

# Please see the following files for replacement text:

mosi-mar.doc  
mosi-exr.w51  
mosi-iss.w51  
culr-sch.w51  
that are on nemo.

## Working **Implementation** **Agreements for Open Systems** **Interconnection Protocols:** **Part 5 - Upper Layers**

Output from the March 1994 Open Systems Environment Implementors' Workshop (OIW)

SIG Chair: **James Quigley, Hewlett Packard**  
SIG Editors: **Debbie Britt, NCTS**      **Laura Emmons, Telenex**

## **Foreword**

This part of the Working Implementation Agreements was prepared by the Upper Layers Special Interest Group (ULSIG) of the for Open Systems Environment Implementors' Workshop (OIW). See Part 1 - Workshop Policies and Procedures in the "Draft Working Implementation Agreements Document" for the workshop charter.

Text in this part has been approved by the Plenary of the above-mentioned Workshop. This part replaces the previously existing chapter on this subject.

Only the pages that were changed in March 1994 are being printed. Please refer to the December 1993 Working Document for additional information.

Future changes and additions to this version of these Implementor Agreements will be published as a new part. Deleted and replaced text will be shown as struck. New and replacement text will be shown as shaded.

## Table of Contents

<b>Part 5 - Upper Layers</b>		1
<b>0</b>	<b>Introduction</b>	1
<b>1</b>	<b>Scope</b>	1
<b>2</b>	<b>Normative References</b>	1
<b>3</b>	<b>Status</b>	1
<b>4</b>	<b>Errata</b>	1
4.1	ISO Defect Solutions	1
4.2	Technical Corrigenda and Defect Reports	1
4.3	Defect Registers	2
4.4	Exception Handling	2
<b>5</b>	<b>Association Control Service Element</b>	2
5.1	Introduction	2
5.2	Services	2
5.3	Protocol Agreements	2
5.3.1	Application Context	2
5.3.2	AE Title	2
5.3.3	Peer Entity Authentication	2
5.4	Abort APDU	3
5.5	Connectionless	3
<b>6</b>	<b>ROSE</b>	3
<b>7</b>	<b>RTSE</b>	3
<b>8</b>	<b>Presentation</b>	3
8.1	Introduction	3
8.2	Service	3
8.3	Protocol Agreements	3
8.3.1	Transfer Syntaxes	3
8.3.2	Presentation Context Identifier	4
8.3.3	Default Context	4
8.3.4	P-Selectors	4
8.3.5	Provider Abort Parameters	4
8.3.6	Provider Aborts and Session Version	4
8.3.7	CPC-Type	4
8.3.8	Presentation-context-definition-result-list	4
8.3.9	RS-PPDU	4
8.4	Presentation ASN.1 Encoding Rules	5
8.5	Presentation Data Value (PDV)	5

8.6	Connection Oriented .....	5
8.7	Connectionless .....	5
<b>9</b>	<b>Session .....</b>	<b>5</b>
9.1	Introduction .....	5
9.2	Services .....	5
9.3	Protocol Agreements .....	5
9.3.1	Concatenation .....	5
9.3.2	Segmenting .....	6
9.3.3	Reuse of Transport Connection .....	6
9.3.4	Use of Transport Expedited Data .....	6
9.3.5	Use of Session Version Number .....	6
9.3.5.1	Selection of session version .....	6
9.3.5.2	User data in session version 2 .....	6
9.3.6	Receipt of Invalid SPDUs .....	6
9.3.7	Invalid SPM Intersections .....	6
9.3.8	S-Selectors .....	7
9.4	Connectionless .....	7
<b>10</b>	<b>Universal ASN.1 Encoding Rules .....</b>	<b>7</b>
10.1	Tags .....	7
10.2	Definite Length .....	7
10.3	External .....	7
10.4	Integer .....	7
10.5	String Types .....	7
10.6	Extensibility .....	8
<b>11</b>	<b>Additions to ISP on Common Upper Layer Requirements .....</b>	<b>8</b>
11.1	Service .....	8
11.2	Provider Abort Parameters .....	8
11.3	Concatenation .....	8
11.4	Segmenting .....	8
11.5	Reuse of Transport Connection .....	8
11.6	Use of Transport Expedited Data .....	8
<b>12</b>	<b>Character Sets .....</b>	<b>9</b>
<b>13</b>	<b>Conformance .....</b>	<b>9</b>
<b>14</b>	<b>Specific ASE Requirements .....</b>	<b>9</b>
14.1	FTAM Phase 2 .....	9
14.2	MHS .....	9
14.3	DS Phase 1 .....	9
14.4	Virtual Terminal .....	9
14.5	MMS .....	9
14.6	Transaction Processing .....	10
14.7	Network Management .....	10
14.8	Remote Database Access .....	10

**Part 5 - Upper Layers**

**March 1994 (Working)**

**Annex A** (normative)

**Object Identifier Register** ..... 11  
    A.1 Register Index ..... 11  
    A.2 Object Identifier Descriptions ..... 11

**Annex B** (informative)

**Recommended Practices** ..... 12

**Annex C** (informative)

**Backward Compatibility** ..... 13

**Annex D** (normative)

**Working Draft of new ISP on mOSI Specification** ..... 17

**Annex E** (normative)

**Working Draft of new ISP on CL-CULR Specification** ..... 36

**Annex F** (informative)

**Upper Layer SIG Registered Questions List** ..... 37

## **Part 5 - Upper Layers**

**Editor's Note** - All references to Stable Agreements in this section are to Version 8.

**Editor's Note** - Clauses 1 through 12 will be replaced by appropriate references to ISP 11188-1 (Common Upper Layers Requirements).

