN m ELSE n/a.			

A.6.2.3   Functional units

The supplier of the implementation shall state the support of the functional units of the implementation, in the box below.

Table A.5: Functional units: services

Item No.	Service	Ref.	Status	Support
1	File directory service	4.1.4.3	c2	
2	Load service	4.1.4.4	c2	
3	Save service	4.1.4.5	c2	
4	Rename service	4.1.4.6	c2	
5	Delete service	4.1.4.7	c2	
6	Typed Data service	4.1.4.8	c2	
7	Mass transfer service	4.1.5.1	m	
8	Exception report service	4.1.5.2	m	
c2	IF A.3/2 THEN o ELSE n/a.			

A.6.2.4 Service elements

The supplier of the implementation shall state the support of the service elements of the implementation, in table A.6.

Table A.6: Service elements

Item No.	Service	Ref.	Role: Master		Role: Slave	
			Sts	Spt	Sts	Spt
1	T_ASSOCIATE	4.1.2.3.1	m		m	
2	T_RELEASE	4.1.2.3.1	m		m	
3	T_U_ABORT	4.1.2.3.1	c3		m	
4	T_P_ABORT	4.1.2.3.1	c3		c3	
5	T_ACCESS	4.1.2.3.1	c3		c3	
6	T_END_ACCESS	4.1.2.3.1	c3		c3	
7	T_DIRECTORY	4.1.2.3.1	c4		c4	
8	T_LOAD	4.1.2.3.1	c4		c4	
9	T_SAVE	4.1.2.3.1	c4		c4	
10	T_RENAME	4.1.2.3.1	c5		c5	
11	T_DELETE	4.1.2.3.1	c5		c5	
12	T_TYPED_DATA	4.1.2.3.1	c5		c5	
13	T_WRITE	4.1.2.3.1	m		m	
14	T_WRITE_END	4.1.2.3.1	m		m	
15	T_U_EXCEPT	4.1.2.3.1	c3		m	
16	T_P_EXCEPT	4.1.2.3.1	c5		c5	
c3	IF A.3/2 THEN m ELSE n/a.					
c4	IF Basic Transfer Mode used THEN n/a ELSE c5.					
c5	IF A.3/2 THEN o ELSE n/a.					

A.6.3 Handling capabilities

The supplier of the implementation shall provide information to describe the negotiation options available in the protocol, and indicate which have been implemented, in the box below.

Those negotiation capabilities are only available in symmetrical service. The use of these services is negotiated during the Access regime establishment.

Table A.7: Capabilities in symmetrical service

Item No.	Service handled	Ref.	Role: Master		Role: Slave	
			Sts	Spt	Sts	Spt
1	File directory service	4.1.4.1.2.2	n/a		c6	
2	Load service	4.1.4.1.2.2	n/a		c6	
3	Save service	4.1.4.1.2.2	n/a		c6	
4	Rename service	4.1.4.1.2.2	n/a		o	
5	Delete service	4.1.4.1.2.2	n/a		o	
6	Typed Data service	4.1.4.1.2.2	o		o	
7	Exception report	4.1.4.1.2.2	o		o	
8	Basic Transfer Mode	4.1.4.1.2.6	o		o	
c6	IF Basic Transfer Mode is used THEN n/a ELSE o.					

A.6.4 Protocol Data Units (PDUs)

This subclause lists all the PDUs defined for the ETS 300 075 [1] protocol, grouped according to regime control. It concerns only the TDU layer, i.e. the PDUs of the T_Protocol.

A.6.4.1 Association PDUs

The supplier of the implementation shall state the support of association PDUs of the implementation in the boxes below.

A.6.4.1.1 Association PDUs/Association establishment

Table A.8: PDU/Association establishment

Item No.	PDU type	Ref	Status	Support
1	T_ASSOCIATE Request	4.1.3.1.1	m	
2	T_ASSOCIATE Response	4.1.3.1.1	c7	
c7	IF A.3/2 THEN m ELSE o.			

A.6.4.1.2 Association PDUs/Association release

Table A.9: PDU/Association release

Item No.	PDU type	Ref	Status	Support
1	T_RELEASE Request	4.1.3.2.1	m	
2	T_RELEASE Response	4.1.3.2.1	m	

A.6.4.1.3 Association PDUs/Association user abort

Table A.10: PDU/Association user abort

Item No.	PDU type	Ref	Status	Support
1	T_U_ABORT Request	4.1.3.3.1	c8	
c8	IF A.6/3 THEN m ELSE n/a.			

