

INTERNATIONAL STANDARDIZED PROFILE

**ISO/IEC
ISP
12062-4**

Third edition
2003-06-15

Information technology — International Standardized Profiles AMH2n — Message Handling Systems — Interpersonal Messaging —

Part 4:

AMH23 and AMH25 — IPM Requirements for MTS Access (P3) and MTS 94 Access (P3)

*Technologies de l'information — Profils normalisés internationaux
AMH2n — Systèmes de messagerie — Messagerie entre personnes —*

*Partie 4: AMH23 et AMH25 — Prescriptions IPM pour accès à
MTS (P3) et accès à MTS 94 (P3)*

Reference number
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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

In addition to developing International Standards, ISO/IEC JTC 1 also develops International Standardized Profiles. An International Standardized Profile is an internationally agreed, harmonized document which identifies a standard or group of standards, together with options and parameters, necessary to accomplish a function or a set of functions. Draft International Standardized Profiles adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standardized Profile requires approval by at least 75 % of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC ISP 12062-4 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 6, *Telecommunications and information exchange between systems*.

This third edition cancels and replaces the second edition (ISO/IEC ISP 12062-4:1997), which has been technically revised.

ISO/IEC ISP 12062 consists of the following parts, under the general title *Information technology — International Standardized Profiles AMH2n — Message Handling Systems — Interpersonal Messaging*:

- *Part 1: IPM MHS Service Support*
- *Part 2: AMH21 — IPM Content*
- *Part 3: AMH22 — IPM Requirements for Message Transfer (P1)*
- *Part 4: AMH23 and AMH25 — IPM Requirements for MTS Access (P3) and MTS 94 Access (P3)*
- *Part 5: AMH24 — IPM Requirements for Enhanced MS Access (P7)*
- *Part 6: AMH26 — IPM Requirements for Enhanced MS 94 Access (P7)*

Introduction

This part of ISO/IEC ISP 12062 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.

One of the rôles for an ISP is to serve as the basis for the development (by organizations other than ISO and IEC) of internationally recognized tests. ISPs are produced not simply to 'legitimize' a particular choice of base standards and options, but to promote real system interoperability. The development and widespread acceptance of tests based on this and other ISPs is crucial to the successful realization of this goal.

The text for this part of ISO/IEC ISP 12062 was originally developed in close cooperation between the MHS Expert Groups of the three Regional Workshops: the North American OSE Implementors' Workshop (OIW), the European Workshop for Open Systems (EWOS) (jointly with the corresponding expert group of the European Telecommunications Standards Institute - ETSI) and the OSI Asia-Oceania Workshop (AOW). The first and second editions of this part of ISO/IEC ISP 12062 were harmonized between these three Workshops and ratified by the plenary assemblies of all three Workshops.

Responsibility for maintenance and further development of MHS ISPs has been transferred to ISO/IEC JTC1/SC33/WG1, who have produced this edition to encompass additions and corrections to ISO/IEC 10021. Because new core requirements have been added for support of Universal Characters in addresses which will take time to be implemented within MHS systems, it is expected that the second edition of this part of ISO/IEC ISP 12062 will remain available for an overlap period.

Information technology — International Standardized Profiles AMH2n — Message Handling Systems — Interpersonal Messaging —

Part 4:

AMH23 and AMH25 — IPM Requirements for MTS Access (P3) and MTS 94 Access (P3)

1 Scope

1.1 General

This part of ISO/IEC ISP 12062 covers access to a Message Transfer System (MTS) in an Interpersonal Messaging (IPM) environment using the P3 MTS Access Protocol (see also figure 1). These specifications form part of the Interpersonal Messaging application functions, as defined in the parts of ISO/IEC ISP 12062, and are based on the Common Messaging content type-independent specifications in ISO/IEC ISP 10611.

An MTA or an MTS-user which conforms to profile AMH23 as specified in this part of ISO/IEC ISP 12062 shall support profile AMH12 as specified in ISO/IEC ISP 10611-4.

An MTA or an MTS-user which conforms to profile AMH25 as specified in this part of ISO/IEC ISP 12062 shall support profile AMH14 as specified in ISO/IEC ISP 10611-4.

1.2 Position within the taxonomy

This part of ISO/IEC ISP 12062 is the fourth part of a multipart ISP identified in ISO/IEC TR 10000-2 as “AMH2, Message Handling Systems - Interpersonal Messaging”.

This part of ISO/IEC ISP 12062 specifies the following profiles:

AMH23 - IPM Requirements for MTS Access (P3)

AMH25 - IPM Requirements for MTS 95 Access (P3)

The AMH23 and AMH25 profiles may be combined with any T-Profiles (see ISO/IEC TR 10000) specifying the OSI connection-mode Transport service.

1.3 Scenario

The model used is one of access to an MTS by an IPM MTS-user - specifically, the intercommunication between a message transfer agent (MTA) and an IPM MTS-user using the P3 protocol, as shown in figure 1.

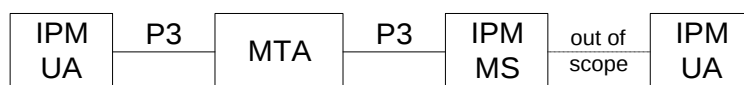


Figure 1 - AMH23 and AMH25 scenario

The AMH23 and AMH25 profiles covers all aspects of the MTS Abstract Service, as defined in clause 8 of ISO/IEC 10021-4, when realized using the P3 protocol in an IPM environment.

The OSI upper layer services and protocols to support the Message Handling Systems functions covered by the AMH23 and AMH25 profiles are specified in subclause 1.3 of ISO/IEC ISP 10611-4.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Amendments and corrigenda to the base standards referenced are listed in annex C.

NOTES

1 - References in the body of this part of ISO/IEC ISP 12062 to specific clauses of ISO/IEC documents shall be considered to refer also to the corresponding clauses of the equivalent ITU-T Recommendations (as noted below) unless otherwise stated.

2 - Informative references are found in annex D.

ISO/IEC TR 10000-1:1998, *Information technology - Framework and taxonomy of International Standardized Profiles - Part 1: General principles and documentation framework*

ISO/IEC TR 10000-2:1998, *Information technology - Framework and taxonomy of International Standardized Profiles - Part 2: Principles and Taxonomy for OSI Profiles*

ITU-T Recommendation F.400/X.400 (1999), *Message Handling Systems - System and service overview*

ISO/IEC 10021-1:2003, *Information technology - Message Handling Systems (MHS) - Part 1: System and service overview* [see also ITU-T Recommendation F.400/X.400]

ITU-T Recommendation X.402 (1999) | ISO/IEC 10021-2:—¹⁾, *Information technology - Message Handling Systems (MHS): Overall architecture*

ITU-T Recommendation X.411 (1999) | ISO/IEC 10021-4:—²⁾, *Information technology - Message Handling Systems (MHS): Message transfer system: Abstract service definition and procedures*

ITU-T Recommendation X.419 (1999) | ISO/IEC 10021-6:1996, *Information technology - Message Handling Systems (MHS): Protocol specifications*

ISO/IEC ISP 10611-4:2003, *Information technology - International Standardized Profiles AMH1n - Message Handling Systems: Common Messaging - Part 4: AMH12 and AMH14 - MTS Access (P3) and MTS 94 Access (P3)*

ISO/IEC ISP 12062-1:2003, *Information technology - International Standardized Profiles AMH2n - Message Handling Systems - Interpersonal Messaging - Part 1: IPM MHS Service Support*

ISO/IEC ISP 12062-2:2003, *Information technology - International Standardized Profiles AMH2n - Message Handling Systems - Interpersonal Messaging - Part 2: AMH21 — IPM Content*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

1) To be published. (Revision of ISO/IEC 10021-2:1996)

2) To be published. (Revision of ISO/IEC 10021-4:1997)

Terms used in this part of ISO/IEC ISP 12062 are defined in the referenced base standards; in addition, the following terms are defined.

3.1 General

Basic requirement : an Element of Service, protocol element, procedural element or other identifiable feature specified in the base standards which is required to be supported by all MHS implementations.

Functional group : a specification of one or more related Elements of Service, protocol elements, procedural elements or other identifiable features specified in the base standards which together support a significant optional area of MHS functionality.

NOTE - A functional group can cover any combination of MHS features specified in the base standards for which the effect of implementation can be determined at a standardized external interface - i.e. via a standard OSI communications protocol (other forms of exposed interface, such as a standardized programmatic interface, are outside the scope of this version of ISO/IEC ISP 12062).