### **0 Introduction**

(Refer to Stable Agreements Document)

### **1 Scope**

(Refer to Stable Agreements Document)

### **2 Normative References**

(Refer to Stable Agreements Document)

### **3 Status**

This version of the upper layer agreements is under development.

### **4 Errata**

#### **4.1 ISO Defect Solutions**

(Refer to Stable Implementation Agreements).

#### **4.2 Technical Corriagenda and Defect Reports**

(Refer to Stable Implementation Agreements).

### **4.3 Defect Registers**

(Refer to Stable Implementation Agreements).

### **4.4 Exception Handling**

(Refer to Stable Implementation Agreements).

## **5 Association Control Service Element**

### **5.1 Introduction**

(Refer to Stable Agreements Document)

### **5.2 Services**

(Refer to Stable Agreements Document)

### **5.3 Protocol Agreements**

#### **5.3.1 Application Context**

(Refer to Stable Agreements Document)

#### **5.3.2 AE Title**

(Refer to Stable Agreements Document)

#### **5.3.3 Peer Entity Authentication**

(Refer to Stable Agreements Document)

## **Part 5 - Upper Layers**

**March 1994 (Working)**

### **5.4 Abort APDU**

(Refer to Stable Agreements Document)

### **5.5 Connectionless**

(Refer to Stable Agreements Document)

## **6 ROSE**

(Refer to Stable Agreements Document)

## **7 RTSE**

(Refer to Stable Agreements Document)

## **8 Presentation**

### **8.1 Introduction**

(Refer to Stable Agreements Document)

### **8.2 Service**

(Refer to Stable Implementation Agreements).

### **8.3 Protocol Agreements**

#### **8.3.1 Transfer Syntaxes**

(Refer to the Stable Agreements Document)



**8.3.2 Presentation Context Identifier**

(Refer to Stable Agreements Document)

**8.3.3 Default Context**

(Refer to Stable Agreements Document)

**8.3.4 P-Selectors**

(Refer to the Stable Agreements Document)

**8.3.5 Provider Abort Parameters**

(Refer to Stable Implementation Agreements).

**Editor's Note -**

**8.3.6 Provider Aborts and Session Version**

(Refer to the Stable Agreements Document)

**8.3.7 CPC-Type**

(Refer to the Stable Agreements Document)

**8.3.8 Presentation-context-definition-result-list**

(Refer to the Stable Agreements Documents)

**8.3.9 RS-PPDU**

(Refer to the Stable Agreements Documents)

**8.4 Presentation ASN.1 Encoding Rules**

(Refer to the Stable Agreements Document)

**8.5 Presentation Data Value (PDV)**

(Refer to the Stable Agreements Document)

**8.6 Connection Oriented**

(Refer to the Stable Agreements Document)

**8.7 Connectionless**

(Refer to Stable Agreements Document)

**9 Session**

**9.1 Introduction**

(Refer to Stable Agreements Document)

**9.2 Services**

(Refer to Stable Agreements Document)

**9.3 Protocol Agreements**

**9.3.1 Concatenation**

(Refer to Stable Implementation Agreements).

**Editor's Note -**

**9.3.2 Segmenting**

(Refer to Stable Implementation Agreements).

**Editor's Note -**

**9.3.3 Reuse of Transport Connection**

(Refer to Stable Implementation Agreements).

**Editor's Note -**

**9.3.4 Use of Transport Expedited Data**

(Refer to Stable Implementation Agreements).

**Editor's Note -**

**9.3.5 Use of Session Version Number**

**9.3.5.1 Selection of session version**

(Refer to the Stable Agreements Documents)

**9.3.5.2 User data in session version 2**

(Refer to the Stable Agreements Document)

**9.3.6 Receipt of Invalid SPDUs**

(Refer to the Stable Agreements Document)

**9.3.7 Invalid SPM Intersections**

(Refer to the Stable Agreements Document)

**9.3.8 S-Selectors**

(Refer to the Stable Agreements Document)

**9.4 Connectionless**

(Refer to Stable Agreements Document)

**10 Universal ASN.1 Encoding Rules**

**10.1 Tags**

(Refer to the Stable Agreements Document)

**10.2 Definite Length**

(Refer to the Stable Agreements Document)

**10.3 External**

(Refer to the Stable Agreements Document)

**10.4 Integer**

(Refer to the Stable Agreements Document)

**10.5 String Types**

(Refer to the Stable Agreements Document)

## **10.6 Extensibility**

(Refer to the Stable Agreements Document)

# **11 Additions to ISP on Common Upper Layer Requirements**

## **11.1 Service**

(Refer to Stable Agreements Document)

## **11.2 Provider Abort Parameters**

(Refer to Stable Agreements Document)

## **11.3 Concatenation**

(Refer to Stable Agreements Document)

## **11.4 Segmenting**

(Refer to Stable Agreements Document)

## **11.5 Reuse of Transport Connection**

(Refer to Stable Agreements Document)

## **11.6 Use of Transport Expedited Data**

(Refer to Stable Agreements Document)

## **12 Character Sets**

(Refer to part 21 -- a new chapter expressly for character sets.)

