INTERNATIONAL STANDARDIZED PROFILE

ISO/IEC ISP 12061-4

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Information technology — Open Systems Interconnection — International Standardized Profiles: OSI Distributed Transaction Processing —

Part 4:
Support of Session, Presentation and ACSE PDUs

Technologies de l'information — Interconnexion de systèmes ouverts (OSI) — Profils normalisés internationaux: Traitement transactionnel réparti —

Partie 4: Prise en charge des PDU de session, de présentation et d'ACSE

Reference number
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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. In addition to developing International Standards, ISO/IEC JTC 1 has created a Special Group on Functional Standardization for the elaboration of International Standardized Profiles.

An International Standardized Profile is an internationally agreed, harmon-ized document which identifies a standard or group of standards, together with options and parameters, necessary to accomplish a function or set of functions.

Draft International Standardized Profiles are circulated to national bodies for voting. Publication as an International Standardized Profile requires approval by at least 75 % of the national bodies casting a vote.

International Standardized Profile ISO/IEC ISP 12061-4 was prepared with the collaboration of

— Asia-Oceania Workshop (AOW);

— European Workshop for Open Systems (EWOS);

— Open Systems Environment Implementors' Workshop (OIW).

ISO/IEC ISP 12061 consists of the following parts, under the general title *Information technology — Open Systems Interconnection — International Standardized Profiles: OSI Distributed Transaction Processing*:

— *Part 1: Introduction to the Transaction Processing Profiles*

— *Part 2: Support of OSI TP APDUs*

— *Part 3: Support of CCR APDUs*

— *Part 4: Support of Session, Presentation and ACSE PDUs*

— *Part 5: Application supported transactions — Polarized control (ATP11)*

— *Part 6: Application supported transactions — Shared control (ATP12)*

— *Part 7: Provider supported unchained transactions — Polarized control (ATP21)*

— *Part 8: Provider supported unchained transactions — Shared control (ATP22)*

— *Part 9: Provider supported chained transactions — Polarized control (ATP31)*

— *Part 10: Provider supported chained transactions — Shared control (ATP32)*

Annexes A to C form an integral part of this part of ISO/IEC ISP 12061.

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Introduction

The aim of Open Systems Interconnection is to allow, with a minimum of technical agreement outside the interconnection standards, the interconnection of computer systems:

- from different manufacturers,
- under different management,
- of different levels of complexity,
- of different technologies.

Transaction Processing is concerned with identifiable information which can be related as transactions, which may involve two or more Open Systems. In the framework of Open Systems Interconnection (OSI) a transaction is defined as "a set of related operations characterized by four properties: atomicity, consistency, isolation and durability."

The definition highlights that a distributed transaction is more than a simple exchange of messages, but that the exchanges form a protected indivisible set.

This multi-part International Standardized Profile contains the complete specification of the six profiles identified in ISO/IEC TR 10000-2.[1]

Part 1 Introduces the overall structure of the specification of the OSI TP Profiles, including the definitions and abbreviations used through out the various parts of ISO/IEC 12061.

Part 2 contains the specification of the support of OSI TP APDUs for each of the profiles specified in parts 5 to 10.

Part 3 contains the specification of the support of the CCR APDUs for each of the profiles specified in parts 5 to 10.

Part 4 contains the specification of the support of ACSE, Presentation and Session APDUs for each of the profiles specified in parts 5 to 10.

Parts 5 to 10 specify the six profiles which are defined, based on the OSI TP standard. These six parts make reference to parts 2 to 4.

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[1]ISO/IEC TR 10000-2: 1992, Information Technology - Framework and Taxonomy of International Standardized Profiles - Part2: Taxonomy of OSI Profiles

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Information technology — Open Systems Interconnection — International Standardized Profiles: OSI Distributed Transaction Processing —

Part 4:

Support of Session, Presentation and ACSE PDUs

1 Scope

This part of this ISO/IEC ISP 12061 specifies the status for the support of the Session, Presentation and ACSE protocols for the profiles identified in ISO/IEC ISP 12061-1[1].

2 Normative references

The following documents contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC ISP 12061. At the time of publication, the editions indicated were valid. All documents are subject to revision, and parties to agreements based on this part of ISO/IEC ISP 12061 are warned against automatically applying any more recent editions of the documents listed below, since the nature of references made by ISPs to such documents, is that they may be specific to a particular edition. Members of IEC and ISO maintain registers of currently valid International Standards and ISPs, and ITU-T maintains published editions of its current Recommendations.

ISO/IEC 8327: 1987[2],	*Information processing systems - Open Systems Interconnection - Basic connection oriented session protocol specification*
ISO/IEC 8327:1987 /Amd 3:1992,	*Information processing systems - Open Systems Interconnection - Basic connection oriented session protocol specification - Amendment 3: Additional synchronization functionality.*
ISO/IEC 8327-2:—[3]	*Information technology - Open Systems Interconnection - Basic connection oriented session PICS Proforma - Part 2: Protocol Implementation Conformance Statement (PICS) Proforma.*
ISO/IEC 8650:1988,	*Information processing systems - Open Systems Interconnection - Protocol specification for the Association Control Service Element.*

[1]There are places where this International Standardized Profile marks a mandatory parameter as out of scope. This may a first appear to be contrary to the rules for referencing an International Standardized Profile. When an International Standardized Profile references another International Standardized Profile it is to specifiy how the referencing International Standardized Profile will use the services of the referenced International Standardized Profile, and not how a conformant implementation of the referenced International Standardized Profile would be constructed. When a mandatory parameter is marked out of scope, it means that within a TP context that parameter would never be used.