A.6.4.1.4 Association PDUs/Association provider abort

Table A.11: PDU/Association provider abort

Item No.	PDU type	Ref.	Status	Support
1	T_P_ABORT Indication	4.1.3.3.1	c9	
c9	IF A.6/4 THEN m ELSE n/a.			

A.6.4.2 Access PDUs

The supplier of the implementation shall state the support of access PDUs of the implementation in the boxes below.

A.6.4.2.1 Access PDUs/Access establishment

Table A.12: PDU/Access establishment

Item No.	PDU type	Ref.	Status	Support
1	T_ACCESS Request	4.1.4.1.1	c10	
2	T_ACCESS Response	4.1.4.1.1	c10	
c10	IF A.6/5 THEN m ELSE n/a.			

A.6.4.2.2 Access PDUs/Access end

Table A.13: PDU/Access end

Item No.	PDU type	Ref.	Status	Support
1	T_END_ACCESS Request	4.1.4.2.1	c11	
2	T_END_ACCESS Response	4.1.4.2.1	c11	
c11	IF A.6/6 THEN m ELSE n/a.			

A.6.4.3 Transfer PDUs

The supplier of the implementation shall state the support of transfer PDUs of the implementation in the boxes below.

A.6.4.3.1 Transfer PDUs/File directory

Table A.14: PDU/Directory service

Item No.	PDU type	Ref.	Status	Support
1	T_DIRECTORY Request	4.1.4.3.1	c12	
2	T_DIRECTORY Response	4.1.4.3.1	c12	
c12	IF A.6/7 THEN m ELSE n/a.			

A.6.4.3.2 Transfer PDUs/Load

Table A.15: PDU/Load service

Item No.	PDU type	Ref.	Status	Support
1	T_LOAD Request	4.1.4.4.1	c13	
2	T_LOAD Response	4.1.4.4.1	c13	
c13	IF A.6/8 THEN m ELSE n/a.			

A.6.4.3.3 Transfer PDUs/Save

Table A.16: PDU/Save service

Item No.	PDU type	Ref.	Status	Support
1	T_SAVE Request	4.1.4.5.1	c14	
2	T_SAVE Response	4.1.4.5.1	c14	
c14	IF A.6/9 THEN m ELSE n/a.			

A.6.4.3.4 Transfer PDUs/Rename service

Table A.17: PDU/Rename service

Item No.	PDU type	Ref.	Status	Support
1	T_RENAME Request	4.1.4.6.1	c15	
2	T_RENAME Response	4.1.4.6.1	c15	
c15	IF A.6/10 THEN m ELSE n/a.			

A.6.4.3.5 Transfer PDUs/Delete service

Table A.18: PDU/Delete service

Item No.	PDU type	Ref.	Status	Support
1	T_DELETE Request	4.1.4.7.1	c16	
2	T_DELETE Response	4.1.4.7.1	c16	
c16	IF A.6/11 THEN m ELSE n/a.			

A.6.4.3.6 Transfer PDUs/Typed_Data service

Table A.19: PDU/Typed Data service

Item No.	PDU type	Ref.	Status	Support
1	T_TYPED_DATA Request	4.1.4.8.1	c17	
c17	IF A.6/12 THEN m ELSE n/a.			

A.6.4.4 Mass transfer PDUs

The supplier of the implementation shall state the support of mass transfer PDUs of the implementation in the boxes below.

A.6.4.4.1 Mass transfer PDUs/Write service

Table A.20: PDU/Write service

Item No.	PDU type	Ref.	Status	Support
1	T_WRITE Request	4.1.5.1.1	m	
2	T_WRITE Response	4.1.5.1.1	m	

Table A.21: PDU/Write End service

Item No.	PDU type	Ref.	Status	Support
1	T_WRITE_END Request	4.1.5.1.1	m	
2	T_WRITE_END Response	4.1.5.1.1	m	

A.6.4.4.2 Exception report service

Table A.22: PDU/User Exception report service

Item No.	PDU type	Ref.	Status	Support
1	T_U_EXCEPTION_REPORT Request	4.1.5.2.1	c18	
c18	IF A.6/15 THEN m ELSE n/a.			

Table A.23: PDU/Provider exception report service

Item No.	PDU type	Ref.	Status	Support
1	T_P_EXCEPTION_REPORT Request	4.1.6.1.1	c19	
c19	IF A.6/16 THEN m ELSE n/a.			

A.6.5 **PDU parameters**

This subclause lists all the parameters of each PDU. The clause number given in "Reference" field refers to ETS 300 075 [1]. The supplier of the implementation shall state the support of PDU parameters of the implementation in the boxes below.

Some parameters authorize a default value. Even if this default value is not transmitted in the parameter field, the supplier of the implementation shall state the support of this value. This is described in ETS 300 075 [1], subclause 7.1.1.3.

A.6.5.1 Parameters of association PDUs

A.6.5.1.1 Association establishment request parameters

Table A.24: Association establishment/Request parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	**Support**
1	Called address	7.1.2.1.3	c20		string of 1 - 254 bytes	
2	Calling address	7.1.2.1.4	c20		string of 1 - 254 bytes	
3	Application name	7.1.2.1.5	m		see table A.24.1	
4	Application response timeout	7.1.2.1.6	o		0 1 - 255 secs	
5	Service Class	7.1.2.1.7	m		see table A.24.2	
6	Explicit confirmation	7.1.2.1.8	m		08 H: explicit confirmation (default value) ????0???: no explicit confirmation	
7	Identification	7.1.2.1.9	c20		see table A.24.3	
8	Request identifier	7.1.2.1.10	c20		???????0 B: no identifier requested ???????1 B: identifier requested	
9	User data	7.1.2.1.11	o		string of 1 - 254 bytes conforming to ITU-T Recommendation T.51 [5]	
c20	IF A.3/2 THEN o ELSE n/a.					

Table A.24.1: Application name parameter: values allowed

Item No.	Application name	Ref.	Sts	Spt	Value	
					Allowed	**Support**
1	Non-standardized name	7.1.2.1.5	o		first byte different from 21 H + string of 0 - 15 bytes	
2	Standardized applications	7.1.2.1.5	o		21 H + string of 0 - 15 bytes	

Table A.24.2: Service class parameter: values allowed

Item No.	Service class	Ref.	Sts	Spt	Value	
					Allowed	Supported
1	Basic Kernel	7.1.2.1.7	o.5		'01' B	
2	Symmetrical Service	7.1.2.1.7	o.5		'10' B	
3	Basic Kernel and Symmetrical Service	7.1.2.1.7	o.5		'11' B	
o.5	it is mandatory to support at least one of these values.					

Table A.24.3: Identification parameter: values allowed

Item No.	Identification parameter	Ref.	Sts	Spt	Value	
					Allowed	Supported
1	Identification	7.1.2.1.9	m		string of 1 - 31 bytes containing: - parameters of 1 - 12 bytes; - 2F H separator.	

A.6.5.1.2   Association establishment response parameters

Table A.25: Association establishment/Response_pos parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	Supported
1	Called address	7.1.2.1.3	c21		string of 1 - 254 bytes	
2	Result/Reason	7.1.2.1.2	c22		20 H	
3	Application response timeout	7.1.2.1.6	c21		0 1 - 255 secs	
4	Identification	7.1.2.1.9	c21		see table A.24.3	
5	User data	7.1.2.1.11	c21		string of 1 - 254 bytes conforming to ITU-T Recommendation T.51 [5]	
c21	IF A.8/2 AND symmetrical service supported THEN o ELSE n/a.					
c22	IF A.8/2 AND symmetrical service supported THEN m ELSE n/a.					

Table A.26: Association establishment/Response_neg parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	Result/Reason	7.1.2.1.2	c23		20 H + string of 0 - 63 bytes (see table A.26.1)	
c23	IF A.8/2 THEN m ELSE n/a.					

Table A.26.1: Reason parameter values for Response Negative

Item No.	Reason	Ref.	Master				Slave			
			Sts	Spt	Value		Sts	Spt	Value	
					Allowed	Support			Allowed	Support
1	Called address incorrect	6.2.1.1	c24		30 H		c24		40 H	
2	Calling address incorrect	6.2.1.1	c24		31 H		c24		41 H	
3	Application name unknown	6.2.1.1	n/a				c24		44 H	
4	Service class refused	6.2.1.1	c24		35 H		c24		45 H	
5	Wrong identification	6.2.1.1	n/a				c24		50 H	
6	Erroneous user data	6.2.1.1	n/a				c24		60 H	
7	Other reason	6.2.1.1	n/a				c24		note	
c24	IF A.26/1 THEN m ELSE n/a.									
NOTE:	6F H + string of 0 - 62 bytes conforming to ITU-T Recommendation T.51 [5].									

A.6.5.1.3 Association release parameters

Table A.27: Association release/request parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	User data	7.1.2.1.11	o		string of 1 - 254 bytes	

Table A.28: Association release/Response_pos parameters

Item No.	Parameter	Ref	Sts	Spt	Value	
					Allowed	**Supported**
1	Result/Reason	7.1.2.1.2	c25		21 H	
2	User data	7.1.2.1.11	c26		string of 1 - 254 bytes	
c25	IF A.3/2 THEN o ELSE n/a.					
c26	IF A.3/2 THEN m ELSE n/a.					

A.6.5.1.4 Association abort parameters

Table A.29: Association abort/Request parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	Reason	7.2.2	c27		if service provider see table A.29.1 else see table A.29.2.	
c27	IF A.10/1 OR A.11/1 THEN m ELSE n/a.					

Table A.29.1: Reason parameter values for service provider

Item No.	Reason	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	Repeated negative acknowledgements/repeated errors	6.2.3.1	c28		70 H	
2	Delay expired	6.2.3.1	c28		71 H	
3	Unknown message	6.2.3.1	c28		72 H	
4	Syntax error/missing parameter	6.2.3.1	c28		73 H	
5	Unrecoverable lower layer error	6.2.3.1	c28		74 H	
6	Protocol conflict	6.2.3.1	c28		75 H	
7	Other reason	6.2.3.1	c28		6F H + optional string of 0 - 62 bytes conforming to ITU-T Recommendation T.51 [5]	
c28	IF A.29/1 THEN m ELSE n/a.					

Table A.29.2: Reason parameter values for service user

Item No.	Reason	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	Wrong identification	6.2.3.1	c29		50 H	
2	Role refused	6.2.3.1	c29		42 H	
3	Other reason	6.2.3.1	c29		6F H + optional string of 0 - 62 bytes conforming to ITU-T Recommendation T.51 [5]	
c29	IF A.29/1 THEN m ELSE n/a.					

A.6.5.2 Parameters of access PDUs

A.6.5.2.1 Access establishment request parameters

Table A.30: Access establishment/Request parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	Role	7.1.2.4.3	c30		'0' B: Slave '1' B: Master	
2	Function	7.1.2.4.3	c30		7 bits: see table A.30.1 for coding	
3	Transfer unit size	7.1.2.4.4	c30		512, 1 024 (default value), 2 048, 4 096, 8 192, 16 384, 32 768, 65 528 (note)	
4	Anticipation window	7.1.2.4.4	c30		1: default value 2 - 8	
5	Recovery	7.1.2.4.4	c30		'0' B: No recovery (default value) '1' B: Recovery	
6	Transfer mode	7.1.2.4.5	c30		'0' B: Basic transfer mode not supported (default value) '1' B: Basic transfer mode supported	
7	User data	7.1.2.4.6	c31		89 H+24 H+0 - 252 bytes 2 bytes (see table A.30.2 and table A.30.3)+0 - 252 bytes	
c30	IF A.12/1 THEN m ELSE n/a.					
c31	IF A.12/1 AND A.2/2 THEN o ELSE n/a.					
NOTE:	Values corresponding to the maximum block size.					

Table A.30.1: Function parameter details/primitives handled

Bit No.	Primitive	Ref.	Role: Master				Role: Slave			
			Sts	Spt	Value		Sts	Spt	Value	
					Allowed	Support			Allowed	Support
1	Read-restart	7.1.2.4.3	c32		1: valid 0: not val.		c32		1: valid 0: not val.	
2	Typed-Data	7.1.2.4.3	c32		1: valid 0: not val.		c32		1: valid 0: not val.	
3	Directory	7.1.2.4.3	n/a				c32		1: valid 0: not val.	
4	Delete	7.1.2.4.3	n/a				c32		1: valid 0: not val.	
5	Rename	7.1.2.4.3	n/a				c32		1: valid 0: not val.	
6	Save	7.1.2.4.3	n/a				c32		1: valid 0: not val.	
7	Load	7.1.2.4.3	n/a				c32		1: valid 0: not val.	
c32	IF A.30/2 THEN m ELSE n/a.									

Table A.30.2: User data details/first byte coding

Bit No.	TDU/Group	Ref.	Role: Master Sts	Role: Master Spt	Role: Master Value Allowed	Role: Master Value Support	Role: Slave Sts	Role: Slave Spt	Role: Slave Value Allowed	Role: Slave Value Support
0	Load/Group A	7.4.1	n/a				c33		1: accepted 0: refused	
1	Load/Group B	7.4.1	n/a				c33		1: accepted 0: refused	
2	Load/Group C	7.4.1	n/a				c33		1: accepted 0: refused	
3	Directory/Group A, application name's subset	7.4.1	n/a				c33		1: accepted 0: refused	
4	Directory/Group A	7.4.1	n/a				c33		1: accepted 0: refused	
5	Directory/Group B	7.4.1	n/a				c33		1: accepted 0: refused	
6	Directory/Group C	7.4.1	n/a				c33		1: accepted 0: refused	
7	Save/Group C	7.4.1	n/a				c33		1: accepted 0: refused	
c33	IF A.30/7 THEN m ELSE n/a.									