## **13 Conformance**

(Refer to Stable Agreements Document)

## **14 Specific ASE Requirements**

### **14.1 FTAM Phase 2**

(Refer to Stable Agreements Document)

### **14.2 MHS**

(Refer to Stable Agreements Document)

### **14.3 DS Phase 1**

(Refer to Stable Agreements Document)

### **14.4 Virtual Terminal**

(Refer to Stable Agreements Document)

### **14.5 MMS**

(Refer to Stable Agreements Document)

**14.6 Transaction Processing**

(Refer to Stable Agreements Document)

**14.7 Network Management**

(Refer to Stable Agreements Document)

**14.8 Remote Database Access**

(Refer to Stable Agreements Document)

---

**Annex A** (normative)

---

**Object Identifier Register**

**A.1 Register Index**

(Refer to Stable Agreements Document)

**A.2 Object Identifier Descriptions**

(Refer to Stable Agreements Document)

---



**Annex B** (informative)

---

**Recommended Practices**

(Refer to Stable Agreements Document.)

---

**Annex C** (informative)**Backward Compatibility**

Version & Section		
Issue	Changed	Backward Compatibility
Restrictions on minimum number of octets implementations shall be able to receive.	V1E2 5.5.3.2	Interworking problems may occur, since implementations could send more than 128 octets. [An implementation that conforms to versions previous to V1E2 as an initiator and V3E1 as a responder will be able to interoperate.]
Agreements on AE Title, AP Title, and AE Qualifier changed.	V1E3 section 5.5.3.3 & V1E4 section 5.5.3.3	Interworking problems may occur between implementations that expect different forms of AP Title and AE Qualifier to be used. [Implementations that accept any form of these parameters will interwork with initiators that conform to earlier versions.]
Restrictions on encoding of "Presentation Context Identifier."	V2E1 section 5.8.3.3	Interworking problems may occur since implementations could encode negative numbers. [An implementation that conforms to versions previous to V2E1 as a responder and V3E1 as an initiator will be able to interoperate.]
Mode selector as first element in set	V1E4 section 5.6.3.4	This will cause interworking problems for those implementations that don't encode "mode selector" as the first element in the set. [An implementation that conforms to versions previous to V1E4 as an initiator and V3E1 as a responder will be able to interoperate.]

Version & Section		
Issue	Changed	Backward Compatibility
Restrictions on encoding of "protocol version" and "presentation requirements."	V2E1 section 5.8.4.2	This will cause interworking problems for those implementations expecting "protocol version" and "presentation requirements" to be encoded in the primitive form. [An implementation that conforms to versions previous to V2E1 as an initiator and V3E1 as a responder will be able to interoperate.]
Restrictions on encoding of "presentation selector."	V2E1 section 5.8.4.3	This will cause interworking problems for those implementations expecting "presentation selector" to be encoded in the primitive form. [An implementation that conforms to versions previous to V2E1 as an initiator and V3E1 as a responder will be able to interoperate with either version.]
Use of default values for Minor syncpoint changed.	V2E3 section 5.11.1.1.1	No backwards compatibility
Addition and deletions of abstract syntaxes.	V2E1 section 5.11.1.3.1	No backwards compatibility
Value for session functional unit "resynchronize" changed.	V2E4 section 5.11.1.4.1	No backwards compatibility
Restrictions on inclusion of "Transfer-syntax-name" in CP PDU and CPC type.	V3E1 section 5.8.6	Interworking problems will occur for those implementations that expect "Transfer-syntax-name" parameter to be present in the PDV-List even though one transfer syntax was negotiated. [An implementation conforming to V3E1 as an initiator and versions previous to V3E1 as a responder will be able to interoperate.]

Version & Section		
Issue	Changed	Backward Compatibility
Encoding restrictions on ASN.1 INTEGER type describing PCI.	V3E1 section 5.10.4	Interworking problems will occur since implementations conforming to previous versions could encode PCI integer lengths greater than 4. [Responders that accept integers describing PCI that are encoded in greater than 4 octets and Initiators that conform to V3E1 will be able to interoperate.]
Encoding restrictions on BIT STRING, OCTET STRING, and CHARACTER STRING.	V3E1 section 5.10.5	Implementations that conform to previous versions can expect these strings to have nested constructed encodings and therefore interworking problems will occur. [Responders that accept nested constructed encodings and Initiators that conform to V3E1 will be able to interoperate.]
No extra trailing bits allowed in BIT STRING.	V3E1 section 5.10.6	Interworking problems will occur when implementations that conform to previous versions send extra trailing bits. [Responders accepting extra trailing bits and Initiators that conform to V3E1 will be able to interoperate.]
Restriction on usage of "token item field" and "user data."	V3E1 section 5.9.3.1	Interworking problems will occur since implementations that conform to V1E1 do not expect the "token item field" to be encoded when a category 0 SPDU is concatenated to a category 2 SPDU.
Restrictions on CPC-type values when multiple transfer syntaxes are proposed.	V2E2 section 5.8.3.9	Interworking problems may occur between initiators that send CPC-type values and receivers that do not examine them.