3.2 Support classification

To specify the support level of operations, arguments, results and other protocol features for this part of ISO/IEC ISP 12062, the following terminology is defined.

The following classifications are used in this part of ISO/IEC ISP 12062 to specify static conformance requirements - i.e. capability.

NOTE - The following classifications apply only to MTS-users, as the requirements for support of operations, arguments, results and other protocol features by an MTA are as specified in ISO/IEC 10611-4.

In the case of arguments and results (protocol elements), the classification is relative to that of the containing element, if any. Where the constituent elements of a non-primitive element are not individually specified, then each shall be considered to have the classification of that element. Where the range of values to be supported for an element is not specified, then all values defined in the MHS base standards shall be supported.

mandatory support (m) : the element or feature shall be supported. An implementation shall be able to generate the element, and/or receive the element and perform all associated procedures (i.e. implying the ability to handle both the syntax and the semantics of the element) as relevant, as specified in the MHS base standards. Where support for origination (generation) and reception are not distinguished, then both capabilities shall be assumed.

4 Abbreviations

AMH	Application Message Handling
CV	Conversion
DC	Delivery Constraints
DIR	Use of Directory
FG	Functional group
IPM	Interpersonal Messaging
ISP	International Standardized Profile
LD	Latest Delivery
MHS	Message Handling Systems
MS	Message store
MT	Message transfer
MTA	Message transfer agent
MTS	Message Transfer System
OSI	Open Systems Interconnection
PD	Physical Delivery
RED	Redirection
RED2	Redirection Instructions

RD	Restricted Delivery
RoC	Return of Content
SEC	Security
SPP	Simple Protected Password
UA	User agent

Support level for protocol elements and features (see 3.2):

m mandatory support

5 Conformance

This part of ISO/IEC ISP 12062 states requirements upon implementations to achieve interworking. A claim of conformance to this part of ISO/IEC ISP 12062 is a claim that all requirements in the relevant base standards are satisfied, and that all requirements in the following clauses and in annexes A and B of this part of ISO/IEC ISP 12062 are satisfied.

5.1 Conformance statement

For each implementation claiming conformance to profiles AMH23 and/or AMH25 as specified in this part of ISO/IEC ISP 12062, a PICS shall be made available stating support or non-support of each option identified in this part of ISO/IEC ISP 12062.

The scope of conformance to profiles AMH23 and AMH25 covers both MTAs and MTS-users. A claim of conformance to profiles AMH23 and/or AMH25 shall state whether the implementation claims conformance as an MTA, as a UA, or as an MS which is not co-located with an MTA. The claim shall also state if the implementation conform to profiles AMH23 and/or AMH25.

A claim of conformance to profile AMH23 shall confirm that the implementation supports profile AMH12 as specified in ISO/IEC ISP 10611-4. A claim of conformance to profile AMH25 shall confirm that the implementation supports profile AMH14 as specified in ISO/IEC ISP 10611-4.

A claim of conformance to profiles AMH23 and/or AMH25 as a UA shall confirm that the implementation supports profile AMH21 as specified in ISO/IEC ISP 12062-2.

5.2 MHS conformance

This part of ISO/IEC ISP 12062 specifies implementation options or selections such that conformant implementations will satisfy the conformance requirements of ISO/IEC 10021 and the ITU-T X.400 Recommendations.

Implementations conforming to profiles AMH23 and AMH25 shall conform to the basic requirements of profiles AMH12 and AMH14, as appropriate to the type of implementation (i.e. MTA or MTS-user) for which conformance is claimed.

Implementations conforming to profiles AMH23 and/or AMH25 as specified in this part of ISO/IEC ISP 12062 shall additionally implement all the mandatory support (m) features identified as basic requirements in annexes A and B except those features that are components of an unimplemented optional feature. It shall be stated which optional support (o) features are implemented.

For implementations conforming to profiles AMH23 and/or AMH25 as specified in this part of ISO/IEC ISP 12062, it shall be stated whether or not they support any of the optional functional groups as specified in ISO/IEC ISP 12062-1 which are applicable to the scope of this profile and to the role (i.e. MTA or MTS-user) for which conformance is claimed. For each functional group for which support is claimed, an implementation shall additionally implement all the mandatory support (m) features identified for that functional group in annex B except those features that are components of an unimplemented optional feature. It shall be stated which optional support (o) features are implemented.