Table A.30.3: User data details/second byte coding

Bit No.	TDU/Group	Ref.	Role: Master				Role: Slave			
			Sts	Spt	Value		Sts	Spt	Value	
					Allowed	Support			Allowed	Support
0	Save/Group B	7.4.1	n/a				c34		1: accepted 0: refused	
1	Save/Group C	7.4.1	n/a				c34		1: accepted 0: refused	
2	Rename/Group A	7.4.1	n/a				c34		1: accepted 0: refused	
3	Rename/Group B	7.4.1	n/a				c34		1: accepted 0: refused	
4	Rename/Group C	7.4.1	n/a				c34		1: accepted 0: refused	
5	Delete/Group A	7.4.1	n/a				c34		1: accepted 0: refused	
6	Delete/Group B	7.4.1	n/a				c34		1: accepted 0: refused	
7	Delete/Group C	7.4.1	n/a				c34		1: accepted 0: refused	
c34	IF A.30/7 THEN m ELSE n/a.									

A.6.5.2.2 Access establishment response parameters

Table A.31: Access establishment/Response_pos parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	Result/Reason	7.1.2.4.2	c35		22 H	
2	Role	7.1.2.4.3	c35		'0' B '1' B	
3	Function	7.1.2.4.3	c35		7 bits: see table A.30.1 for coding	
4	Transfer unit size	7.1.2.4.4	c35		512, 1 024 (default value), 2 048, 4 096, 8 192, 16 384, 32 768, 65 528	
5	Anticipation window	7.1.2.4.4	c35		1: default value 2 - 8	
6	Recovery	7.1.2.4.4	c35		'0' B: No recovery (default value) (note) '1' B: Recovery	
7	Transfer mode	7.1.2.4.5	c35		'0' B: Basic transfer mode not supported (default value) '1' B: Basic transfer mode supported	
8	User data	7.1.2.4.6	c36		91 H+24 H+0 - 252 bytes 2 bytes (see table A.31.2 and table A.31.3)+0 - 252 bytes	
c35	IF A.12/1 THEN m ELSE n/a.					
c36	IF A.12/1 THEN o ELSE n/a.					
NOTE:	This value has no meaning for the Master role.					

Table A.32: Access establishment/Response_neg parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	Result/Reason	7.1.2.4.12	c37		22 H + string of 0 - 63 bytes (see table A.32.1)	
c37	IF A.12/2 THEN m ELSE n/a.					

Table A.32.1: Reason parameter values for Response Negative

Item No.	Reason	Ref.	Master Sts	Master Spt	Master Value Allowed	Master Value Support	Slave Sts	Slave Spt	Slave Value Allowed	Slave Value Support
3	Role refused	6.2.4.1	c38		32 H		c38		42 H	
4	Insufficient primitive handled	6.2.4.1	n/a				c38		43 H	
16	Erroneous user data	6.2.4.1	n/a				c38		60 H	
19	Other reason	6.2.4.1	n/a				c38		note	
c38	IF A.32/1 THEN m ELSE n/a.									
NOTE:	6F H + string of 0 - 62 bytes conforming to ITU-T Recommendation T.51 [5].									

A.6.5.2.3 Access end request parameters

Table A.33: Access end/Request parameters

Item No.	Parameter	Ref.	Sts	Spt	Value Allowed	Value Supported
1	Reason	7.2.2	c39		if service user see table A.33.1	
2	User data	7.1.2.1.11	c40		string of 1 - 254 bytes conforming to ITU-T Recommendation T.51 [5].	
c39	IF A.13/1 THEN m ELSE n/a.					
c40	IF A.13/1 THEN o ELSE n/a.					

Table A.33.1: Reason parameter values for service user

Item No.	Reason	Ref.	Sts	Spt	Value Allowed	Value Supported
1	Insufficient primitives handled	6.2.5.1	c41		43 H	
2	Other reason	6.2.5.1	c41		6F H + optional string of 0 - 62 bytes conforming to ITU-T Recommendation T.51 [5].	
c41	IF A.33/1 THEN m ELSE n/a.					

A.6.5.2.4 Access end response parameters

Table A.34: Access end/Response_pos parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	Supported
1	Result/Reason	7.1.2.5.2	c42		23 H	
2	User data	7.1.2.1.11	c43		string of 1 - 254 bytes conforming to ITU-T Recommendation T.51 [5].	
c42	IF A.13/2 THEN m ELSE n/a.					
c43	IF A.13/2 THEN o ELSE n/a.					

A.6.5.3 Parameters of transfer PDUs

A.6.5.3.1 File directory parameters

Table A.35: File directory/Request parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	Supported
1	User Data	7.1.2.6.3	c44		First byte: 30H, 31H (default value), 32H, 33H + string of 0 - 253 bytes	
2	Designation	7.1.2.6.4	c45		1 - 8 elementary words, separated by separators (see table A.35.1)	
c44	IF A.14/1 THEN o ELSE n/a.					
c45	IF A.14/1 THEN m ELSE n/a.					

Table A.35.1: Directory designation elements parameter values

Item No.	Designation Element	Ref.	Sts	Spt	Value	
					Allowed	Supported
1	Elementary word	7.4.3	c46		1 - 12 bytes sequence. Each byte included in [21;7E] except: 28H, 29H, 2BH, 2FH. value 2A H once maximum.	
2	Separators	7.4.3	c46		2BH, 2FH, 28H, 29H	
c46	IF A.35/2 THEN m ELSE n/a.					

Table A.36: File directory/Response_pos parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	Result/Reason	7.1.2.6.2	c47		24 H	
c47	IF A.14/2 THEN m ELSE n/a.					

Table A.37: File directory/Response_neg parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	Result/Reason	7.1.2.6.2	c48		24 H + string of 0 - 63 bytes (see table A.37.1).	
c48	IF A.14/2 THEN m ELSE n/a.					

Table A.37.1: Reason parameter values for Response Negative

Item No.	Reason	Ref.	Master				Slave			
			Sts	**Spt**	**Value**		**Sts**	**Spt**	**Value**	
					Allowed	**Support**			**Allowed**	**Support**
1	Erroneous designation	6.2.6.1	n/a				c49		47 H	
2	No answer to the request	6.2.6.1	n/a				c49		48 H	
3	Erroneous user data	6.2.6.1	n/a				c49		60 H	
4	Other reason	6.2.6.1	n/a				c49		note	
c49	IF A.37/1 THEN m ELSE n/a.									
NOTE:	6F H + string of 0 - 62 bytes conforming to ITU-T Recommendation T.51 [5].									

A.6.5.3.2 File load parameters

Table A.38: File load/Request parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	User Data	7.1.2.7.5	c50		First byte: 31H (default value), 32H, 33H + string of 0 - 253 bytes	
2	Designation	7.1.2.7.4	c51		string of 1 - 70 bytes containing 1 - 8 elementary words, separated by codes (see table A.38.1)	
3	Recovery point	7.1.2.7.3	c50		0 - 65 535	
c50	IF A.15/1 THEN o ELSE n/a.					
c51	IF A.15/1 THEN m ELSE n/a.					

Table A.38.1: Load designation elements parameter values

Item No.	Designation Element	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	Elementary word	7.4.4	c52		1 - 12 bytes sequence. Each byte included in [21;7E] except: 28H, 29H, 2BH, 2FH	
2	Separators	7.4.4	c52		2F H	
c52	IF A.38/2 THEN m ELSE n/a.					

Table A.39: File load/Response_pos parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	Result/Reason	7.1.2.7.2	c53		25 H	
c53	IF A.15/2 THEN m ELSE n/a.					

Table A.40: File load/Response_neg parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	Result/Reason	7.1.2.1.12	c54		25 H + string of 0 - 63 bytes (see table A.40.1)	
c54	IF A.15/2 THEN m ELSE n/a.					

Table A.40.1: Reason parameter values for Response Negative

Item No.	Reason	Ref.	Master				Slave			
			Sts	Spt	Value		Sts	Spt	Value	
					Allowed	Support			Allowed	Support
1	Erroneous recovery point	6.2.7.1	n/a				c55		46 H	
2	Erroneous designation	6.2.7.1	n/a				c55		47 H	
3	Unknown file	6.2.7.1	n/a				c55		49 H	
4	Erroneous user data	6.2.7.1	n/a				c55		60 H	
5	Other reason	6.2.7.1	n/a				c55		note	
c55	IF A.40/1 THEN m ELSE n/a.									
NOTE:	6F H + string of 0 - 62 bytes conforming to ITU-T Recommendation T.51 [5].									

A.6.5.3.3   File save parameters

Table A.41: File save/Request parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	User Data	7.1.2.7.5	c56		First byte: 31H (default value), 32H, 33H + string of 0 - 253 bytes	
2	Designation	7.1.2.7.4	c57		string of 1 - 70 bytes containing 0 - 8 elementary words, separated by codes (see table A.38.1)	
3	Recovery point	7.1.2.7.3	c56		0 - 65 535	
c56	IF A.16/1 THEN o ELSE n/a.					
c57	IF A.16/1 THEN m ELSE n/a.					

Table A.42: File save/Response_pos parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	Result/Reason	7.1.2.8.2	c58		26 H	
c58	IF A.16/2 THEN m ELSE n/a.					

Table A.43: File save/Response_neg parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	Result/Reason	7.1.2.1.12	c59		26 H + string of 0 - 63 bytes (see table A.43.1)	
c59	IF A.16/1 THEN m ELSE n/a.					

Table A.43.1: Reason parameter values for Response Negative

Item No.	Reason	Ref.	Master				Slave			
			Sts	Spt	Value		Sts	Spt	Value	
					Allowed	Support			Allowed	Support
1	Erroneous recovery point	6.2.8.1	n/a				c60		46 H	
2	Erroneous designation	6.2.8.1	n/a				c60		47 H	
3	Already existing file	6.2.8.1	n/a				c60		4A H	
4	Erroneous user data	6.2.8.1	n/a				c60		60 H	
5	Other reason	6.2.8.1	n/a				c60		note	
c60	IF A.43/1 THEN m ELSE n/a.									
NOTE:	6F H + string of 0 - 62 bytes conforming to ITU-T Recommendation T.51 [5].									

A.6.5.3.4   **File rename parameters**

Table A.44: File rename/Request parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	User Data	7.1.2.7.5	c61		First byte: 31H (default value), 32H, 33H + string of 0 - 253 bytes	
2	Designation	7.1.2.9.3	c62		string of 1 - 70 bytes containing 1 - 8 elementary words, separated by codes (see table A.38.1)	
3	New name	7.1.2.9.3	c62		string of 1 - 70 bytes containing 1 - 8 elementary words, separated by codes (see table A.38.1)	
c61	IF A.17/1 THEN o ELSE n/a.					
c62	IF A.17/1 THEN m ELSE n/a.					

Table A.45: File rename/Response_pos parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	Result/Reason	7.1.2.9.2	c63		27 H	
c63	IF A.17/2 THEN m ELSE n/a.					

Table A.46: File rename/Response_neg parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	Result/Reason	7.1.2.1.12	c64		27 H + string of 0 - 63 bytes (see table A.46.1)	
c64	IF A.17/2 THEN m ELSE n/a.					

Table A.46.1: Reason parameter values for Response Negative

Item No.	Reason	Ref.	Master Sts	Master Spt	Master Value Allowed	Master Value Support	Slave Sts	Slave Spt	Slave Value Allowed	Slave Value Support
1	Erroneous designation	6.2.9.1	n/a				c65		47 H	
2	Unknown file	6.2.9.1	n/a				c65		49 H	
3	Erroneous new name	6.2.9.1	n/a				c65		4C H	
4	New name already in use	6.2.9.1	n/a				c65		4D H	
5	Erroneous user data	6.2.9.1	n/a				c65		60 H	
6	Other reason	6.2.9.1	n/a				c65		note	

c65   IF A.46/1 THEN m ELSE n/a.
NOTE: 6F H + string of 0 - 62 bytes conforming to ITU-T Recommendation T.51 [5].

A.6.5.3.5   File delete parameters

Table A.47: File delete/Request parameters

Item No.	Parameter	Ref.	Sts	Spt	Value Allowed	Value Supported
1	User Data	7.1.2.7.5	c66		First byte: 31H (default value), 32H, 33H + string of 0 - 253 bytes	
2	Designation	7.1.2.7.4	c67		string of 1 - 70 bytes containing 1 - 8 elementary words, separated by codes (see table A.38.1)	

c66   IF A.18/1 THEN o ELSE n/a.
c67   IF A.18/1 THEN m ELSE n/a.

Table A.48: File delete/Response_pos parameters

Item No.	Parameter	Ref.	Sts	Spt	Value Allowed	Value Supported
1	Result/Reason	7.1.2.10.2	c68		28 H	

c68   IF A.18/2 THEN m ELSE n/a.

Table A.49: File delete/Response_neg parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	Result/Reason	7.1.2.1.12	c69		28 H + string of 0 - 63 bytes (see table A.49.1)	
c69	IF A.18/2 THEN m ELSE n/a.					

Table A.49.1: Reason parameter values for Response Negative

Item No.	Reason	Ref.	Master				Slave			
			Sts	Spt	Value		Sts	Spt	Value	
					Allowed	**Support**			**Allowed**	**Support**
1	Erroneous designation	6.2.10.1	n/a				c70		47 H	
2	Unknown file	6.2.10.1	n/a				c70		49 H	
3	Erroneous user data	6.2.10.1	n/a				c70		60 H	
4	Other reason	6.2.10.1	n/a				c70		note	
c70	IF A.49/1 THEN m ELSE n/a.									
NOTE:	6F H + string of 0 - 62 bytes conforming to ITU-T Recommendation T.51 [5].									

A.6.5.3.6   Typed data parameters

Table A.50: Typed_Data/Request parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	User Data	7.1.2.11.1	c71		1 - 254 bytes	
c71	IF A.19/1 THEN m ELSE n/a.					

A.6.5.3.7 Write parameters

Table A.51: Write/Request parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	Explicit confirmation	7.1.2.12.4	m		'1' B: confirmation requested '0' B: confirmation not requested	
2	First block	7.1.2.12.4	m		'00' B: block '01' B: first block '10' B: last block '11' B: first and last block	
3	Block number	7.1.2.12.4	c72		0 - 65 535	
4	Data field	7.1.2.12.1	m		BK: 1 - 1 024 bytes SS: 1-N bytes (see parameter "transfer size unit" of table A.30/3 for N value)	
c72	IF A.3/2 THEN o ELSE n/a.					

Table A.52: Write/Response_pos parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	Result/Reason	7.1.2.12.5	c73		2F H + block number (see table A.52.1)	
c73	IF A.3/2 THEN o ELSE n/a.					

Table A.52.1: Write/Response_pos block number parameter values

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	Block number	7.1.2.12.5	c74		0 - 65 535	
c74	IF A.51/3 THEN m ELSE n/a.					

Table A.53: Write/Response_neg parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	Result/Reason	7.1.2.12.5	c75		2F H + block number (see table A.52.1)	
c75	IF A.3/2 THEN o ELSE n/a.					

A.6.5.3.8 Write end parameters

Table A.54: Write End/ Request parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	Explicit confirmation	7.1.2.12.4	m		'0' B: confirmation requested '1' B: confirmation not requested	
2	First block	7.1.2.12.4	m		'00' B: block '01' B: first block '10' B: last block '11' B: first and last block	
3	Block number	7.1.2.12.4	c76		0 - 65 535	
4	Data field	7.1.2.12.1	m		BK: 0 - 1 024 bytes SS: 0-N bytes (see parameter "transfer size unit" of table A.30/3 for N value)	
c76	IF A.3/2 THEN o ELSE n/a.					

Table A.55: Write End/Response_pos parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	Result/Reason	7.1.2.12.5	c77		2F H + block number (see table A.52.1)	
c77	IF A.3/2 THEN m ELSE n/a.					

Table A.56: Write End/ Response_neg parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	Supported
1	Result/Reason	7.1.2.12.5	c78		result code + block number + reason (see table A.56.1)	
c78	IF A.3/2 THEN m ELSE n/a.					

Table A.56.1: Write End response negative result parameter values

Item No.	Result Element	Ref.	Sts	Spt	Value	
					Allowed	Supported
1	Result code	7.1.2.12.5	m		2F H	
2	Block number	7.1.2.12.5	c79		0 - 65 535	
3	Reason	7.1.2.12.5	o		string of 0 - 63 bytes (see table A.33.1)	
c79	IF A.51/3 THEN m ELSE n/a.					

Table A.56.2: Reason values for Response Negative

Item No.	Reason	Ref.	Master				Slave			
			Sts	Spt	Value		Sts	Spt	Value	
					Allowed	Support			Allowed	Support
1	Erroneous file	7.1.2.12.3	n/a				c80		4B H	
2	Other reason	7.1.2.12.3	n/a				c80		note	
c80	IF A.56/1 THEN m ELSE n/a.									
NOTE:	6F H + string of 0 - 62 bytes conforming to ITU-T Recommendation T.51 [5].									

A.6.5.3.9   User exception parameters

Table A.57: User Exception/Request parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	Supported
1	Reason	7.2.2	m		read restart, transfer reject	

A.6.5.3.10   Provider exception parameters

Table A.58: Provider Exception/Request parameters

Item No.	Parameter	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	Reason	7.2.2	m		see table A.58.1	

Table A.58.1: Reason parameter values for service provider

Item No.	Reason	Ref.	Sts	Spt	Value	
					Allowed	**Supported**
1	Repeated negative acknowledgements/repeated errors	7.2.2.1	m		70 H	
2	Syntax error/missing parameter	7.2.2.1	m		73 H	
3	Protocol conflict	7.2.2.1	m		75 H	
4	Primitive not handled	7.2.2.1	m		76 H	
5	Other reason	7.2.2.1	m		6F H + optional string of 0 - 62 bytes conforming to ITU-T Recommendation T.51 [5].	

History

Document history			
August 1995	Public Enquiry	PE 89:	1995-08-07 to 1995-12-01
May 1996	Vote	V 103:	1996-05-20 to 1996-08-23