Version & Section		
Issue	Changed	Backward Compatibility
References to ISO 8649 and ISO 8650 changed.	V1E3 section "References."	Interworking problems will occur for those implementations that conform to ISO DIS 8649 and 8650. V1E3 references IS versions of 8649 and 8650.
References to ISO 8326, ISO 8327, ISO 8822, and ISO 8823 changed.	V1E4 section References.	Interworking problems will occur for those implementations that conform to 8326/DAD2, 8327/DAD2, DIS 8822, and DIS 8823. V1E4 referenced 8326/AD2, 8327/AD2, IS 8822, and IS 8823.
AE Title changed according to Amendment 1 to ISO 8650.	V3E1 section 5.5.3.2	Interworking problems will occur between initiators that use AE-title- form 1 and responders that accept only AE-Title-form 2.
Restrictions on usage of "direct references" in ABRT APDU.	V3E1 section 5.5.4	Interworking problems will occur for those implementations that expect the "direct reference" parameter to be included in the ABRT APDU. [An implementation that conforms to V3E1 as an initiator and versions previous to V3E1 as a responder will be able to interoperate.]

---

**Annex D** (normative)

---

**Working Draft of new ISP on mOSI Specification**

**TITLE:** Common Upper Layer OSI upper layer facilities  
Explanatory Report for PDISP 11188-3 for Requirements - Part 3: Minimal

**SOURCE:** OIW  
Laura Emmons

**DATE:** May 22, 1994

**STATUS:** OSI/OSE workshops and for with PDISP 11188-3  
Draft report for information to the Regional submission to SGFS together

**a) General Profile Information**

**1) Profile Identifier**

therefore has no place within  
This profile does not specify a full A-profile, and the taxonomy of TR 10000-2.

**2) Profile Title**

Minimal OSI upper layer  
Common Upper Layer Requirements — Part 3: facilities

**3) Submitting Organization**

Workshop (OIW)  
Open Systems Environmental Implementor's

Laura Emmons  
Telenex, Inc.  
7401 Boston Blvd.  
Springfield, VA 22153  
USA

Tel: (703) 644-9113  
Fax: (703) 644-9011  
e-mail: laurae@ar.telenex.com

**4) Date of notification to SGFS**

**5) Maintenance Commitment**

regional OSI/OSE workshops done. James Quigley is the project manager.

**b) Base Standards Referenced**

**1) List of ISO/IEC standards, technical reports and CCITT recommendations**

Editor's note: These references will be updated in the course of DISP to ISP progression.

**1.1 Identical Recommendations | International Standards**

CCITT Recommendation X.227 (1993) | ISO 8650: 1993,<sup>1</sup> *Information processing systems–Open Systems Interconnection–Protocol specification for the Association Control Service Element.*

**1.2 Paired Recommendations | International Standards equivalent in technical content**

CCITT Recommendation X.200 (1984), Reference Model of Open Systems Interconnection for CCITT applications.  
ISO 7498:1984, Information processing systems–Open Systems Interconnection–Basic Reference Model.  
CCITT Recommendation X.210 (1988), OSI Layer Service Definition Conventions for CCITT applications.  
ISO/TR 8509:1986, OSI Layer Service Definition Conventions.

---

<sup>1</sup> Currently under ISO/IEC national body review



CCITT Recommendation X.214 (1988), Transport service definition for Open Systems Interconnection for CCITT applications.  
ISO 8072:1986, Information processing systems–Open Systems Interconnection–Transport service definition.  
CCITT Recommendation X.225 (1988), Session protocol specification for Open Systems Interconnection for CCITT applications.  
ISO 8327:1990, Information processing systems–Open Systems Interconnection–Connection oriented session protocol specification.  
CCITT Recommendation X.226 (1988), Presentation protocol specification for Open Systems Connection for CCITT applications.  
ISO 8822:1988, Information processing systems–Open Systems Interconnection–Connection oriented presentation protocol specification.

### 1.3

### Additional references

ISO 7498-3:1988, Information processing systems–Open Systems Interconnection–Basic Reference Model–Part 3: Naming and Addressing.  
ISO 8327-2:1992, *Information processing systems–Open Systems Interconnection–Connection oriented session protocol specification–Part 2: Protocol Implementation Conformance Statement (PICS) Proforma.*  
ISO 8650-2: 1992, *Information processing systems–Open Systems Interconnection–Protocol specification for the Association Control Service Element–Part 2: Protocol Implementation Conformance Statement (PICS) Proforma .*  
ISO 8823:1992, *Information processing systems–Open Systems Interconnection–Connection-oriented Presentation Protocol Specification–Part 2: Protocol Implementation Conformance Statement (PICS) Proforma.*  
ISO/IEC 9545:1989, *Information technology–Open Systems Interconnection–Application Layer Structure*  
ISO/IEC TR 10000-1:1992, *Information technology–Framework of taxonomy of International Standardized Profiles–Part 1: Framework.*  
ISO/IEC TR 10000-2:1992, *Information technology–Framework of taxonomy of International Standardized Profiles–Part 2: Taxonomy of Profiles.*  
ISO/IEC ISP 11188-1, *Information technology–International Standardized Profile–Common upper layer requirements–Part 1: Basic connection-oriented requirements.*<sup>2</sup>

### 2)

### TR 10000-1 Conformance

10000-1 on conformance are

The documentation requirements of ISO/IEC TR  
not met.

---

<sup>2</sup>Currently at level of working draft

consist of several tables which refer to the DIS versions of the ACSE, Presentation, and Session compliance to this profile is

The Profile Requirements List of PDISP 11188-3 specify the profile requirements. They currently PICS proforma of the base standards of the service definitions. A proforma for determining presented in Annex D.

**3) Aspects of non-compliance with standards**

No such aspects.

**4) Ammendments, corrigenda to base standards**

(see also editor's note above).  
None in addition to clause 3 of PDISP 11188-3

**c) Registration requirements**

None

**d) Other publications**

Draft IETF RFC  
(London: 1993)

"ThinOSI upper layers cookbook", P. Furniss

"X/Open Transport Interface Appendix for Minimal OSI Functionality", H. Lowe  
(Cambridge, MA: 1993)

**e) Profile purpose**

**1) Executive Summary**

general requirements on the use are identified as "Common  
definition of any complete other ISPs which do define A-further requirements on the

ISO/IEC ISP 11188 as a multi-part ISP specifies of OSI upper layer protocols by A-profiles. These Upper Layer Requirements".

The parts of this multi-part ISP do not contain the profiles, but can be referenced normatively by profiles. In addition, a referencing ISP may specify protocols, provided it does not contradict this ISP.

common text for ISPs or other  
 In addition to simplifying their  
 implementation of the protocols for their  
 contexts.

The purpose of this multi-part ISP is to provide  
 referencing specifications which specify A-profiles.  
 drafting, it also facilitates the common  
 use in different A-profile

of the minimal OSI facilities to  
 applications. These facilities are  
 the ACSE, Presentation and

This part of ISO/IEC ISP 11188 specifies a profile  
 support basic connection-oriented communication  
 comprised of a subset of the facilities defined by  
 Session service definitions.

**2)**

**Relationship to other ISPs**

be referenced and used by  
 AFT or AOM profiles. This profile  
 Coomon upper layer  
 requirements.

PDISP 11188-3 is specified as a common basis to  
 application ISPs for A-profiles, e.g. ISPs for the  
 would be referenced in place of PDISP 11188-1  
 requirements: Basic connection-oriented

**f)**

**PDISP development process**

**1)**

**Editor: OSI ULSIG (Laura Emmons)**

**History:**

draft of mOSI ISP written in

Draft 1                      OIW/ULSIG-33-03/93 First OIW

CULR-1.  
 regional  
 working  
 the OIW.

ISP format and based on the  
 Circulated for comments to the  
 workshops. Added as annex to  
 Implementor's Agreements of

made after comments were

Draft 2                      OIW/ULSIG-33-06/93 Revisions  
 obtained from OIW and EWOS.

revisions made after comments  
 EWOS.

Draft 3                      OIW/ULSIG-33-09/93 Further  
 were obtained from OIW and

revisions were made after issues Draft 4 OIW/ULSIG-33-12/93 Further were raised by OIW and EWOS.

**2) Degree of Openess and Harmonization**

The working drafts of PDISP 11188-3 have been circulated to all three regional workshops.

**3) Joint planning operation**

The PDISP was developed under the coordination of RWS-CC.

**g) PDISP content and format**

**1) TR 10000-1-1 Requirements**

These requirements have/have not been met.

**2) Divergence from TR 10000**

**3) Multi-part structure**

This PDISP is structured as a multi-part ISP to meet the requirements of various A-profiles.

Additional parts:

— Draft for PDISP 11188-1:  
Common upper layer requirements - Part 1: Basic connection-oriented requirements

— Draft for PDISP 11188-2:  
Common upper layer requirements - Part 2: Basic connection-oriented requirements for ROSE based profiles

**h) Any other information**

None

### mOSI Issues List

---

(10)	Reference:	New Annex
should be added which would references.	Issue:	An informative bibliography contain non-normative
	Source:	OIW ULSIG
	Date Raised:	December 7, 1993
	Solution:	Added new annex I.
1993	Status:	OIW:Accepted December 10, EWOS: AOW:
(11)	Reference:	Clauses 2 and 8
and conformance should be	Issue:	All information on compliance combined into clause 2.
	Source:	OIW ULSIG
	Date Raised:	December 7, 1993
8 into clause 2.	Solution:	Combine relevant parts of clause
1993	Status:	OIW:Accepted December 10, EWOS: AOW:

- (12) Reference: Annexes A, B and C.
- definition of category 1  
that all facilities are mandatory  
have separate column for
- Issue: It was felt that since the  
compliance/conformance implies  
for sending, it is not necessary to  
category 1 and 2 in the tables.
- Source: OIW ULSIG
- Date Raised: December 7, 1993
- Solution: Removed category 1 column  
from all tables.
- Status: OIW:Accepted December 10,  
1993  
EWOS:  
AOW:
- (13) Reference: Annexes A and B.
- (CMISE) and AFTnn (FTAM)  
facilities/parameters should be made  
RLRE reason code, CPR and  
Responding Presentation
- Issue: In order to align with AOM1n  
profiles, the following  
optional in the tables: RLRQ and  
ARP provider reason, and CPR  
selector.
- Source: OIW ULSIG
- Date Raised: December 7, 1993
- Solution: Tables have been changed.
- Status: OIW:Accepted December 10,  
1993  
EWOS:  
AOW:

- (14) Reference: Clause 6
- Issue: There should be a new table mandatory, optional, out-of-of compliance and conformance.
- Source: OIW ULSIG
- Date Raised: December 7, 1993
- Solution: Table added to clause 6.
- Status: OIW:Accepted December 10, 1993
- EWOS:  
AOW:
- (15) Reference: All
- Issue: All information in CULR-1 should be replicated in this document so that people do not have to read so many speciifications.
- Source: OIW ULSIG
- Date Raised: December 9, 1993
- Solution: Open. Will be discussed at next workshop.
- Status: OIW:  
EWOS:  
AOW:



- (16) Reference: Clause 6  
Issue: Review the definitions in clause 6 for accuracy.  
Source: OIW ULSIG  
Date Raised: December 9, 1993  
Solution: Open.  
Status: OIW:  
EWOS:  
AOW:
- (4) Reference: Introduction  
Issue: Add expalnatory report and executive summary to document.  
Source: OIW ULSIG  
Date Raised: September 13, 1993  
Solution: Added Foreword, Explanatory Report, changed Introduction.  
Status: OIW:AcceptedSeptember 16, 1993  
EWOS:  
AOW:
- (5) Reference: Clause 8  
Issue: Compliance clause should be in same section in both CULR-1 and this document.  
Source: EWOS TLG  
Date Raised: July 13, 1993

Moved 8.3 and 8.4 to new	Solution:	Moved 8.1 - 8.2 to new clause 2. Annex D.
1993	Status:	OIW:AcceptedSeptember 16, EWOS: AOW:
(6)	Reference:	Clause 5, Table 1
mandatory is correct.	Issue:	Issue on whether the definition of
	Source:	OIW ULSIG
	Date Raised:	June 10, 1993
CT SIG, added new note requested.	Solution:	After joint meeting with the OIW under table 1. Comments
1993	Status:	OIW:Accepted September 16, EWOS: AOW:
(7)	Reference:	2.1 Annex D, Tables 2 and 3
tables 2 and 3 (and their 2.1) when used as a proforma application specification.	Issue:	Issue on the correctness of corresponding documentation in by a referencing standalone
	Source:	OIW ULSIG
	Date Raised:	15 September 1993
text in clause 2 and annexes	Solution:	Jim Quigley has supplied new D and E..

Document No.ULSIG-71-12/93  
Date:May 22, 1994

1993

Status:

OIW:Accepted December 10,

EWOS:

AOW:

(8) Reference: 3.7  
and 2. Issue: Add definitions for category 1  
Source: OIW ULSIG  
Date Raised: 13 September 1993  
Solution: Done. Section number has  
changed to 4.7.  
Status: OIW:AcceptedSeptember 16,  
1993  
EWOS:  
AOW:

(9) Reference: None.  
Issue: Issue on whether to add section  
on use of transport services, especially the Reuse of  
Transport Connection service.  
Source: Kedem Kaminsky  
Date Raised: 14 September 1993  
Solution: Mr. Kaminsky was specifically  
interested in the use of mOSI by network management profiles.  
The AOM1n profile is the most widely used network  
management profile. It explicitly states connection is out of scope. CULR-3  
also states this in Annex C. The  
AOM1n profile makes no other comments on the use of the  
Transport service. This is not an issue.  
Status: OIW:Accepted December 7,  
1993  
EWOS:  
AOW:

- (1) Reference: B.3.1 line 2  
C.4.1.3 line 3
- Issue: Called (N)-selectors should be optional for sending in Catagory II compliance.
- Source: OIW ULSIG
- Date Raised: June 10, 1993
- Solution: Cat II "m" should be changed to "o".
- Status: OIW: AcceptedJune 10, 1993  
EWOS:  
AOW:
- (2) Reference: D.2
- Issue: Clause D.2 is not written clearly.
- Source: OIW ULSIG
- Date Raised: June 10, 1993
- Solution: Rewritten to say the following:  
  
"Transfer-syntax is the representation of the abstract-syntax during data transfer. If an application does not make a distinction between the abstract and transfer syntax, the same object identifier should be used to denote both syntaxes. In the case where: a) the abstract and transfer syntax are not the same; and b) the default abstract syntax object identifier has been used (see D.1 above) the following default transfer syntax object identifier may be used..."
- Status: OIW:AcceptedJune 10, 1993  
EWOS:

Document No.ULSIG-71-12/93  
Date:May 22, 1994

AOW:

(3)

should be removed.

Reference: Annex E  
Issue: There is no text for Annex E. It  
Source: OIW ULSIG  
Date Raised: June 10, 1993  
Solution: Removed.  
Status: OIW:AcceptedJune 10, 1993  
EWOS:  
AOW:

### Schedule for Progression of CULR

<b>Milestone</b>	<b>CULR-1</b>	<b>CULR-2</b>	<b>CULR-3</b>
<b>Informal SC21 review</b>	May 92/ Jun 93	N/A	Jun 93
<b>EWOS endorsement</b>	Sep 93	Nov 93	May 94
<b>OIW endorsement</b>	Sep 93	Dec 93	Mar 94
<b>AOW endorsement</b>	Oct 93	Dec 93 - Feb 94 by correspondence	Apr 94
<b>pDISP submission</b>	Nov 93/ Mar 94	Apr 94/Aug 94	May 94/ Aug 94
<b>DISP Ballot</b>	Dec 93 - Apr 94	Sep 94 - Jan 95	Sep 94 - Jan 95
<b>EDIT Meeting</b>	Jul 94	Feb 95	Feb 95
<b>FINAL TEXT</b>	Oct 94	Mar 95	Mar 95



---

**Annex E** (normative)

---

**Working Draft of new ISP on CL-CULR Specification**

(This is **ONLY** a placeholder for anticipated work on a new profile for **connectionless upper layer facilities**)

---

**Annex F (informative)**

---

**Upper Layer SIG Registered Questions List**  
**ULSIG Registered Question List**

---

(1)                               Summary:                     Herb Falk's question on ACSE Association Info.  
  
                                      Source:                     Herb Falk  
  
                                      Date Raised: 26 April, 1993  
  
                                      Issue:                     Copy of message follows:

The problem is specifically that the ACSE "Association-information", which is an ASN.1 EXTERNAL, has taken the CHOICE of octet-aligned. The ISO specifications and NIST stable agreements seem to be clear on this matter. We will try to explain them as best we can. A hard copy of the Presentation-Connect PDU follows on a separate page. Note that the item circled and marked "1" is the beginning of the PDV-list. Note "2" is the beginning of the Presentation Data List encoded as Single-ASN1-type. Note "3" is the beginning of the Association-Information encoded as an EXTERNAL. Note "4" is the beginning of the External encoding tagged as octet-aligned.

Please reference page 31 of ISO specification ISO-8823 (IS). At the top of the page is found a definition for the PDV-list. Legal presentation data values are a CHOICE of { Single-ASN1-type, octet-aligned, and arbitrary}. This CHOICE is further qualified in section 8.4.2.5, on the following page, to say that the single-ASN1-type shall be used if the PDV-list contains exactly one presentation data value. The ACSE Assocaite-Request PDU shown in the trace has exactly one presentation data value, therefore this encoding rule applies. The PDU conforms to this specification and may be verified in note "2" to be the value 0xA0.

Please refer to page 18 of ISO specification 8650 for a description of the AARQ-apdu. Towards the bottom of the page there is a description of "user-information". It states that "user-information" is IMPLICIT "Association-information" OPTIONAL. 3 pages later in the same specification is the definition for "Association-information". It states that an "Association-information" field may only be a SEQUENCE OF EXTERNAL. An EXTERNAL is not defined in the ACSE Protocol specification. It is found in the ASN.1 Protocol Specification ISO 8824.

Please refer to ISO specification 8824 (Abstract Syntax Notation One) page 23 for a description of the EXTERNAL. Section 34.7 of 8824 says that:

"If the data value is the value of a single ASN.1 data-type, and if the encoding is an integral number of octets, then the sending implementation shall use any of the encoding choices:

    single-ASN1-type  
    octet-aligned  
    arbitrary"

According to ISO 8824 it would be legal to send "Associate-information" as octet-aligned at note "4". However,

we believe that there is an implementation agreement on this CHOICE of encoding. If you look at the NIST stable agreements on page 12 in section 10.3 there is an implementors agreement on which choice to use in the EXTERNAL. The second sentence in that paragraph reads as follows:

"If a data value to be encapsulated in an EXTERNAL type is an instance of a single ASN.1 type encoded to the basic encoding rules for ASN.1 then the option "single-ASN1-type" shall be chosen as encoding."

We believe that this sentence is why the byte in note "4" should be the value 0xA0 instead of 0x81. This seems to be self-explanatory. However, to make sure that we are not taking this sentence out of context or misinterpreting it, we have placed a call to the Upper Layers chairman of NIST and are asking for a clarification.

Remember that NIST stable agreements are not binding which means that the Computrol MMS is still within the guidelines for this encoding at the current time. But also be advised that these stable agreements are being moved into the upper layer agreements within the next year.

Responses: From Laura Emmons (laurae@ar.telenex.com)

May 10:

I took a look at Herb Falk's defect report and I don't think there is any problem with any of the standards or our position on the use of the EXTERNAL data type. His description of the encoding of the encoding of his layer 6 header seems to be irrelevant. If the MMS-InitiateRequest is a single ASN.1 element (I haven't seen this protocol, but it seems that it is), then the data value of the instance of the Association-information element should be encoded as a single-ASN1-type. Therefore, in his pdu Note 4 should be an 0xA0.

Solution:

Status: OIW:  
EWOS:  
AOW:

(2) Summary: PGI PI issue from Japan  
Source: Jun Yamaguchi (junichi@vnet.ibm.com)  
Date Raised: July 22, 1993  
Issue: Copy of message follows:

I have a question about ISO 8327. I would like you to clarify an interpretation of this standard.

Base standard states "PGI units and PI units within the same nesting level shall be ordered in increasing value of their PGI and PI codes." in the clause 8.2.6 of ISO 8327.

There are several interpretations for thsi statement:

1. PGI units shall be ordered in increasing value of their PGI codes. PI units in the same PGI unit shall be ordered in increasing value of their PI codes. PI units without PGI code have the same nesting level with PGI units, and this kind of PI units and PGI units shall be ordered in increasing value of their PGI and PI codes.
2. PGI units shall be ordered in increasing value of their PGI codes. PI units in the same PGI unit shall be ordered in increasing value of their PI codes. PI units without PGI code shall be ordered in increasing value of their PI codes. There are no relationship between PGI units and PI units about the order.
3. PGI units shall be ordered in increasing order of their PGI codes. PI units in the same PGI unit shall be ordered in increasing value of their PI codes. PI units without PGI code have no relationship with other units. So, this kind of PI units may be placed in any position.

Which interpretation is correct, or all wrong?

Responses: From Bob Baker  
(baker@uxdp5.Tredydev.Unisys.com) July 26:  
I reviewed Jun Yamaguchi's session question which you forwarded to the OIW members. We had the same question years ago when we were implementing our Session layer, and I talked with Kim Banker at the time. He was very helpful and we finished our implementation based on his suggestions.

We believe interpretation #1 is the only correct interpretation of the session specification. This interpretation is consistent with what Kim told us and also with our implementation...Interpretations #2 and #3 would permit any of the PI codes which have no PGI code to be present after PGI 193 (User Data) in an SPDU. This is annoying at best, and would probably cause many implementations severe problems.

From Andrew Chandler (a.chandler@xopen.co.uk) August 17  
My interpretation is as follows (essentially this is interpretation 1 above):

PGI units shall be ordered in increasing value of their PGI codes.

PI units in the same PGI unit shall be ordered in increasing value of their PI codes.

PGI units and PI units at the same level of nesting shall be ordered in increasing value of their PGI and PI codes.

Solution: Interpretation 1 is correct.

Status: OIW:Accepted 09/93  
EWOS:  
AOW:

(3) Summary: Encoding FTAM single PDV list  
Source: Kevin Bohan  
(0004141431@mcimail.com)

Date Raised: July 29, 1993

Issue: Copy of message follows:

I have a question as to what is meant in section 8.5 of the NIST Stable Agreements.

Proginet has an FTAM product that sends back an F-Begin-Group-Response, F-Deselect-Response, F-Close-Response, F-End-Group-Response.

This is done using a single PDV list. We have encoded this PDV-List using the single-ASN1-type. The remote site is kicking this out and they claim that this is not valid.

Is this Valid?

Responses:

Solution:

Status: OIW:  
EWOS:  
AOW:

(4) Summary: Ed Kelley question on whether FTAM  
can directly use P-U-ABORT.

Source:

Date Raised:

Issue:

Responses:

Solution:

Status: OIW:

**Document No.ULSIG-96-12/93**  
**Date:May 22, 1994**

EWOS:  
AOW:

(5)                      Summary:            new MMS issue on CUL for Security

                            Source:                MMS SIG

                            Date Raised: 16 September, 1993

                            Issue:                Copy of liason:

The MMS SIG is investigating the use of various OSI protocols and features for achieving different security requirements for MMS. With further discussion with the Security SIG, it appears that concepts in GULS are adequate for our needs. In particular, the use of the ACSE Functional Unit for Authentication.

As it is likely, that all of the SIGs will need similar requirements for upper layers, we are asking for you to investigate the common needs and, if warranted, develop a version of the Common Upper Layer Requirements that address security.

Responses:

Solution:

Status:                OIW:  
                            EWOS:  
                            AOW:



(6)  
bad encoding.

Summary: Gary Williams issue on p-u-abort on

Source:

Date Raised: 9 September 1993

Issue: The problem is that we believe that there is a possible contradiction between clause 7.9 of Draft Version 12 of pDISP 11188-1, 1993-01-22 (ISP:Common Upper Layer Requirements) which states:

"If a received PPDU contains improperly encoded data values(including data values embedded with the user data field of a PPDU) and if an abort is issued, then either an ARU shall be issued."

and ISO 8823: 1988, clause's 6.4.4.2 and 6.4.4.3 which state that the only response is a P-P-ABORT.

The information that we require is how to start the procedure to address this issue, possibly obtain a contact name, or how to get in touch with he/she in order to resolve the issue.

Responses: From Klaus Truoel (truoel@gmd.de) Aug 8, 1993:

The current draft of Common Upper Layer Requirements is draft 14, and it will hopefully get the approval as PDISP by the Regional Workshops in Sept and Oct. Of course, after that approval it will not be too late to fix bugs if there are any.

The clause which you are questioning is the same also in the latest version. Actually, it is a clause which is in that document (and in the European FTAM ENVs) since many years. It passed several ISO ballots, reviews and discussions with ISO experts.

The reason behind that clause, as far as I can remember the history, is the often discussed problem, which OSI layer would be responsible to detect "improperly encoded data values". Is it the presentation layer or can it in many cases only be done by the application ? In the latter case, the application would initiate the Abort and that would result in an ARU. This is what the clause expresses.

And, by the way, the clauses in ISO 8823 which you reference, specify "if possible". Sometimes it may not be possible if only the application can detect the bug.

As I myself am the editor of the PDISP, you may send all comments or questions to me. In case you are not satisfied with my above explanation and if you want to raise the issue to a broader audience for consideration, I am prepared to take the issue with me to the forthcoming OIW (beginning of Sept.) and to EWOS (Oct.).

Solution:

Status:

OIW:  
EWOS:  
AOW:

(7)

Summary: X/Open ROSE PCI must be in BER.

Source:

Date Raised:

Issue:

Responses:

Solution:

Status:           OIW:  
                      EWOS:  
                      AOW: