

TITLE: Information technology - International Standardized Profiles AMM11: MMS General Applications Base Profile - Part 1: Specification of ACSE, Presentation and Session Protocols for the use by MMS

SOURCE: Editor

STATUS: Submittal copy, June 1994

This document has been prepared based on the comments from the OIW's MMS SIG, EWOS's EGMMS and the AOW's MMS SIG. The text has been revised to be as close to the final document as possible at this time. Additions to draft six text are denoted by highlighted text. Deletions are denoted by ~~strikeout~~.

This document is based on ISO/IEC DISP 11188-1, Common Upper Layer Requirements (CULR). When additional requirements are needed, they are included in this part. The intention is to not duplicate text from DISP 11188-1 here. Since we are referencing DISP 11188-1, the definition of 'm', 'o', etc is determined by DISP 11188-1.

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## Foreword

The ISO/IEC ISP 14226 specifies the AMM11 MMS General Applications International Standardized Profile. This ISP has three parts:

Part 1 - Specification of ACSE, Presentation, and Session Protocols for the use by MMS

Part 2 - Common MMS Requirements

Part 3 - Specific MMS Requirements

This part of the ISO/IEC ISP 14226 is produced and approved by the Special Group on Functional Standardization of ISO/IEC JTC 1. This Group includes ISO/IEC Member Bodies and S-liaison organizations. The S-liaison organizations that have contributed to the production of this draft are

Asia-Oceania Workshop (AOW)

European Workshop for Open Systems (EWOS)

NIST OSE Implementors Workshop (OIW)

## Introduction

This draft for an International Standardized Profile (ISP) is defined within the context of Functional Standardization, in accordance with the principles specified by ISO/IEC TR 10000, "Framework and Taxonomy of International Standardized Profiles". The context of Functional Standardization is one part of the overall field of Information Technology (IT) standardization activities, covering base standards, profiles, and registration mechanisms. A profile defines a combination of base standards that collectively perform a specific well-defined IT function. Profiles standardize the use of options and other variations in the base standards, and provide a basis for the development of uniform, internationally recognized system tests.

# **Information technology - International Standardized Profiles AMM11: MMS General Applications Base Profile -**

## **PART 1: Specification of ACSE, Presentation and Session Protocols for the use by MMS**

### **. Scope**

### **. General**

This part of ISO/IEC ISP 14226 specifies how the Association Control Service Element, the Presentation layer and the Session layer standards shall be used to support the required MMS functions specified in Part 3. Other MMS ISPs may specify this part as part of their profiles.

### **. Position within the Taxonomy**

This part of ISO/IEC ISP 14226 is the first part, of a multi-part ISP identified in ISO/IEC TR 10000-2 as "AMM11, MMS General Applications Base Profile". It may be combined with any T-Profile specifying the OSI connection-mode transport service.

### **. Scenario**

The model used is one of two end systems running an end-to-end association using the ACSE, Presentation and Session services and protocols (see figure 1).

## **. Normative References**

The following documents contain provisions which, through reference in this text, constitute provisions of this profile. At the time of publication, the editions indicated were valid. All documents are subject to revision, and parties to agreements based on this profile 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 CCITT maintains published editions of its current Recommendations.

Amendments and corrigenda to the base standards referenced: See annex B for a complete list of these documents which are used in this ISP.

- ISO/IEC TR 10000-1:1992, Information Technology - Framework and taxonomy of International Standardized Profiles - Part 1 : Framework.
- ISO/IEC TR 10000-2:1992, Information Technology - Framework and taxonomy of International Standardized Profiles - Part 2 : Taxonomy of Profiles.
- ISO/IEC DISP 11188-1:1993, Information Technology - International Standardized Profile -Common Upper Layer Requirements - Part 1: Basic connection oriented requirements.

## **. Definitions**

Terms used in this part are defined in the referenced base standards.

## **. Abbreviations**

Abbreviations used in this part are defined in the referenced base standards.

PRL Profile Requirements List

## **. Conformance**

This part of ISO/IEC ISP 14226 states requirements upon implementations to achieve interworking. A claim of conformance to this part of ISO/IEC ISP 14226 is a claim that all requirements in the relevant base standards are satisfied, and that all requirements in the following Clauses and in annex A are satisfied. Annex A states the relationship between these requirements and those of base standards.

## **. Conformance Statement**

For each implementation claiming conformance to this part of ISO/IEC 14226 an appropriate set of PICs shall be made available stating support or non-support of each option identified in this part.

## **. Relationship with Base Standards**

All requirements defined in ISO/IEC DISP 11188-1 concerning the relationship with base standards apply for an implementation to conform to this ISP.

Annex A makes mandatory support of some features that were optional in the above document.

#### **. ACSE Conformance**

To conform to the Association Control Service Element (ACSE) protocol used in this profile, implementations shall implement the normal mode, AE-Title-form2 for sending, support operation of session version 2, and all the supported (m) features (identified in annex A). They shall state which optionally supported (o) features are implemented.

All rules defined in clause 6 of ISO/IEC DISP 11188-1 shall be applied.

#### **. Presentation Conformance**

To conform to the Presentation protocol used in this profile, implementations shall implement the normal mode and all the supported (m) features (identified in annex A). They shall state which optionally supported (o) features are implemented. All rules defined in clause 7 of ISO/IEC DISP 11188-1 shall be applied.

Conformant implementations shall also support the following encoding rules:

Constructed encodings shall not be used for bit strings (or types derived from bit strings by tagging) shorter than 256 bits, nor for octet strings (or types derived from octet strings by tagging) shorter than 1024 octets in the MMS PDUs. For such strings, only primitive encoding shall be used. Upon receipt of a constructed bit string or octet string that violates this restriction, the receiving implementation may reject the corresponding PDU or send a P-U-Abort, but shall not send a P-P-Abort.

#### **. Transfer Syntax Conformance**

An implementation conforming to this part of profile shall support the "Basic Encoding rules of a single ASN.1 type" as defined in ISO 8825, together with the additional rules defined in clause 8 of ISO/IEC DISP 11188-1, for the generation of protocol encodings specified in ASN.1.

#### **. Session Conformance**

To conform to the Session protocol used in this profile, implementations shall implement the supported (m) features (identified in annex A). They shall state which optionally supported (o) features are implemented. All rules defined in clause 9 of ISO/IEC DISP 11188-1 shall be applied.

Implementations conforming to this part shall implement session version 2.

The session duplex functional unit is required by the base standard for operation of MMS.

## **PART 1:**

# **Annex A - Profile Requirements List for ACSE, Presentation and Session**

### **A.. General**

NOTE - Upon CULR becoming ISP, the following text will be updated to reflect the CULR ISP.

This annex describes the ACSE, Presentation and Session requirements in terms of tables which reference the base standard PICS proforma. They are intended to give a precise specification of requirements. In case of arbitration or dispute, this annex takes precedence over clause 5 of this ISP.

### **A.. References**

In the PICS proforma reference column of A.4 to A.6, and in the lists of conditional expressions underneath the tables, tables within the base standard PICS proformas are referenced. The first letter identifies the specific PICS proforma:

- A: ACSE - ISO/IEC 8650-2
- P: Presentation - ISO/IEC 8823-2
- S: Session - ISO/IEC 8327-2

The characters from the second character to the solidus (/) form a reference to the specific subclause in annex A of that PICS proforma which contains the table in question. The number after the solidus references the row number in the table.

### **A.. Classification of Requirements**

Throughout this annex, to specify the level of support for each feature, the following classification is used.

### **A.. Status Column**

The status column reflects the classification to be found in the base standard PICS proforma:

- o: optional
- c: conditional
- o.n: optional with at least one of the marked items being selected

The definitions of conditional items may be found in the respective PICS proformas. Where the status entry contains two classifications separated by a comma, these reference the sending and receiving capabilities respectively.

**A.. Profile Column**

The profile column reflects the requirement of this part of ISO/IEC 14226. Each entry in this column is chosen from the following list (for definitions see ISO/IEC DISP 11188-1 clause 3.2):

- m: mandatory support
- C: conditional support
- o.n: optional with at least one of the marked items being selected
- i: outside the scope
- : not applicable

Where the status entry contains two classifications separated by a comma, these reference the sending and receiving capabilities respectively.

**A.. ACSE PRL**

	PICS Proforma Reference	Name of Item	Normative Reference	Status	Profile
1	A.A.6.1/1	Initiator		o.2	C11
2	A.A.6.1/2	Responder		o.2	C12

C11: If an MMS implementation claims support for the MMS Initiate service in the requestor role then m, else o.

C12: If an MMS implementation claims support for the MMS Initiate service in the responder role then m, else o.

3	A.A.6.2/1	Initiator		o	C13
4	A.A.6.2/2	Requestor		o	C14

C13: If an MMS implementation claims support for the MMS Conclude service in the requestor role then m, else o.

C14: If an MMS implementation claims support for the MMS Conclude service in the responder role then m, else o.

5	A.A.7/1	Normal mode		o.4	m
6	A.A.7/2	X.410 (1984) mode		o.4	i
7	A.A.7/4	Support operation of Session v2		o	m



8	A.A.11.1/2	Form 2 (Object id. and integer)		o.5,m	C15,m
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C15: If sending of any of the AP-title or AE-qualifier parameters is supported, then m, else o.

### A.. Presentation PRL

	PICS Proforma Reference	Name of Item	Normative Reference	Status	Profile
1	P.A.5.1/1	X.410 (1984)	5.2.2	o.01	i
2	P.A.5.1/2	Normal	5.2.2	o.01	m

3	P.A.6.1.1.1	Initiator (presentation connection)		o.03	C21
4	P.A.6.1.1.1	Responder (presentation connection)		o.03	C22

C21: m if the implementation supports the MMS Initiate service in the requestor role. o otherwise.

C22: m if the implementation supports the MMS Initiate service in the responder role. o otherwise.

5	P.A.6.1.1.3	Requestor (orderly release)		o.05	C23
6	P.A.6.1.1.3	Acceptor (orderly release)		o.05	C24

C23: m if the implementation supports the MMS Conclude service in the requestor role. o otherwise.

C24: m if the implementation supports the MMS Conclude service in the responder role. o otherwise.

**A.. Session PRL**

	PICS Proforma Reference	Name of Item	Normative Reference	Status	Profile
1	S.A.3/2	Version 2		o.1	m
2	S.A.6.1/4	Duplex		o.2	m
3	S.A.6.2/2	Reuse of transport connection		o	i
4	S.A.6.2/4	Extended Concatenation (sending)		o	i
5	S.A.6.2/5	Extended Concatenation (receiving)		o	i
6	S.A.7.1.1.1	Initiator (session connection)		o.3	C21
7	S.A.7.1.1.1	Responder (session connection)		o.3	C22
8	S.A.7.1.1.2	Requestor (orderly release)		o.4	C23
9	S.A.7.1.1.2	Acceptor (orderly release)		o.4	C24
10	S.A.7.1.1.3	Requestor (normal data transfer)		o.5	m
11	S.A.7.1.1.3	Acceptor (normal data transfer)		o.5	m
12	S.A.7.1.2/2	Overflow Accept (OA)	9.2.2	c5, c6	i,i
13	S.A.7.1.2/3	Connect Data Overflow (CDO)	9.2.2	c6, c5	i,i
14	S.A.7.5.1/1	Requestor (expedited data)		o.6	-
15	S.A.7.5.2/2	Acceptor (expedited data)		o.6	-
16	S.A.7.6.1/1	Requestor (typed data)		o.7	-
17	S.A.7.6.1/2	Acceptor (typed data)		o.7	-

1 8	S.A.7.7. 1/1	Requestor (capability data)		0.8	-
1 9	S.A.7.7. 1/2	Acceptor (capability data)		0.8	-

20	S.A.7.8.1/1	Requestor (minor synchronize)		o.9	-
21	S.A.7.8.1/2	Acceptor (minor synchronize)		o.9	-
22	S.A.7.10.1/	Requestor (major synchronize)		o.10	-
23	S.A.7.10.1/	Acceptor (major synchronize)		o.10	-
24	S.A.7.13.1.	Requestor (activity start)		o.12	-
25	S.A.7.13.1.	Acceptor (activity start)		o.12	-
26	S.A.7.13.1.	Requestor (activity resume)		o.13	-
27	S.A.7.13.1.	Acceptor (activity resume)		o.13	-
28	S.A.7.13.1.	Requestor (activity interrupt)		o.14	-
29	S.A.7.13.1.	Acceptor (activity interrupt)		o.14	-
30	S.A.7.13.1.	Requestor (activity discard)		o.15	-
31	S.A.7.13.1.	Acceptor (activity discard)		o.15	-

3 2	S.A.7.13 .1.	Requestor (activity end)		o.16	-
3 3	S.A.7.13 .1.	Acceptor (activity end)		o.16	-
3 4	S.A.7.13 .1.	Requestor (give tokens confirm)		o	-
3 5	S.A.7.13 .1.	Acceptor (give tokens confirm)		o	-
3 6	S.A.8.1. 3/4	Data Overflow Item (CN)	9.2.2	c6, c5	i,i
3 7	S.A.8.2/ 1	TSDU Maximum Size (OA)		c64, c65	i,i
3 8	S.A.8.2/ 2	Version Number (OA)		c66, c67	i,i
3 9	S.A.8.3/ 1	Enclosure Item (CDO)	9.2.2	c68, c69	i,i
4 0	S.A.8.3/ 1	User Data (CDO)	9.2.2	c68, c69	i,i