[2]Under revision

[3]To be published

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ISO/IEC 8650-2:1995,	*Information technology - Open Systems Interconnection - Protocol specification for the Association Control Service Element - Part 2: Protocol Implementation Conformance Statement (PICS) Proforma.*
ISO/IEC 8823:1988,	*Information processing systems - Open Systems Interconnection - Connection oriented presentation protocol specification.*
ISO/IEC 8823:1988 /Amd 5:1992,	*Information processing systems - Open Systems Interconnection - Connection oriented presentation protocol specification - Amendment 5: Additional synchronisation functionality to the presentation service user.*
ISO/IEC 8823-2:—[3]	*Information technology - Open Systems Interconnection - Connection oriented presentation protocol specification - Part 2: Protocol Implementation Conformance Statement (PICS) Proforma.*
ISO/IEC 8825:1990,	*Information technology - Open Systems Interconnection - Specification of Basic Encoding Rules for Abstract Syntax Notation One (ASN.1).*
ISO/IEC 9805:1990,	*Information technology - Open Systems Interconnection - Protocol Specification for the Commitment, Concurrency and Recovery service element.*
ISO/IEC 9805-2:—[3]	*Information technology - Open Systems Interconnection - Commitment, Concurrency and Recovery protocol - Part 2: Protocol Implementation Conformance Statement (PICS) Proforma.*
ISO/IEC 9805:1990 /Amd 2:1992,	*Information technology - Open Systems Interconnection - Protocol Specification for the Commitment, Concurrency and Recovery service element - Amendment 2: Session mapping changes.*
ISO/IEC 10026-1:1992,	*Information technology - Open Systems Interconnection - Distributed Transaction Processing - Part 1: OSI TP Model.*
ISO/IEC 10026-2:1992,	*Information technology - Open Systems Interconnection - Distributed Transaction Processing - Part 2: OSI TP Service.*
ISO/IEC 10026-3:1992,	*Information technology - Open Systems Interconnection - Distributed Transaction Processing - Part 3: OSI TP Protocol specification.*
ISO/IEC 10026-4:1995,	*Information technology - Open Systems Interconnection - Distributed Transaction Processing - Part 4: Protocol Implementation Conformance Statement (PICS) Proforma.*
ISO/IEC ISP 11188-1:1995,	*Information technology - International Standardized Profile - Common upper layer requirements - Part 1: Basic connection oriented requirements.*

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3 Definitions and abbreviations

The definitions and abbreviations listed in ISO/IEC 12061-1 apply.

4 Notation

The notation introduced in ISO/IEC ISP 12061-1 applies.

5 Support of Session spdus

Annex A specifies the support of Session protocol.

6 Support of Presentation ppdus

Annex B specifies the support of Presentation protocol.

7 Support of ACSE apdus

Annex C specifies the support of ACSE protocol.

8 Conformance

To conform to the OSI ACSE protocol used in any of the profiles defined in this ISP, an implementation shall implement, according to the specifications given in ISO/IEC 8650:

- All mandatory features identified in annex C.
- All selected optional features, as identified in the completed ACSE PICS.
- All restrictions as specified in the Common Upper Layer Requirements ISO/IEC ISP 11188-1.

To conform to the OSI Presentation protocol used in any of the profiles defined in this part of ISO/IEC ISP 12061, an implementation shall implement, according to the specifications given in ISO/IEC 8823:

- All mandatory features identified in annex B.
- All selected optional features, as identified in the completed Presentation PICS.
- All restrictions as specified in the Common Upper Layer Requirements ISO/IEC ISP 11188-1.

To conform to the OSI Session protocol used in any of the profiles defined in this ISP, an implementation shall implement, according to the specifications given in ISO/IEC 8327:

- All mandatory features identified in annex A.
- All selected optional features, as identified in the completed Session PICS.
- All restrictions as specified in the Common Upper Layer Requirements ISO/IEC ISP 11188-1.

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Annex A
(normative)

Session PDU support

This subclause details TP's requirements on the Session protocol. The reader should consult the Upper Layer agreements for a detailed discussion of these services. This part of ISO/IEC ISP 12061 only specifies PDU parameters necessary for this International Standardized Profile.

A.1 Supported functions

Table 1 - SUPPORTED FUNCTIONS

	BASE STANDARD ISO/IEC 8327-2		PROFILE		
ITEM#	CAPABILITY	STATUS	PROFILE ID	STATUS	NOTES
1	Kernel	M		M	
2	Negotiated Release	O		*(I)	
3	Half Duplex	O.n		NA	3
4	Duplex	O.n		M	
5	Expedited Data	O		*(I)	
6	Typed Data	O	11,12	*(I)	
			21,22,31,32	M	
7	Capability Data Exchange	C	11,12	*(I)	
			21,22,31,32	NA	3
8	Minor Synchronize	O	11,12	*(I)	
			21,22,31,32	M	
9	Symmetric Synchronize	O	11,12	*(I)	
			21,22,31,32	NA	3
10	Major Synchronize	O		*(I)	
11	Resyncronize	O	11,12	*(I)	
			21,22,31,32	M	
12	Exceptions	C		NA	1,3
13	Activity Management	O	11,12	*(I)	
			21,22,31,32	NA	2,3,
14	Data Separation	C	11,12	*(I)	
			21,22,31,32	M	

NOTES

1. Exceptions FU cannot be negotiated because Half Duplex is not allowed.

2. Activity Management FU cannot be negotiated for these profiles because the Data Separation FU does not allow the Activity Management FU to also be selected.

3. Succesfully accepting these functional units is a protocol error. If any of the following Functional Units is proposed on a CN SPDU the Functional Unit shall not be accepted and the corresponding bit shall be set to zero on the Accept SPDU.

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A.2 ISO 8327 protocol versions implemented

Table 2 -ISO 8327 PROTOCOL VERSIONS IMPLEMENTED

	BASE STANDARD ISO/IEC 8327 -2		PROFILE		
ITEM#	CAPABILITY	STATUS	PROFILE ID	STATUS	NOTES
1	Version 1	O		I	
2	Version 2	O		M	

A.3 Protocol mechanisms

Table 3- PROTOCOL MECHANISMS

	ISO/IEC 8327-2		PROFILE		
ITEM#	CAPABILITY	STATUS	PROFILE ID	STATUS	NOTES
1	Use of Transport Expedited Data	O		O	
2	Reuse of Transport Connection	O		*(I)	
3	Basic Concatenation	M		M	
4	Extended Concatenation	O		I	
5	Segmentation	O		*(I)	
6	Segmentation of Unlimited User Data	O		*(I)	

A.4 Initiator/responder capabilities

Table 4 - INITIATOR/RESPONDER CAPABILITIES

	ISO/IEC 8327-2		PROFILE		
ITEM#	CAPABILITY	STATUS	PROFILE ID	STATUS	NOTES
1	Initiator	O		C101	
2	Responder	O		M	

101. If capable of initiating an Association then M, else I.

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A.5 Session procedures usage by profile

This table specifies the supported level of each Session PDU with respect to each profile.

