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

Output from the December 1993 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 December 1993 are being printed. Please refer to the September 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

Part 5 - Upper Layers

Editor's Note - All references to Stable Agreements in this section are to Version 7.

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

In accordance with FIPS 146-1, with specific exceptions as noted below, this edition of the Part 5 - Stable Implementation Agreements remains backwardly compatible with Part 5 - Stable Implementation Agreements, Version 3, Edition 1. The method for assuring continued interoperability when these specific exceptions occur is detailed below and has been approved by the plenary of the OIW. Therefore, this edition of Part 5 - Stable Implementation Agreements supersedes all previous versions and editions of the Part 5 - Stable Implementation Agreements.

4.2 Technical Corriagenda and Defect Reports

An existing ISO base standard (e.g., ISO 8649 -- ACSE service) may be modified by an approved/registered Technical Corriagenda (TC) that fixes problems as reported in one or more Defect Reports (DR).

An error or request for clarification concerning a base standard is brought to the attention of ISO by a Defect Report. Defect Reports may be submitted to ISO by the OIW or by national bodies such as ANSI X3T5 task group in the USA.

A Defect Report is processed by the Defect Editing Group of the base standard as part of the ISO "Rapid Amendment Process". If the Defect Editing Group agrees that the Defect Report concerns an error in the base standard, the Defect Editing Group prepares a fix to the error in the form of a Draft Technical Corrigenda (DTC). A DTC is not used to add new or revised facility to the base standard. The purpose of the DTC is to rectify inconsistencies and or mechanisms that do not provide the defined facility.

> **NOTE -** The amendment procedure is not used to add facility to a base standard.

A DTC undergoes a 3-month draft ballot by national bodies. An editing meeting may be necessary to resolve national body comments.

An accepted/registered DTC becomes a TC. A TC immediately becomes a part of the base standard that it references. For a referencing standard or profile, the modification by a TC or an errata immediately takes effect unless it applies to an option that is "out-of-scope" or prohibited by the referencing standard or profile.

A TC may impact the interoperability of a base standard. In some cases, recertification may be necessary.

4.3 Defect Registers

Table ISO Defect Reports

Defect	Source	Circ.	Distr. as	Resp to	Returned to Editor for -				Ballot	Voting	Final	Remarks
		by Sec.	WG doc.	Sec. by	info	actn	DTC/49	DTC/50	ends	Sum'ry	text	
8649/001	Editor	88-12	--	89-11	--	--	N4447	--	90-05-15	N4687	N5630	Closed: Part of 8649/TC1
8649/002	Editor	89-11	--	89-11	--	--	N4448	--	90-05-15	N4688	N5630	Closed: Part of 8649/TC1
8649/003	Editor	89-11	--	89-11	--	--	N4449	--	90-05-15	N4689	N5630	Closed: Part of 8649/TC1
8649/004	Editor	90-02	N765	90-05-30	--	yes	tbd	tbd	tbd	tbd	tbd	Open: ULA advice - wait for XALS developments
8649/005	--											Number not used
8649/006	Japan	90-03	N782	90-06	--	--	N5320	--	91-01	N5690	--	Referred back to WG6 ULA group; response Nxxxx
							N6336	N6336	91-12-10	N6627	--	AFNOR: no vote
							tbd	tbd	tbd	tbd	tbd	Revised DTC due from Editor
8649/007	CCITT	90-12	N962	91-03-25	--	--				N6628	Ed 2	Closed: DTC text unchanged; add to Edition 2
8650/001	Editor	88-08	N533	89-11	--	--	--	N3473	89-08	N3862	N4286	Closed: Part of 8650/TC1
8650/002	Editor	88-08	N534	89-11	N653	--	--	--	--	--	--	Closed: Not recommended for progression
8650/003	Japan	88-10	N573	89-01	N654	--	--	--	--	--	--	Closed:Editorial change already in IS text
8650/004	Editor	88-12	--	88-12	--	--	--	N3475	89-08	N4286	N4286	Closed: Part of 8650/TC1
8650/005	--											Number not used
8650/006	CCITT	90-10	N915	91-01-11	tbd	--	--	--	--	--	--	Closed: Not recommended for progression
8650/007	CCITT	90-10	N916	91-01-11	--	--	--	N6338	91-12-10	N6629	Ed 2	Closed: Add to Edition 2 of 8650
8650/008	Editor	90-06	--	90-06	N911	--	--	--	--	--	--	Closed: Response only - did not change text
8650/009	Editor	93-??	N???	93-03	--	--	--	Nxxxx	93-12	tbd	tbd	Open: under discussion preparing for DTC text

4.4 Exception Handling

For those cases where backwards compatibility cannot be assured due to a Technical Corrigenda (see clause 4.6), interoperability will be maintained by requiring existing implementations to incorporate the change within 12 months after it has been registered as a Technical Corriagenda. The registration authority for conformance testing will determine in each case whether or not recertification is necessary.

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)

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

Editor's Note - Refer to Clause 11.1 of the Working Agreements Document.

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

Editor's Note - See Clause 11.2 of the Working Agreements Document.

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

Editor's Note - Refer to Clause 11.3 of the Working Agreements Document.

9.3.2 Segmenting

Editor's Note - Refer to Clause 11.4 of the Working Agreements Document.

9.3.3 Reuse of Transport Connection

Editor's Note - Refer to Clause 11.5 of the Working Agreements Document.

9.3.4 Use of Transport Expedited Data

Editor's Note - Refer to Clause 11.6 of the Working Agreements Document.