Implementations shall support the procedures associated with supported protocol elements as specified in the base standards and as further specified in ISO/IEC ISP 12062-1. The MHS Elements of Service corresponding to such procedures are indicated in annex A of ISO/IEC ISP 12062-1.

5.3 Underlying layers conformance

Implementations conforming to profiles AMH23 and/or AMH25 as specified in this part of ISO/IEC ISP 12062 shall also meet the requirements for support of underlying layers as specified in subclause 5.3 of ISO/IEC ISP 10611-4.

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Annex A³

(normative)

ISPICS Proforma**for ISO/IEC ISP 12062-4 (AMH23 and AMH25)**

This annex modifies the P3 ISPICS proforma as contained in annex A of ISO/IEC ISP 10611-4 for the purposes of conformance to the AMH23 and AMH25 profiles.

NOTE - The tables and other material in this annex replace the corresponding clauses of annex A of ISO/IEC ISP 10611-4 or should otherwise be inserted as appropriate.

In the event of a discrepancy becoming apparent in the body of this part of ISO/IEC ISP 12062 and the tables in this annex, this annex is to take precedence.

Clause A.1 specifies the basic requirements for conformance to profiles AMH23 and AMH25. Clause A.2 specifies additional requirements to those specified in A.1 for each of the optional functional groups if conformance to such a functional group is claimed. Clause A.3 allows additional information to be provided for certain aspects of an implementation where no specific requirements are included in ISO/IEC ISP 12062 or in ISO/IEC ISP 10611. All three clauses shall be completed as appropriate.

In each table, the "Base" column reflects the level of support required for conformance to the base standard and the "Profile" column specifies the level of support required by this ISP (using the classification and notation defined in 3.2).

The generic term "MTS-user" is used in the tables in this annex where the distinction between different types of MTS-user is not significant. Where a column is headed "UA", then an MS is only required to be able to pass through such elements transparently between a UA and the MTA.

The "Ref" column is provided for cross-referencing purposes. The notation employed for references also indicates composite elements which contain sub-elements (a sub-element reference is prefixed by the reference of the composite element).

The "Support" column is provided for completion by the supplier of the implementation as follows:

- | | |
|------------|--|
| Y | the element or feature is fully supported (i.e. satisfying the requirements of the m profile support classification) |
| Y- | the element or feature is minimally supported (i.e. satisfying the requirements of the m-profile support classification) |
| N | the element or feature is not supported, further qualified to indicate the action taken on receipt of such an element as follows:

<div style="margin-left: 20px;">ND - the element is discarded/ignored
 NR - the PDU is rejected (with an appropriate error indication where applicable)</div> |
| – or blank | the element or feature is not applicable (i.e. a major feature or composite protocol element which includes this element or feature is not supported or is minimally supported) |

³Copyright release for ISPICS proformas

Users of this International Standardized Profile may freely reproduce the ISPICS proforma in this annex so that it can be used for its intended purpose and may further publish the completed ISPICS.

A.0 Identification of the implementation**A.0.1 Identification of PICS**

Ref	Question	Response
1	Date of statement (YYYY-MM-DD)	
2	PICS serial number	
3	System conformance statement cross reference	

A.0.2 Identification of IUT

Ref	Question	Response
1	Implementation name	
2	Implementation version	
3	Hardware name	
4	Hardware version	
5	Operating system name	
6	Operating system version	
7	Special configuration	
8	Other information	

A.0.3 Identification of supplier

Ref	Question	Response
1	Organization name	
2	Contact name(s)	
3	Address	
4	Telephone number	
5	Telex number	
6	Fax number	
7	E-mail address	
8	Other information	

A.0.4 Identification of protocol

Ref	Question	Response
1	Title, reference number and date of publication of the protocol standard	
2	Protocol version(s)	not applicable
3	Addenda/amendments/corrigenda implemented	
4	Defect reports implemented	not applicable

A.0.5 Type of implementation

Ref	Implementation Type	Response
1	MTS-user (UA or MS)	
2	MTA	

NOTE - A separate PICS shall be completed for each implementation type for which conformance is claimed.

A.0.6 Global statement of conformance

Ref	Question	Response
1	Are all mandatory base standards requirements implemented?	