Table 5 - KERNEL FUNCTIONAL UNIT PROCEDURES USAGE BY PROFILE

ITEM #	Protocol Data Units	ISO/IEC 8327-2	Profiles						
			11	21	31	12	22	32	Notes
1	Connect (CN)	C/C	C103 /M	C103 /M	C103 /M	C103 /M	C103 /M	C103 /M	
2	Overflow Accept(OA)	C	I	I	I	I	I	I	
3	Connect Data Overflow(CDO)	C	I	I	I	I	I	I	
4	Accept(AC)	C/C	C104 /C103	C104 /C103	C104 /C103	C104 /C103	C104 /C103	C104 /C103	
5	Refuse(RF)	C/C	M /C103	M /C103	M /C103	M /C103	M /C103	M /C103	
6	Finish(FN)	O/C	O/M	O/M	O/M	O/M	O/M	O/M	
7	Disconnect(DN)	O	M /C105	M /C105	M /C105	M /C105	M /C105	M /C105	
8	Abort(AB)	M	M	M	M	M	M	M	
9	Abort Accept(AA)	O	C106	C106	C106	C106	C106	C106	
10	Data Transfer(DT)	O/C	M	M	M	M	M	M	
11	Prepare(PR)	C/C	C107	C107	C107	C107	C107	C107	

103. If capable of initiating an Association then M, else I.

104. If capable of responding to a AARQ APDU then M, else I.

105. If capable of initiating a FINISH then M, else NA.

106. If reusing T-Connection then M, else I.

107. If transport expedited available then M, else NA.

Table 6 - NEGOTIATED RELEASE FUNCTIONAL UNIT PROCEDURES USAGE BY PROFILE

ITEM #	Protocol Data Units	ISO/IEC 8327-2	Profiles						
			11	21	31	12	22	32	Notes
1	Not Finished(NF)	O/M	*	*	*	*	*	*	
2	Give Tokens(GT)	O	*	*	*	*	*	*	1
3	Please Tokens(PT)	O/M	*	*	*	*	*	*	1

NOTES

1. These PDUs are marked * in this table because the Negotiated Release FU is marked * in Table 1. These PDUs may be used else where in different ways.

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Table 7 - HALF DUPLEX FUNCTIONAL UNIT PROCEDURES USAGE BY PROFILE

ITEM #	Protocol Data Units	ISO/IEC 8327-2	Profiles						
			11	21	31	12	22	32	Notes
1	Give Tokens(GT)	O	NA	NA	NA	NA	NA	NA	1
2	Please Tokens(PT)	O/M	NA	NA	NA	NA	NA	NA	1

NOTES

1. These PDUs are marke NA in this table because the Half Duplex FU is marked NA in Table 1. These PDUs may be used else where in different ways.

DUPLEX FUNCTIONAL UNIT PROCEDURES

No additional SPDUs (this clause is present for completeness).

Table 8 - EXPEDITED DATA FUNCTIONAL UNIT PROCEDURES USAGE BY PROFILE

ITEM #	Protocol Data Units	ISO/IEC 8327-2	Profiles						
			11	21	31	12	22	32	Notes
1	Expedited Data(EX)	O/M	*	*	*	*	*	*	

Table 9 - TYPED DATA FUNCTIONAL UNIT PROCEDURES USAGE BY PROFILE

ITEM #	Protocol Data Units	ISO/IEC 8327-2	Profiles						
			11	21	31	12	22	32	Notes
1	Typed Data(TD)	O/M	*	M	M	*	M	M	

Table 10 - CAPABILITY DATA FUNCTIONAL UNIT PROCEDURES USAGE BY PROFILE

ITEM #	Protocol Data Units	ISO/IEC 8327-2	Profiles						
			11	21	31	12	22	32	Notes
1	Capability Data(CD))	O/M	*	NA	NA	*	NA	NA	1
2	Capability Data Ack(CDA)	M/C	*	NA	NA	*	NA	NA	1

NOTES

1. Because the Capability Data FU shall never be selected on a Session Connection for Profiles 21, 22, 31, and 32, the Session Protocol Machine will generate a protocol error when a CD or CDA SPDU is received in these profiles.

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Table 11 -MINOR SYNCHRONIZE FUNCTIONAL UNIT PROCEDURES USAGE BY PROFILE

ITEM #	Protocol Data Units	ISO/IEC 8327-2	Profiles						
			11	21	31	12	22	32	Notes
1	Minor Sync Point(MIP)	O	*	M	M	*	M	M	
2	Minor Sync Point Ack(MIA)	O/C	*	M	M	*	M	M	
3	Give Tokens(GT)	O	*	M	M	*	M	M	
4	Please Tokens(PT)	O/M	*	M	M	*	M	M	

Table 12 -SYMMETRIC SYNCHRONIZE FUNCTIONAL UNIT PROCEDURES USAGE BY PROFILE

ITEM #	Protocol Data Units	ISO/IEC 8327-2	Profiles						
			11	21	31	12	22	32	Notes
1	Minor Sync Point(MIP)	O	*	NA	NA	*	NA	NA	1
2	Minor Sync Point Ack(MIA)	O/C	*	NA	NA	*	NA	NA	1

NOTES

1. Because the Symmetric Synchronize FU shall never be selected on a Session Connection for Profiles 21, 22, 31, and 32, the MIP and MIA SPDUs have been marked NA. They may be used differently elsewhere.

Table 13 -MAJOR SYNCHRONIZE FUNCTIONAL UNIT PROCEDURES USAGE BY PROFILE

ITEM #	Protocol Data Units	ISO/IEC 8327-2	Profiles						
			11	21	31	12	22	32	Notes
1	Major Sync Point(MAP)	O/M	*	*	*	*	*	*	
2	Major Sync Point Ack(MAA)	M/C	*	*	*	*	*	*	
3	Give Tokens(GT)	O	*	*	*	*	*	*	1
4	Please Tokens(PT)	O/M	*	*	*	*	*	*	1
5	Prepare(PR)	C/C	*	*	*	*	*	*	1

NOTES

1. Because the Major Synchronize FU has been marked * in Table 1, these PDUs have been marked *. They may be used differently elsewhere.

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Table 14 -RESYNCHRONIZE FUNCTIONAL UNIT PROCEDURES USAGE BY PROFILE

ITEM #	Protocol Data Units	ISO/IEC 8327-2	Profiles						
			11	21	31	12	22	32	Notes
1	RESYNCHRONIZE(RS)	O/M	*	M	M	*	M	M	1
2	RESYNCHRONIZE Ack(RA)	M/C	*	M	M	*	M	M	1
3	Prepare(PR)	C/C	*	C107	C107	*	C107	C107	1

NOTES

1. Because the ReSynchronize FU has been marked in Table 1 with * for Profiles 11 and 12 these PDUs have been marked with * in this table. They may be used differently elsewhere.

Table 15 -EXCEPTIONS FUNCTIONAL UNIT PROCEDURES USAGE BY PROFILE

ITEM #	Protocol Data Units	ISO/IEC 8327-2	Profiles						
			11	21	31	12	22	32	Notes
1	Exception Report(ER)	O/M	NA	NA	NA	NA	NA	NA	1
2	Exception Data(ED)	O/M	NA	NA	NA	NA	NA	NA	1

NOTES

1. Because the ExceptionFU shall never be selected for a Session Connection, the Session Protocol Machine will generate a protocol error when an ER or ED SPDU is received.

Table 16 -ACTIVITY MANAGEMENT FUNCTIONAL UNIT PROCEDURES USAGE BY PROFILE

ITEM #	Protocol Data Units	ISO/IEC 8327-2	Profiles						
			11	21	31	12	22	32	Notes
1	Activity Start(AS)	O/M	*	NA	NA	*	NA	NA	2
2	Activity Resume(AR)	O/M	*	NA	NA	*	NA	NA	2
3	Activity Interrupt(AI)	O/M	*	NA	NA	*	NA	NA	2
4	Activity Interrupt Ack(AIA)	M/C	*	NA	NA	*	NA	NA	2
5	Activity Discard(AD)	O/M	*	NA	NA	*	NA	NA	2
6	Activity Discard Ack(ADA)	M/C	*	NA	NA	*	NA	NA	2
7	Activity End(AE)	O/M	*	NA	NA	*	NA	NA	2
8	Activity End Ack(AEA)	M/C	*	NA	NA	*	NA	NA	2
9	Prepare(PR)	C/C	*	NA	NA	*	NA	NA	2,3
10	Give Tokens(GT)	O	*	NA	NA	*	NA	NA	2,3
11	Please Tokens(PT)	O/M	*	NA	NA	*	NA	NA	2,3
12	Give Tokens Confirm(GTC)	O/M	*	NA	NA	*	NA	NA	1,2

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Table 16 - continued

ITEM #	Protocol Data Units	ISO/IEC 8327-2	Profiles						
			11	21	31	12	22	32	Notes
13	Give Tokens Confirm Ack(GTA)	O/M	*	NA	NA	*	NA	NA	1,2

NOTES

1. The Give tokens confirm and Ack are a result of the control give service and require the activity management FU.

2. Because the Activity Management FU shall never be selected on a Session connection for profiles 21, 22, 31 and 32, the Session Protocol Machine will generate a protocol error when the SPDU is received in these Profiles.

3. Because the Activity Management FU has been marked in Table 1 with * or NA the PDUs have been marked with * or NA in this table. They may be used differently elsewhere.

A.6 Supported parameters of session pdus

A.6.1 Connect (cn) spdu

Table 17 - CONNECT (CN) SPDU

	ISO/IEC 8327-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
	PGI Connection Identifier					
1	PGI default (absent)	O/M		I		
2	PGI default (empty)	O/M		I		
3	Calling SS-User Reference	O/M		I		
4	Common Reference	O/M		I		
5	Additional Reference Info	O/M		I		
	PGI Connect/Accept Item					
6	PGI default (absent)	O/M		I		
7	PGI default (empty)	O/M		I		
8	PGI default (not empty)	O/M		M		
9	Protocol Options	C/M		I/M		
10	TSDU-Maximum-size	O/M		I/M		
11	Version Number	O/M		M	Version 2	
12	Initial Serial Number	O/M	11,12	*		
			21,22,31,32	M		
13	Token Setting Item	O/M	11,12	*		
			21,22,31,32	M		
14	Second Initial Serial Number	C/C	11,12	C108		
			21,22,31,32	I		1

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Table 17 - continued

	ISO/IEC 8327-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
	Single Items					
15	Session User Requirements	O/M		M		
16	Calling Session Selector	O/M		M		
17	Called Session Selector	O/M		M		
18	PGI "User Data"	O/M		M		
19	Data Overflow	C/C		I		
20	PGI "Extended User Data"	C/C		M		

NOTES

1. Because the Symmetric Synchronize FU shall never be selected for a Session connection for Profiles 21, 22, 31 and 32, the Session Protocol machine will ignore the Second Initial Serial Number parameter if it is present on a CN SPDU in Profiles 21, 22, 31, and 32.

108. If Symmetric-Sync supported then O else I.

A.6.2 Overflow accept (oa) spdu

This SPDU is not used by TP. Its use by a U-ASE is not specified by this ISP.

A.6.3 Connect data overflow (cdo) spdu

This SPDU is not used by TP. Its use by a U-ASE is not specified by this ISP.

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A.6.4 Accept (ac) spdu

Table 18 - ACCEPT(AC) SPDU

	ISO/IEC 8327-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
	PGI Connection Identifier					
1	PGI default (absent)	O/M		I		
2	PGI default (empty)	O/M		I		
3	Calling SS-User Reference	O/M		I		
4	Common Reference	O/M		I		
5	Additional Reference Info	O/M		I		
	PGI Connect/Accept Item					
6	PGI default (absent)	O/M		NA		1
7	PGI default (empty)	O/M		NA		1
8	PGI default (not empty)	O/M		M		
9	Protocol Options	C/M		I		
10	TSDU-Maximum-size	O/M		I/M		
11	Version Number	C/M		M	Version 2	
12	Initial Serial Number	O/M	11,12	*		
			21,22,31,32	M		
13	Token Setting Item	O/M	11,12	*		
			21,22,31,32	M		
14	Second Initial Serial Number	C/C	11,12	C108		
			21,22,31,32	I		2
	Single Items					
15	Token Item	O/M		O/M		
16	Session User Requirements	O/M		M		
17	Calling Session Selector	O/M		M		
18	Called Session Selector	O/M		M		
19	PGI "User Data"	O/M		M		
20	Enclosure Item	C		*		

NOTES

1. Because Session Version 2 shall be selected, the Session Protocol Machine will generate a protocol error when the PGI Connect/Accept item is absent or empty.

2. Because the Symmetric Synchronize FU shall never be selected for a Session connection for Profiles 21, 22, 31 and 32, the Session Protocol Machine will ignored the Second Initial Serial Number parameter if it is present on an AC SPDU in Profiles 21, 22, 31, and 32.

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A.6.5 Refuse (rf) spdu

Table 19 - REFUSE (RF) SPDU

	ISO\IEC 8327-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	PGI default (empty)	O/M		I		
2	PGI default (not empty)	O/M		I		
3	Called SS-User Reference	O/M		I		
4	Common Reference	O/M		I		
5	Additional Reference Info	O/M		I		
	Single Items					
6	Transport Disconnect	O/M		O/M		
9	Session User Requirements	O/M		M		
10	Version Number	O/M		M		
11	Reason Code	O/M		M		
12	Enclosure Item	C		*		

A.6.6 Finish (fn) spdu

Table 20 - FINISH (FN) SPDU

	ISO/IEC 8327-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Transport Disconnect	O/M		O/M		
2	PGI "User Data"	O/M		M		
3	Enclosure Item	C/C		*		

A.6.7 Disconnect (dn) spdu

Table 21 - DISCONNECT (DN) SPDU

	ISO/IEC 8327-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	PGI "User Data"	O/M		M		
2	Enclosure Item	C/C		*		

A.6.8 Not finished (nf) spdu

This SPDU is not used by TP. Its use by a U-ASE is not specified by this ISP.

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A.6.9 Abort (ab) spdu

Table 22 - ABORT (AB) SPDU

	ISO/IEC 8327-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Transport Disconnect	M		M		
2	Reflect Parameter Values	O/M		I		
3	PGI "User Data"	O/M		M		
4	Enclosure Item	C/C		*		

A.6.10 Abort accept (aa) spdu

This SPDU is not used by TP. Its use by a U-ASE is not specified by this ISP.

A.6.11 Data transfer (dt) spdu

Table 23 - DATA TRANSFER (DT) SPDU

	ISO/IEC 8327-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	User Information Field	O/M		M		
2	Enclosure Item	C/C		*		

A.6.12 Expedited data (ex) spdu

This SPDU is not used by TP. Its use by a U-ASE is not specified by this ISP.

A.6.13 Typed data (td) spdu

Table 24 - TYPED DATA (TD) SPDU

	ISO/IEC 8327-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Enclosure Item	C/C		*		
2	User Information Field	O/M		M		

A.6.14 Capability data (cd) spdu

This SPDU is not used by TP. Its use by a U-ASE in profiles 11 and 12 is not specified by this ISP; however, its use by a U-ASE in profiles 21,22,31 and 32 is prohibited

A.6.15 Capability data ack (cda) spdu

This SPDU is not used by TP. Its use by a U-ASE in profiles 11 and 12 is not specified by this ISP; however, its use by a U-ASE in profiles 21,22,31 and 32 is prohibited

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A.6.16 Give tokens (gt) spdu

This PDU is not used by Profiles 11 and 12.

Table 25 - GIVE TOKENS (GT) SPDU

	ISO/IEC 8327-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Token Item	O/M		M	Minor Sync	
				*	Other Tokens	
2	PGI "User Data"	C/C		M		
3	Enclosure Item	C/C		*		

A.6.17 Please tokens (pt) spdu

This PDU is not used by Profiles 11 and 12.

Table 26 - PLEASE TOKENS (PT) SPDU

	ISO/IEC 8327-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Token Item	O/M		M	Minor Sync	
				*	Other Tokens	
2	PGI "User Data"	O/M		M		
3	Enclosure Item	C/C		*		

A.6.18 Minor sync point (MIP) spdu

This PDU is not used by Profiles 11 and 12.

Table 27 - MINOR SYNC POINT (MIP) SPDU

	ISO/IEC 8327-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Sync Type Item	O/M		M		
2	Serial Number	M		M		
3	PGI "User Data"	O/M		M		
4	Enclosure Item	C		M		

A.6.19 Minor sync point ack (mia) spdu

This PDU is not used by Profiles 11 and 12.

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Table 28 - MINOR SYNC POINT ACK (MIA) SPDU

	ISO/IEC 8327-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Serial Number	M		M		
2	PGI "User Data"	O/M		M		
3	Enclosure Item	C/C		*		

A.6.20 Major sync point (map) spdu

This SPDU is not used by TP. Its use by a U-ASE is not specified by this ISP.

A.6.21 Major sync point ack (maa) spdu

This SPDU is not used by TP. Its use by a U-ASE is not specified by this ISP.

A.6.22 Resynchronize (rs) spdu

This PDU is not used by TP for profiles 11 and 12.

Table 29 - RESYNCHRONIZE (RS) SPDU

	ISO/IEC 8327-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Enclosure Item	C		*		
2	Token Setting Item	O/M		M	Minor Sync	
				*	Other Tokens	
3	Resync Type	O/M		M		
4	Serial Number	O/M		M		
5	Second Resync Type	C		I		
6	Second Serial Number	C		I		
7	PGI "User Data"	O/M		M		

A.6.23 Resynchronize ack (ra) spdu

Table 30 RESYNCHRONIZE ACK (RA) SPDU

This PDU is not used by TP for profiles 11 and 12.

	ISO/IEC 8327-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Enclosure Item	C		*		
2	Token Setting Item	O/M	32	M	Minor Sync	
				*	Other Tokens	
3	Resync Type	O/M		I		
4	Serial Number	O/M		M		
5	Second Resync Type	C/C		I		
6	Second Initial Serial Number	C/C		I		
7	PGI "User Data"	O/M		M		

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A.6.24 Prepare (pr) spdu

Table 31 - PREPARE (PR) SPDU

This PDU is not used by TP for profiles 11 and 12.

	ISO/IEC 8327-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Prepare Type	M		M		
2	Resync Type	C		I		
3	Second Resync Type	C		I		

A.6.25 Exception report (er) spdu

This SPDU is not used by TP. Its use by a U-ASE is prohibited

A.6.26 Exception data (ed) spdu

This SPDU is not used by TP. Its use by a U-ASE is prohibited

A.6.27 Give tokens confirm (gtc) spdu

This SPDU is not used by TP. Its use by a U-ASE in profiles 11 and 12 is not specified by this ISP; however, its use by a U-ASE in profiles 21,22,31 and 32 is prohibited

A.6.28 Give tokens confirm ack (gta) spdu

This SPDU is not used by TP. Its use by a U-ASE in profiles 11 and 12 is not specified by this ISP; however, its use by a U-ASE in profiles 21,22,31 and 32 is prohibited

A.6.29 Activity start (as) spdu

This SPDU is not used by TP. Its use by a U-ASE in profiles 11 and 12 is not specified by this ISP; however, its use by a U-ASE in profiles 21,22,31 and 32 is prohibited

A.6.30 Activity resume (ar) spdu

This SPDU is not used by TP. Its use by a U-ASE in profiles 11 and 12 is not specified by this ISP; however, its use by a U-ASE in profiles 21,22,31 and 32 is prohibited

A.6.31 Activity interrupt (ai) spdu

This SPDU is not used by TP. Its use by a U-ASE in profiles 11 and 12 is not specified by this ISP; however, its use by a U-ASE in profiles 21,22,31 and 32 is prohibited

