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

Output from the June 1991 NIST Workshop for Implementors of OSI

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Foreword

This part of the Working Implementation Agreements was prepared by the Upper Layers Special Interest Group (ULIG) of the National Institute of Standards and Technology (NIST) Workshop for Implementors of Open Systems Interconnection (OSI). See Procedures Manual for 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.

Annexes A, B, and C are for information purposes only.

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 strikeout. New and replacement text will be shown as shaded.

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Editor's Note - All references to Stable Agreements in this section are to Version 4 .

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

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(Refer to Stable Agreements Document)

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13.4 Virtual Terminal

(Refer to Stable Agreements Document)

13.5 MMS

13.5.1 ACSE Requirements

ACSE Functional Units: Kernel

Application Context: "ISO MMS" { iso(1) standard(0) 9506 part(2) mms-application-context-version1(3)} - implies use of ACSE and MMS ASE

13.5.2 Presentation Requirements

Presentation Functional Units: Kernel

At least 2 Presentation Contexts must be supported.

Abstract Syntaxes:

a) "mms-abstract-syntax-major-version1" { iso(1) standard(0) 9506 part(2) mms-abstract-syntax-major-version1 (1)}

b) "ISO 8650-ACSE1" {joint-iso-ccitt(2) association-control(2) abstract-syntax(1) apdus(0) version1(1)}

Associated Transfer Syntax: "Basic Encoding of a single ASN.1 type" {joint-iso-ccitt(2) asn1(1) basic-encoding(1)}

13.5.3 Session Requirements

Session Functional Units:

a) Kernel

b) Duplex

Version Number: 2

Maximum size of User Data parameter field: 10,240

13.6 Transaction Processing

13.6.1 ACSE Requirements

ACSE Functional Units: Kernel

The application context is user-defined.

13.6.2 Presentation Requirements

Presentation Functional Units: Kernel

Presentation Contexts:

a) At least 3 must be supported if the commit functional unit of TP is not supported.

b) At least 4 must be supported if the commit functional unit of TP is supported.

Abstract Syntaxes: "ISO 8650-ACSE1" { joint-iso-ccitt(2) association-control(2) abstract-syntax(1) apdus(0) version1(1) }

Associated Transfer Syntax:

a) "Basic Encoding of a single ASN.1 type" { joint-iso-ccitt(2) asn1(1) basic-encoding(1) }

b) "ISO 10026-TP" { joint-iso-ccitt(2) transaction-processing(?) abstract-syntax(2) tp-apdus(1) }

c) If required, "ISO 9804-CCR" (TBD)

d) At least one user-defined abstract syntax.

13.6.3 Session Requirements

Session Functional Units:

a) kernel

b) duplex

c) Others as required by CCR (TBD) if the commit functional unit of TP is supported.

Version Number: 2

Maximum size of User Data parameter field: 10,240

13.7 Network Management

(Refer to Stable Agreements Document)

Annex A (informative)

Recommended Practices

(Refer to Stable Agreements Document)

Annex B (informative)

Object Identifier Register

B.1 Register Index

(Refer to Stable Agreements Document)

B. 2 Object Identifier Descriptions

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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 "presentatation 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.]