A.0.7 Statement of profile conformance

Ref	Question	Response	Comments
1	Are all mandatory requirements of profile AMH12 implemented?		
2	Implemented profiles		
2.1	Are all mandatory requirements of profile AMH23 implemented?		
2.2	Are all mandatory requirements of profile AMH25 implemented?		
3	Are all mandatory requirements of any of the following optional functional groups implemented?		
3.1	IPM Conversion (CV)		
3.2	IPM Distribution List (DL)		class(es):
3.3	IPM Physical Delivery (PD)		not applicable in the case of an MS
3.4	IPM Redirection (RED)		not applicable in the case of an MS
3.5	IPM Latest Delivery (LD)		not applicable in the case of an MS
3.6	IPM Return of Content (RoC)		
3.7	IPM Security (SEC)		class(es):
3.8	IPM Use of Directory (DIR)		class(es):
3.9	IPM Simple Protected Password (SPP)		
3.10	IPM Redirection Instructions (RED2)		not applicable in the case of an MS
3.11	IPM Delivery Constraints (DC)		not applicable in the case of an MS
3.12	IPM Restricted Delivery (RD)		not applicable in the case of an MS

Annex B

(normative)

ISPICS Requirements List for ISO/IEC ISP 12062-4 (AMH23 and AMH25)

In the event of a discrepancy becoming apparent in the body of this part of ISO/IEC ISP 12062 and the tables in this annex, this annex is to take precedence.

This annex specifies the support constraints and characteristics of ISO/IEC ISP 12062-4 on what shall or may appear in the implementation columns of an ISPICS. Such requirements are additional to those specified in annex A of ISO/IEC ISP 10611-4 as modified by annex A of this part of ISO/IEC ISP 12062 (references are to the corresponding table entries in those annexes).

This annex only specifies additional requirements for MTS-users. The support requirements for MTAs are as specified in annex A of ISO/IEC ISP 10611-4.

Clause B.1 specifies the basic requirements for conformance to profiles AMH23 and AMH25. Clause B.2 specifies additional requirements to those specified in B.1 for each of the optional functional groups if conformance to such a functional group is claimed.

In each table, the "Profile" column specifies the level of support required by this ISP (using the classification and notation defined in 3.2). The supplier of an implementation for which conformance to profiles AMH23 and AMH25 is claimed should complete the Support column of the tables in annex A of ISO/IEC ISP 10611-4 as modified by annex A of this part of ISO/IEC ISP 12062 in accordance with the requirements contained therein together with any additional requirements in this annex in the case of an MTS-user implementation.

The "Ref" column is provided for cross-referencing purposes. The notation employed for references also indicates composite elements which contain sub-elements (a sub-element reference is prefixed by the reference of the composite element).

B.1 Basic requirements**B.1.1 Supported application contexts**

No additional requirements.

B.1.2 Supported operations**B.1.2.1 Message Submission Service Element (MSSE)**

Ref	Operation	Profile
A.1.2.2/3	CancelDeferredDelivery	m

B.1.3 Operation arguments/results

No additional requirements.

B.1.4 MessageSubmissionEnvelope

Ref	Element	Profile
A.1.4/7	deferred-delivery-time	m
A.1.4/9.4.15	IPMPPerRecipientEnvelopeExtensions	m
A.1.4/9.4.15.1	blind-copy-recipients	m
A.1.4/9.4.15.2	body-part-encryption-token	o
A.1.4/9.4.15.3	forwarded-content-token	o

B.1.5 ProbeSubmissionEnvelope

No additional requirements.

B.1.6 MessageDeliveryEnvelope

Ref	Element	Profile
A.1.6/3.12.19	dl-expansion-history	m
A.1.6/3.12.27	IPMPPerRecipientEnvelopeExtensions	m
A.1.6/3.12.27.1	blind-copy-recipients	m
A.1.6/3.12.27.2	body-part-encryption-token	o
A.1.6/3.12.27.3	forwarded-content-token	o

B.1.7 ReportDeliveryEnvelope

No additional requirements.

B.1.8 Common data types

No additional requirements.

B.1.9 Extension data types

No additional requirements.