A.6.32 Activity interrupt ack (aia) spdu

This SPDU is not used by TP. Its use by a U-ASE in profiles 11 and 12 is not specified by this ISP; however, its use by a U-ASE in profiles 21,22,31 and 32 is prohibited

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A.6.33 Activity discard (ad) spdu

This SPDU is not used by TP. Its use by a U-ASE in profiles 11 and 12 is not specified by this ISP; however, its use by a U-ASE in profiles 21,22,31 and 32 is prohibited

A.6.34 Activity discard ack (ada) spdu

This SPDU is not used by TP. Its use by a U-ASE in profiles 11 and 12 is not specified by this ISP; however, its use by a U-ASE in profiles 21,22,31 and 32 is prohibited

A.6.35 Activity end (ae) spdu

This SPDU is not used by TP. Its use by a U-ASE in profiles 11 and 12 is not specified by this ISP; however, its use by a U-ASE in profiles 21,22,31 and 32 is prohibited

A.6.36 Activity end ack (aea) spdu

This SPDU is not used by TP. Its use by a U-ASE in profiles 11 and 12 is not specified by this ISP; however, its use by a U-ASE in profiles 21,22,31 and 32 is prohibited

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Annex B
(normative)

Presentation PPDU support

B.1 Presentation service parameters

This subclause details TP's requirements on the Presentation protocol. The reader should consult the Upper Layer agreements for a detailed discussion of these services. This part of ISO/IEC ISP 12061 only specifies PDU parameters necessary for this International Standardized Profile.

B.1.2 Connection initiator or responder capabilities

Table 1 - CONNECTION INITIATOR OR RESPONDER CAPABILITIES

	ISO/IEC 8823-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Initiator	O		C101		
2	Responder	O		M		

101. If capable of initiating an association then M, else I.

B.1.3 Protocol mechanisms

Table 2 -PROTOCOL MECHANISMS

	ISO/IEC 8823-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	X.410 (1984)	O		NA		1
2	Normal	O		M		

NOTES

1. Implementations that support X.410 mode shall respond to a CP PPDU proposing X.410-1984 mode with an S-U-ABRT; where the user data contains an AbortInformation data element (defined in X.410), which contains an AbortReason (type INTEGER) of value 4 (protocol error). Implementations that do not support X.410-1984 mode shall respond with either a Presentation-Provider abort or a Presentation-Provider Reject.

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B.1.4 Functional units

Table 3 - FUNCTIONAL UNITS

	ISO/IEC 8823-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Kernel	M		M		
2	Presentation Context Management	O		*		
3	Presentation Context Restoration	C		*		

B.1.5 Presentation pdu usage by profile

Table 4 KERNEL PDU USAGE BY PROFILE

ITEM #	PROTOCOL DATA UNITS	ISO/IEC 8823-2	PROFILES						
			11	21	31	12	22	32	NOTES
1	CONNECT PRESENTATION (CP)	C/C	C101 /M	C101 /M	C101 /M	C101 /M	C101 /M	C101 /M	
2	CONNECT PRESENTATION ACCEPT (CPA)	C/C	C102 /C101	C102 /C101	C102 /C101	C102 /C101	C102 /C101	C102 /C101	
3	CONNECT PRESENTATION REJECT (CPR)	C/C	M /C101	M /C101	M /C101	M /C101	M /C101	M /C101	
4	ABNORMAL RELEASE PROVIDER (ARP)	M	M	M	M	M	M	M	
5	ABNORMAL RELEASE USER (ARU)	M	M	M	M	M	M	M	
6	PRESENTATION DATA (TD)	M	M	M	M	M	M	M	

102. If capable of accepting an AARQ APDU then M, else NA.

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B.1.6 Presentation context management pdu usage by profile

Table 5 PRESENTATION CONTEXT MANAGEMENT PDU USAGE BY PROFILE

ITEM #	PROTOCOL DATA UNITS	ISO/IEC 8823-2	PROFILES						
			11	21	31	12	22	32	NOTES
1	ALTER CONTEXT (AC)	O/M	*	*	*	*	*	*	
2	ALTER CONTEXT ACKNOWLEDGE (ACA)	M	*	*	*	*	*	*	

B.1.7 Other presentation pdu usage by profile

Table 6 OTHER PRESENTATION PDU USAGE BY PROFILE

ITEM #	PROTOCOL DATA UNITS	ISO/IEC 8823-2	PROFILES						
			11	21	31	12	22	32	NOTES
1	PRESENTATION TYPED DATA (TTD)	M	*	M	M	*	M	M	
2	EXPEDITED DATA (TE)	O/M	*	*	*	*	*	*	
3	CAPABILITY DATA (TC)	O/M	*	NA	NA	*	NA	NA	
4	CAPABILITY DATA ACKNOWLEDGE (TCC)	O/M	*	NA	NA	*	NA	NA	
5	RESYNCHRONIZE (RS)	O/M	*	M	M	*	M	M	
6	RESYNCHRONIZE ACKNOWLEDGE (RSA)	O/M	*	M	M	*	M	M	

B.1.8 Presentation context restoration functional unit

No additional PPDUs.

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B.2 Supported parameters

B.2.1 Connect presentation (cp) ppdu

Table 7 - CONNECT PRESENTATION (CP) PPDU

	ISO/IEC 8823-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Calling Presentation Selector	O/M		M		
2	Called Presentation Selector	O/M		M		
3	Mode Selector	M		M	Normal	
4	Presentation Context Definition List	O/M		M		
5	Default Context Name	O/M		C103		
6	Protocol Version	O/M		M		
7	Presentation Requirements	O/M		*		1
8	User Session Requirements	O/M		C104		1
9	User Data	O/M		M		

NOTES

1. TP does not use this parameter, however a U-ASE is not prohibited from using it, subject to the restrictions imposed by TP on the use of Session Functional Units.

103. If the Expedited Data FU is supported then M, else I.

104. If the Context Management FU is supported then M, else I.

B.2.2 Connect presentation accept (cpa) ppdu

Table 8 - CONNECT PRESENTATION ACCEPT (CPA) PPDU

	ISO/IEC 8823-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Responding Presentation Selector	O/M		M		
2	Mode Selector	M		M	Normal	
3	Presentation Context Definition Result List	O/M		M		
4	Protocol Version	O/M		M		
5	Presentation Requirements	O/M		*		1
6	User Session Requirements	O/M		C104		1
7	User Data	O/M		M		

NOTES

1. TP does not use this parameter, however a U-ASE is not prohibited from using it, subject to restrictions imposed by TP on the use of Sesison Functional Units.

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B.2.3 Connect presentation reject (cpr) ppdu

Table 9 - CONNECT PRESENTATION REJECT (CPR) PPDU

	ISO/IEC 8823-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Responding Presentation Selector	O/M		M		
2	Presentation Context Definition Result List	O/M		M		
3	Protocol Version	O/M		M		
4	Default Context Result	O/M		C105		
5	Provider Reason	O/M		M		1
6	User Data	O/M		M		

NOTES

1. For enhanced interoperability it is recommended that appropriate provider reason values be sent with all CPR PPDUs.

105. If capable of proposing Default Context then M, else I.

B.2.4 Abnormal release user (aru) ppdu

Table 10 - ABNORMAL RELEASE USER (ARU) PPDU

	ISO/IEC 8823-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Presentation Context Identifier List	O/M		M		
2	User Data	O/M		M		

B.2.5 Abnormal release provider (arp) ppdu

Table 11 - ABNORMAL RELEASE PROVIDER (ARP) PPDU

	ISO/IEC 8823-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Abort Reason	O/M		M		1
2	Event Identifier	O/M		M		2

NOTES

1. For enhanced interoperability it is recommended that appropriate provider reason values be sent with all ARP PPDUs.

2. For enhanced interoperability it is recommended that appropriate event identifier values be sent with all ARP PPDUs.

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B.2.6 Alter context (ac) ppdu

This PPDU is not used by TP. Its use by a U-ASE is not specified by this ISP.

B.2.7 Alter context acknowledge (aca) ppdu

This PPDU is not used by TP. Its use by a U-ASE is not specified by this ISP.

B.2.8 Presentation data (td) ppdu

Table 12 - PRESENTATION DATA (TD) PPDU

	ISO/IEC 8823-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	User-data	O/M		M		

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B.2.9 Presentation typed data (ttd) ppdu

Table 13 - PRESENTATION TYPED DATA (TTD) PPDU

This PPDU is not applicable to profiles 11 and 12.

	BASE STANDARD ISO 8823		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	User-data	O/M		M		

B.2.10 Expedited data (te) ppdu

This PPDU is not used by TP. Its use by a U-ASE is not specified by this ISP.

B.2.11 Capability data (tc) ppdu

This PPDU is not used by TP. Its use by a U-ASE is not specified by this ISP. It can be used by Profiles 11 and 12 However its use by a U-ASE in profiles 21,22,31 and 32 is prohibited.

B.2.12 Capability data acknowledge (tcc) ppdu

This PPDU is not used by TP. Its use by a U-ASE is not specified by this ISP. It can be used by Profiles 11 and 12 However its use by a U-ASE in profiles 21,22,31 and 32 is prohibited.

B.2.13 Resynchronize (rs) ppdu

Table 14- RESYNCHRONIZE (RS) PPDU

This PPDU is not applicable to profiles 11 and 12.

	BASE STANDARD ISO 8823		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Presentation Context Identifier List	C/C		C104		
2	User-data	O/M		M		

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B.2.14Resynchronize acknowledge (rsa) ppdu

Table 15 - RESYNCHRONIZE ACKNOWLEDGE (RSA) PPDU

This PPDU is not applicable to profiles 11 and 12.

	BASE STANDARD ISO 8823		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTE
1	Presentation Context Identifier List	O/M		C104		
2	User-data	O/M		M		

B.2.15Sessions service primitives not carrying presentation pci

Table 16 SESSION SERVICE PRIMITIVES NOT CARRYING PRESENTATION PCI

ITEM #	PRIMITIVES	ISO/IEC 8823-2	PROFILES						
			11	21	31	12	22	32	NOTES
1	S-REL req/ind	C	O/M	O/M	O/M	O/M	O/M	O/M	
2	S-REL rsp/cnf	C	*(M) /C106	*(M) /C106	*(M) /C106	*(M) /C106	*(M) /C106	*(M) /C106	
3	S-PT req/ind	C	*	M	M	*	M	M	
4	S-SYNm req/ind	C	*	M	M	*	M	M	
5	S-SYNm rsp/cnf	C	*	M	M	*	M	M	
6	S-SYNM req/ind	C	*	*	*	*	*	*	
7	S-SYNM rsp/cnf	O/M	*	*	*	*	*	*	
8	S-UER req/ind	C	NA	NA	NA	NA	NA	NA	
9	S-ACTS req/ind	C	*	NA	NA	*	NA	NA	
10	S-ACTR req/ind	C	*	NA	NA	*	NA	NA	
11	S-ACTE req/ind	C	*	NA	NA	*	NA	NA	
12	S-ACTE rsp/cnf	C	*	NA	NA	*	NA	NA	

106. If capable of initiating an S-REL req M then else I.

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B.3 Support of syntaxes

B.3.1 Transfer syntaxes supported

Table 17 - TRANSFER SYNTAXES SUPPORTED

			SUPPORT	
ITEM#	TYPE	DETAIL	BASE	P
1	Object Identifier	joint-iso-ccitt asn1(1) basic-encoding(1)	M	M

B.3.2 Abstract syntaxes supported

Table 18 - ABSTRACT SYNTAXES

				SUPPORT		NOTES
ITEM#	TYPE	DETAIL	PROFILE ID	BASE	P	
1	Object Identifier	joint-iso-ccitt association-control(2) abstract-syntax(1) apdus(0) version1(1)		O	M	
2	Object Identifier	joint-iso-ccitt ccr(7) abstract-syntax(2) apdus(1) version2(2)	11,12	O	I	1
			21,22,31,32	O	M	
3	Object Identifier	joint-iso-ccitt transaction-processing(10) abstract-syntax(2) tp-apdus(1)		O	M	

NOTES

1. This ISP specifies that a referencing specification shall not use CCR when operating with profile 11 or profile 12 (in particular, refer to Parts 5 and 6 clause 7). However, when the abstract syntaxes are negotiated at the Presentation level, it is not possible to identify whether a protocol error shall be detected or not (this can be detected at the OSI TP level).

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Annex C
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ACSE APDU support

This subclause details TP's requirements on the ACSE protocol. The reader should consult the Upper Layer agreements for a detailed discussion of these services. This part of ISO/IEC ISP 12061 only specifies PDU parameters necessary for this International Standardized Profile.