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

SOURCE: OIW
Laura Emmons

DATE: February 10, 1994

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

a) General Profile Information

1) Profile Identifier

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

2) Profile Title

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

3) Submitting Organization

Open Systems Environmental Implementor's Workshop (OIW)

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4) Date of notification to SGFS

5) Maintenance Commitment

The OIW ULSIG will ensure on behalf of the three regional OSI/OSE workshops that the maintenance of PDISP 11188-3 will be 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,[1] *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.

[1] 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.*[2]

2) TR 10000-1 Conformance

The documentation requirements of ISO/IEC TR 10000-1 on conformance are not met.

[2]Currently at level of working draft

The Profile Requirements List of PDISP 11188-3 specify the profile requirements. They currently consist of several tables which refer to the DIS versions of the PICS proforma of the base standards of the ACSE, Presentation, and Session service definitions. A proforma for determining compliance to this profile is presented in Annex D.

3) Aspects of non-compliance with standards

No such aspects.

4) Ammendments, corrigenda to base standards

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

c) Registration requirements

None

d) Other publications

Draft IETF RFC "ThinOSI upper layers cookbook", P. Furniss (London: 1993)

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

e) Profile purpose

1) Executive Summary

ISO/IEC ISP 11188 as a multi-part ISP specifies general requirements on the use of OSI upper layer protocols by A-profiles. These are identified as "Common Upper Layer Requirements".

The parts of this multi-part ISP do not contain the definition of any complete profiles, but can be referenced normatively by other ISPs which do define A-profiles. In addition, a referencing ISP may specify further requirements on the protocols, provided it does not contradict this ISP.

The purpose of this multi-part ISP is to provide common text for ISPs or other referencing specifications which specify A-profiles. In addition to simplifying their drafting, it also facilitates the common implementation of the protocols for their use in different A-profile contexts.

This part of ISO/IEC ISP 11188 specifies a profile of the minimal OSI facilities to support basic connection-oriented communication applications. These facilities are comprised of a subset of the facilities defined by the ACSE, Presentation and Session service definitions.

2) Relationship to other ISPs

PDISP 11188-3 is specified as a common basis to be referenced and used by application ISPs for A-profiles, e.g. ISPs for the AFT or AOM profiles. This profile would be referenced in place of PDISP 11188-1 Coomon upper layer requirements: Basic connection-oriented requirements.

f) PDISP development process

1) Editor: OSI ULSIG (Laura Emmons)

History:

Draft 1	OIW/ULSIG-33-03/93	First OIW draft of mOSI ISP written in ISP format and based on the CULR-1. Circulated for comments to the regional workshops. Added as annex to working Implementor's Agreements of the OIW.
Draft 2	OIW/ULSIG-33-06/93	Revisions made after comments were obtained from OIW and EWOS.
Draft 3	OIW/ULSIG-33-09/93	Further revisions made after comments were obtained from OIW and EWOS.

Draft 4 OIW/ULSIG-33-12/93Further revisions were made after issues 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

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(10)

Reference: New Annex

Issue: An informative bibliography should be added which would contain non-normative references.

Source: OIW ULSIG

Date Raised: December 7, 1993

Solution: Added new annex I.

Status: OIW:Accepted December 10, 1993

EWOS:
AOW:

(11)

Reference: Clauses 2 and 8

Issue: All information on compliance and conformance should be combined into clause 2.

Source: OIW ULSIG

Date Raised: December 7, 1993

Solution: Combine relevant parts of clause 8 into clause 2.

Status: OIW:Accepted December 10, 1993

EWOS:
AOW:

(12)

Reference: Annexes A, B and C.

Issue: It was felt that since the definition of category 1 compliance/conformance implies that all facilities are mandatory for sending, it is not necessary to have separate column for 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.

Issue: In order to align with AOM1n (CMISE) and AFTnn (FTAM) profiles, the following facilities/parameters should be made optional in the tables: RLRQ and RLRE reason code, CPR and ARP provider reason, and CPR Responding Presentation 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 which outlines the definitions of mandatory, optional, out-of- scope, and excluded for the cases 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

Solution: Moved 8.1 - 8.2 to new clause 2. Moved 8.3 and 8.4 to new Annex D.

Status: OIW:AcceptedSeptember 16, 1993
EWOS:
AOW:

(6) Reference: Clause 5, Table 1

Issue: Issue on whether the definition of mandatory is correct.

Source: OIW ULSIG

Date Raised: June 10, 1993

Solution: After joint meeting with the OIW CT SIG, added new note under table 1. Comments requested.

Status: OIW:Accepted September 16, 1993
EWOS:
AOW:

(7) Reference: 2.1
Annex D, Tables 2 and 3

Issue: Issue on the correctness of tables 2 and 3 (and their corresponding documentation in 2.1) when used as a proforma by a referencing standalone application specification.

Source: OIW ULSIG

Date Raised: 15 September 1993

Solution: Jim Quigley has supplied new text in clause 2 and annexes D and E..

Status: OIW:Accepted December 10,
1993

EWOS:
AOW:

(8)

Reference: 3.7

Issue: Add definitions for category 1 and 2.

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 that reuse of the transport 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:

AOW:

(3)

Reference: Annex E

Issue: There is no text for Annex E. It should be removed.

Source: OIW ULSIG

Date Raised: June 10, 1993

Solution: Removed.

Status: OIW:AcceptedJune 10, 1993
EWOS:
AOW:

Schedule for Progression of CULR

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

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 warrented, develop a version of the Common Upper Layer Requirements that address security.

Responses:

Solution:

Status: OIW:
EWOS:
AOW:

(6) Summary: Gary Williams issue on p-u-abort on bad encoding.

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 beissued."

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 questionning 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: