

ISO/IEC 8073:1997-08 (E)

Information technology - Open Systems Interconnection - Protocol for providing the connection-mode transport service

Contents		Page
1	Scope	1
2	References	1
2.1	Identical Recommendations International Standards	2
2.2	Paired Recommendations International Standards equivalent in technical content.....	2
3	Definitions	2
4	Abbreviations	4
4.1	Data Units.....	4
4.2	Types of Transport Protocol data units	4
4.3	TPDU fields	4
4.4	Times and associated variables	4
4.5	Miscellaneous	5
5	Overview of the Transport Protocol	5
5.1	Service provided by the Transport Layer	5
5.2	Service assumed from the Network Layer.....	5
5.3	Functions of the Transport Layer	6
5.4	Classes and options when operating Over CONS	8
5.5	Characteristics of class 4 transport protocol when operating over CLNS	10
5.6	Model of the Transport Layer.....	10
6	Elements of procedure	10
6.1	Use of the network service 1	1
6.2	Transport Protocol Data Unit (TPDU) transfer	12
6.3	Segmenting and reassembling	13
6.4	Concatenation and Separation	13
6.5	Connection establishment	13
6.6	Connection refusal.....	19
6.7	Normal release.....	20
6.8	Error release when operating over CONS	22
6.9	Association of TPDU's with transport connections	22
6.10	Data TPDU numbering	25
6.11	Expedited data transfer	26
6.12	Reassignment after failure when operating over CONS	27
6.13	Retention and acknowledgement of TPDU's.....	28
6.14	Resynchronization	30
6.15	Multiplexing and demultiplexing when operating over CONS.....	32
6.16	Explicit flow control	32
6.17	Checksum	33
6.18	Frozen references.....	34
6.19	Retransmission on time-out.....	34
6.20	Resequencing.....	35
6.21	Inactivity control.....	35
6.22	Treatment of protocol errors	35
6.23	Splitting and recombining when operating over CONS	36
7	Protocol classes	37
8	Spedfication for class 0 - Simple class	37
8.1	Functions of class 0	37

8.2	Procedures for class 0	37
9	Specification for class 1 - Basic error recovery class	39
10	Specification for class 2 - Multiplexing class	40
11	Specification for class 3 - Error recovery and multiplexing class.....	42
12	Specification for class 4 - Error detection and recovery class	43
13	Structure and encoding of TPDU	55
13.1	Validity	55
13.2	Structure	55
13.3	Connection Request (CR) TPDU	57
13.4	Connection Confirm (CC) TPDU.....	62
13.5	Disconnect Request (DR) TPDU.....	62
13.6	Disconnect Confirm (DC) TPDU	63
13.7	Data (DT) TPDU	64
13.8	Expedited Data (ED) TPDU.....	65
13.9	Data Acknowledgement (AK) TPDU.....	66
13.10	Expedited Data Acknowledgement (EA) TPDU.....	68
13.11	Reject (RJ) TPDU	68
13.12	TPDU Error (ER) TPDU	69
14	Conformance.....	70
14.5	Claims of conformance shall State.....	71
Annex A - State tables		72
A.1	General	72
A.2	Conventions.....	72
A.3	Tables	73
A.4	State tables for classes 0 and 2.....	75
A.5	State tables for classes 1 and 3.....	78
A.6	State tables for class 4 over CONS	80
A.7	State tables for class 4 Over CLNS	89
Annex B - Network connection management subprotocol		92
B.1	Introduction	92
B.2	Scope.....	92
B.3	Definitions	92
B.4	Abbreviations	93
B.5	Overview of the protocol	93
B.6	Elements of procedure	94
B.7	Protocol Operation.....	98
B.8	Structure and encoding of TPDU.....	102
B.9	Conformance	104
B.10	State table	105
B.11	Diagram for NCMS protocol Operation	107
Annex C - PICS Proforma.....		110
C.1	General	110
C.2	Identification	110
C.3	Indices used in this Annex.....	111
C.4	Based Recommendation International Standard conformance	113
C.5	General Statement of conformance	113
C.6	Protocol implementation	113
C.7	NCMS functions.....	113
C.8	Initiator/responder capability for protocol classes 0-4	114
C.9	Supported functions	114
C.10	Supported TPDU.....	120
C.11	Supported parameters of issued TPDU	121
C.12	Supported parameters for received TPDU	128

C.13 User data in issued TPDU	128
C.14 User data in received TPDU	130
C.15 Negotiation	130
C.16 Error handling	134
C.17 Timers and protocol parameters	135
Annex D - Checksum Algorithms	137
D.1 Symbols	137
D.2 Arithmetic Conventions	137
D.3 Algorithm for generating checksum parameters	137
D.4 Algorithm for checking checksum parameters	138
Annex E - State tables for operation of class 4 over connection-mode and connectionless-mode network services	139
E.1 General	139
E.2 Conventions	139
E.3 Tables	139
E.4 State tables for class 4	139