C.1 Supported functions

Table 1 - SUPPORTED FUNCTIONS

	ISO/IEC 8650-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Normal Mode	O		M		
2	X.410 - 1984 mode	O		NA		1
3	Rules for Extensibility	M		M		
4	Supports Operation of Session Vers. 2	O		M		

NOTES

1. Implementations that support X.410 mode shall respond to a CP PPDU proposing X.410-1984 mode with an S-U-ABRT; where the user data contains an AbortInformation data element (defined in X.410), which contains an AbortReason (type INTEGER) of value 4 (protocol error). Implementations that do not support X.410-1984 mode shall respond with either a Presentation-Provider abort or a Presentation-Provider Reject.

C.2 Initiator/responder capabilties

Table 2 -INITIATOR/RESPONDER CAPABILITIES

	ISO/IEC 8650-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Association Initiator	O	11,12	O		
			21,22,31,32	M		
2	Association Responder	O	11,12	M		1
			21,22,31,32	M		

NOTES

1. An implementation shall be capable of rejecting an AARQ APDU, acceptance of an AARQ APDU is optional.

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C.3 Functional units

Table 3 -FUNCTIONAL UNITS

	ISO/IEC 8650-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Kernel	M		M		
2	Authentication	O		*		

C.4 ACSE pdu usage by profile

Table 4 ACSE PDU USAGE BY PROFILE

ITEM #	Protocol Data Units	ISO/IEC 8650-2	Profiles						
			11	21	31	12	22	32	Notes
1	A-ASSOCIATE-REQUEST (AARQ)	C/C	C101/M	M	M	C101/M	M	M	1
2	A-ASSOCIATE-RESPONSE (AARE)	C/C	M/C101	M	M	M/C101	M	M	1
3	A-RELEASE-REQUEST (RLRQ)	O/M	O/M	O/M	O/M	O/M	O/M	O/M	
4	A-RELEASE-RESPONSE (RLRE)	M/C	M/C102	M/C102	M/C102	M/C102	M/C102	M/C102	
5	A-ABORT (ABRT)	C/C	M	M	M	M	M	M	

NOTES

1. All implementations, including initiator only ones, shall have the capability to receive an AARQ APDU and rejecting it with an AARE APDU.

101. If capable of initiating an Association then M, else I.

102. If capable of initiating A-RELEASE then M, else I.

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C.5 A-Associate-Request (aarq)

Table 5 - A-ASSOCIATE-REQUEST (AARQ)

	ISO/IEC 8650-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Protocol Version	C/M		M		
2	Application Context Name	M		M		
3	Calling AP Title	O/M	11,12	O/M	See Table 10	1
			21,31,22,32	M	See Table 10	1
4	Calling AE Qualifier	O/M	11,12	O/M	See Table 10	1
			21,31,22,32	M	See Table 10	1
5	Calling AP Invocation Identifier	O/M	11,12	O/M		1
			21,31,22,32	O/M		1, 2
6	Calling AE Invocation Identifier	O/M	11,12	O/M		1
			21,31,22,32	O/M		1,2
7	Called AP Title	O/M		O/M	See Table 10	
8	Called AE Qualifier	O/M		O/M	See Table 10	
9	Called AP Invocation Identifier	O/M	11,12	O/M		1,3
			21,31,22,32	O/M		1,3
10	Called AE Invocation Identifier	O/M	11,12	O/M		1,3
			21,31,22,32	O/M		1,3
11	Implementattion Information	C/M		I		
12	Requester ACSE Requirements	C/M		*		
13	Mechanism Name	C/M		*		
14	Calling Authentication Value	C/M		*		
15	User Information	O/M		M		

NOTES

1. For implementations using association pools, these parameters are recommended in order to re-use associations.

2. If this parameter is received, then it is recommended to be logged and used for the reestablishment of the association during transaction recovery.

3. If this parameter is sent, then it is recommended to be logged and used for the reestablishment of the association during transaction recovery.

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C.6 A-Associate-Reponse (aare)

Table 6 - A-ASSOCIATE-RESPONSE (AARE)

	ISO/IEC 8650-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Protocol Version	C/M		M		
2	Application Context Name	M		M		
3	Responding AP Title	O/M	11,12	O/M	See Table 10	1
			21,31,22,32	M	See Table 10	1
4	Responding AE Qualifier	O/M	11,12	O/M	See Table 10	1
			21,31,22,32	M	See Table 10	1
5	Responding AP Invocation Identifier	O/M	11,12	O/M		
			21,31,22,32	O/M		2
6	Responding AE Invocation Identifier	O/M	11,12	O/M		
			21,31,22,32	O/M		2
7	Result	M		M		
8	Result Source - Diagnostic	M		M	1 - 10	
		C		*	11 - 14	
9	Implementation Information	O/M		I		
10	Requester ACSE Requirements	C/M		*		
11	Mechanism Name	C/M		*		
12	Calling Authentication Value	C/M		*		
13	User Information	O/M		M		

NOTES

1. This parameter shall be present on an AARE APDU if the called parameter was present in the AARQ APDU and the responding parameter is different from the called parameter.

2. If this parameter is received, then it is recommended to be logged and used for re-establishment of the association during transaction recovery.

C.7 A-Release-Request (rlrq)

Table 7 - A-RELEASE-REQUEST (RLRQ)

	ISO/IEC 8650-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Reason	O/M		I		
2	User information	O/M		I		

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C.8 A-Release-Response (rlre)

Table 8 - A-RELEASE-RESPONSE (RLRE)

	ISO/IEC 8650-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Reason	O/M		I		
2	User information	O/M		I		

C.9 A-Abort (abrt)

Table 9 - A-ABORT (ABRT)

	ISO/IEC 8650-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Abort Source	M		M		
2	Abort Diagnostic	C		*		
3	User Information	O/M		M		

C.10 AE Title name forms

Table 10 - AE TITLE NAME FORMS

	ISO/IEC 8650-2		PROFILE			
ITEM#	SYNTAX FORM	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Form 1 (Directory Name)	O/M		O/M	1 .. 1024 octets	1,2
2	Form 2 (Object ID)	O/M		M	1 .. 64 octets	1,2

NOTES

1. The limits specified apply to the AE-Title which is the combination of the AP-Title and AE-Qualifier. They are specified in line with the limits given in Part 3 on the Atomic-Action Identifier and the Branch Identifier.

2. The length restrictions apply to the encoded parameter values.

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C.11 Authentication value form

Table 11 - AUTHENTICATION VALUE FORM

	ISO/IEC 8650-2		PROFILE			
ITEM#	PARAMETER	STATUS	PROFILE ID	STATUS	T/L/V ALLOWED	NOTES
1	Graphic String	C/C		*		
2	Bit String	C/C		*		
3	External	C/C		*		
4	Any Defined By	C/C		*		

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