B.1.10 OR-names

Ref	OR-Name Form	Profile
A.1.10.1/2	numeric OR-address	m
A.1.10.1/3	terminal OR-address	m

B.2 Optional functional groups

The following requirements are additional to those specified in B.1 if support of the functional group is claimed.

B.2.1 IPM Conversion (CV)

The following requirements are additional to those specified for the Common Messaging CV FG in annex A.2.1 of ISO/IEC ISP 10611-4.

B.2.1.1 MessageSubmissionEnvelope

Ref	Element	Profile
A.1.4/8.3	conversion-with-loss-prohibited	m
A.1.4/9.3	explicit-conversion	m

B.2.1.2 ProbeSubmissionEnvelope

Ref	Element	Profile
A.1.5/7.3	conversion-with-loss-prohibited	m
A.1.5/8.3	explicit-conversion	m

B.2.2 IPM Distribution List (DL)

There are no additional requirements to those specified for the Common Messaging DL FG in annex A.2.2 of ISO/IEC ISP 10611-4.

B.2.3 IPM Physical Delivery (PD)

The following requirements are additional to those specified for the Common Messaging PD FG in annex A.2.3 of ISO/IEC ISP 10611-4.

B.2.3.1 MessageSubmissionEnvelope

Ref	Element	Profile
A.1.4/8.5	originator-return-address	m

B.2.4 IPM Redirection (RED)

The following requirements are additional to those specified for the Common Messaging RED FG in annex A.2.4 of ISO/IEC ISP 10611-4.

B.2.4.1 MessageSubmissionEnvelope

Ref	Element	Profile
A.1.4/9.4.1	originator-requested-alternate-recipient	m

B.2.4.2 ProbeSubmissionEnvelope

Ref	Element	Profile
A.1.5/8.4.1	originator-requested-alternate-recipient	m

B.2.4.3 MessageDeliveryEnvelope

Ref	Element	Profile
A.1.6/3.12.18	redirection-history	m

B.2.4.4 ReportDeliveryEnvelope

Ref	Element	Profile
A.1.7/6.7.1	redirection-history	m

B.2.4.5 Common data types

Ref	Element	Profile
A.1.8/5.3	alternate-recipient-allowed	m

B.2.5 IPM Latest Delivery (LD)

There are no additional requirements to those specified for the Common Messaging LD FG in annex A.2.5 of ISO/IEC ISP 10611-4.

B.2.6 IPM Return of Content (RoC)

There are no additional requirements to those specified for the Common Messaging RoC FG in annex A.2.6 of ISO/IEC ISP 10611-4.

B.2.7 IPM Security (SEC)

The following requirements are additional to those specified for the Common Messaging SEC FG in annex A.2.7 of ISO/IEC ISP 10611-4.

B.2.7.1 MessageSubmissionEnvelope

Ref	Element	Profile
A.1.4/8.6	originator-certificate	c ¹
A.1.4/8.13	multiple-originator-certificates	c ¹
A.1.4/9.4.15.2	body-part-encryption-token	c ²
A.1.4/9.4.15.3	forwarded-content-token	c ³
1	mandatory for security classes SEC0, SEC0C and SEC1.	
2	mandatory for security class SEC0C.	
3	mandatory for all the Common Messaging confidentiality security classes (SnC) if the FWD FG is supported.	

B.2.7.2 MessageDeliveryEnvelope

Ref	Element	Profile
A.1.6/3.12.11	originator-certificate	c ¹
A.1.6/3.12.24	multiple-originator-certificates	c ¹
A.1.6/3.12.27.2	body-part-encryption-token	c ²
A.1.6/3.12.27.3	forwarded-content-token	c ³
1	mandatory for security classes SEC0, SEC0C and SEC1.	
2	mandatory for security class SEC0C.	
3	mandatory for all the Common Messaging confidentiality security classes (SnC).	

B.2.8 IPM Use of Directory (DIR)

There are no additional requirements to those specified for the Common Messaging DIR FG in annex A.2.8 of ISO/IEC ISP 10611-4.

B.2.9 IPM Simple Protected Password (SPP)

There are no additional requirements to those specified for the Common Messaging SPP FG in annex A.2.9 of ISO/IEC ISP 10611-4.

B.2.10 IPM Redirection instructions (RED2)

There are no additional requirements to those specified for the Common Messaging RED2 FG in annex A.2.10 of ISO/IEC ISP 10611-4.