Stable Implementation Agreements for Open Systems Interconnection Protocols: Part 30 - Interpersonal Messging ISP

Output from the December 1993 NIST Workshop for Implementors of OSI

SIG Chair: **Chris Bonatti, Booz • Allen & Hamilton**
SIG Editor: **Rich Ankney, Fischer International**

Foreword

The text in this chapter contains the draft working text for MHS ISP AMH2n on Interpersonal Messaging, and its accompanying explanatory documents. It is retained here as a temporary placeholder until promulgation of the ISP is completed. The ISP is included in its final pDISP editorial form, without additional OIW specific notation. The following documents are contained in this chapter:

- Explanatory Report for Parts 1-5 of pDISP 12062 - Message Handling Systems - Interpersonal Messaging
- ISP 12062-1: IPM MHS Service Support
- ISP 12062-2: AMH21 - IPM Content
- ISP 12062-3: AMH22 - IPM Requirements for Message Transfer (P1)
- ISP 12062-4: AMH23 - IPM Requirements for MTS Access (P3)
- ISP 12062-5: AMH24 - IPM Requirements for Enhanced MS Access (P7)

From: EWOS

To: ISO/IEC JTC1/SGFS

cc: OIW
AOW

Date: 1993-9-25

Subject: **pDISP nnnnn - Message Handling Systems - Interpersonal Messaging (AMH2)**

The enclosed Explanatory Report and the 5 parts of pDISP nnnnn (AMH2) are herewith submitted to ISO/IEC JTC1/SGFS for formal review and processing for DISP ballot.

All outstanding issues were resolved at the 8th MHS ISP Special Group (MISG) meeting (Stockholm, Sweden, September 22-24, 1993), and the pDISPs have been approved for SGFS submission by the three regional workshops.

SGFS are also requested to consider the continuing requirement for public and timely visibility of the explanatory material relating to the structure of the ISP and the profiles contained therein, as included in clauses D and F of the Explanatory Report (this request was also included with the submission of the AMH1 pDISP). Similar material was submitted to SGFS in early 1992 for inclusion in the SGFS N100 directory but, with the revision in scope and nature of that directory (as the new standing document SD-4), it is no longer evident where such material should be located. One possibility is to include it as a introductory part to the ISP itself. However, it is the opinion of the MISG that explanatory material of this nature is an important requirement for potential users of ISPs (both suppliers and purchasers) and should therefore ideally be obtainable separately (and hence separately identified in the ISO catalogue) and, if possible, in advance of final publication of the ISP.

J B Stranger

Editor, pDISP nnnnn (AMH2)

TITLE: **Explanatory Report for Parts 1-5 of pDISP nnnnn - Message Handling Systems - Interpersonal Messaging**

SOURCE: J Stranger

DATE: 1993-9-24

STATUS: Final version for submission to ISO/IEC JTC1/SGFS together with pDISP nnnnn

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This explanatory report has been prepared in accordance with ISO/IEC JTC1/SGFS SD-1 (SGFS N601, 1992-08-24) which specifies the taxonomy update, ISP approval and maintenance process.

A. General Profile Information

1. *Profile identification*

These parts of pDISP nnnnn cover the profiles with taxonomy identifiers AMH2n, as listed in clause 6.3.2 of ISO/IEC TR 10000-2 : 1992 and as follows:

AMH21 - IPM Content
AMH22 - IPM Requirements for Message Transfer (P1)
AMH23 - IPM Requirements for MTS Access (P3)
AMH24 - IPM Requirements for Enhanced MS Access (P7)

2. *Submitting organization and contact point*

The submitting organization is:

European Workshop for Open Systems
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The editor for all parts of this submission who will serve as contact point during the review and approval process is:

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3. *Date of original notification to SGFS*

Submission of harmonized taxonomy update - 1992-4-23

Notice of intent to submit draft pDISP nnnnn for informal quality review - 1993-3-30

Submission of draft pDISP nnnnn for informal quality review - 1993-4-15

4. *Declaration of commitment to maintain*

On behalf of the three regional OSI/OSE workshops, EWOS undertakes to ensure that these parts of pDISP nnnnn will be maintained. The contact point for maintenance is the Chairman of EWOS EG MHS, who can be contacted via the EWOS secretariat at the above address.

B. Base Standards Referenced

1. *ISO/IEC standards, technical reports and CCITT recommendations referenced*

References listed without a publication date are expected to be published during 1993.

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.*

ISO/IEC 10021-1: 1990, *Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 1: Service Overview. [see also CCITT Recommendation X.400(1988)]*

ISO/IEC 10021-2: 1990, *Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 2: Overall Architecture. [see also CCITT Recommendation X.402(1988)]*

ISO/IEC 10021-4: 1990, *Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 4: Message Transfer System: Abstract Service Definition and Procedures. [see also CCITT Recommendation X.411(1988)]*

ISO/IEC 10021-5: 1990, *Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 5: Message Store: Abstract Service Definition. [see also CCITT Recommendation X.413(1988)]*

ISO/IEC 10021-6: 1990, *Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 6: Protocol Specifications. [see also CCITT Recommendation X.419(1988)]*

ISO/IEC 10021-7: 1990, *Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 7: Interpersonal Messaging System. [see also CCITT Recommendation X.420(1988)]*

ISO/IEC ISP 10611-1: ---[1], *Information technology - International Standardized Profiles - Message Handling Systems - Common Messaging - Part 1: MHS Service Support.*

ISO/IEC ISP 10611-2: ---[1], *Information technology - International Standardized Profiles - Message Handling Systems - Common Messaging - Part 2: Specification of ROSE, RTSE, ACSE, Presentation and Session Protocols for use by MHS.*

[1] To be published.

ISO/IEC ISP 10611-3: ---[1], *Information technology - International Standardized Profiles - Message Handling Systems - Common Messaging - Part 3: AMH11 - Message Transfer (P1).*

ISO/IEC ISP 10611-4: ---[1], *Information technology - International Standardized Profiles - Message Handling Systems - Common Messaging - Part 4: AMH12 - MTS Access (P3).*

ISO/IEC ISP 10611-5: ---[1], *Information technology - International Standardized Profiles - Message Handling Systems - Common Messaging - Part 5: AMH13 - MS Access (P7).*

CCITT Recommendation X.400(1988), *Message handling system and service overview.*

CCITT Recommendation X.402(1988), *Message handling systems: Overall architecture.*

CCITT Recommendation X.411(1988), *Message handling systems: Message transfer system: Abstract service definition and procedures.*

CCITT Recommendation X.413(1988), *Message handling systems: Message store: Abstract service definition.*

CCITT Recommendation X.419(1988), *Message handling systems: Protocol specifications.*

CCITT Recommendation X.420(1988), *Message handling systems: Interpersonal messaging system.*

MHS Implementors' Guide, Version 8, March 1992 (CCITT Special Rapporteur's Group on Message Handling Systems and ISO/IEC JTC1/SC18/WG4 SWG on Messaging).

2. *Compliance with documentation requirements on conformance*

The Profiles documented in the submitted pDISP parts are in the class of Application Profiles using Connection-mode Transport Service. The documentation requirements in ISO/IEC TR 10000-1 on conformance (clauses 6.4-6.7, 8.4) have been met.

It had been intended that annex A of part 2 of pDISP nnnnn would be in the form of an IPRL based on the corresponding ISO/IEC 10021-7 PICS proforma. However, the development of MOTIS PICS proformas has now been suspended and it has therefore been necessary for pDISP nnnnn to include a complete ISPICS proforma for the MHS P2 protocol (the alternative approach of a separate annex containing the assumed base standard PICS proforma was not considered appropriate in this case). This ISPICS proforma broadly follows the final draft of CCITT Recommendation X.481 (April 1992), but the structure has been modified to some extent to take account of profiling requirements and the somewhat different conformance objectives. In addition, the identification of the base standard requirement has in some cases had to be interpreted or varied from that specified in the current CCITT PICS proforma, either due to the different classification scheme employed or where the base standard is unclear and it has been considered that the CCITT PICS proforma is in error.

3. *Non-compliance with base standards*

There are no aspects of actual or potential non-compliance with base standards.

4. *Amendments and technical corrigenda to base standards which may impact on interworking*

There are no approved amendments or technical corrigenda (errata) to base standards referenced in the profiles contained in the parts of this pDISP which in the view of the submitting organization may have a potential impact on interworking.

C. Relationship To Other Publications

No national or regional standards are referenced in the parts of the submitted pDISP.

D. Profile Purpose

1. *Summary*

The AMH2n set of profiles is applicable to end systems operating in an Open Systems Interconnection (OSI) environment which form part of a distributed Message Handling Systems (MHS) environment and which provide an interpersonal messaging service.

The AMH21 profile specifies the Interpersonal Messaging (IPM) content (P2 'protocol'), which is carried end-to-end (i.e., UA-to-UA) by the MHS protocols (i.e., P1, P3, P7).

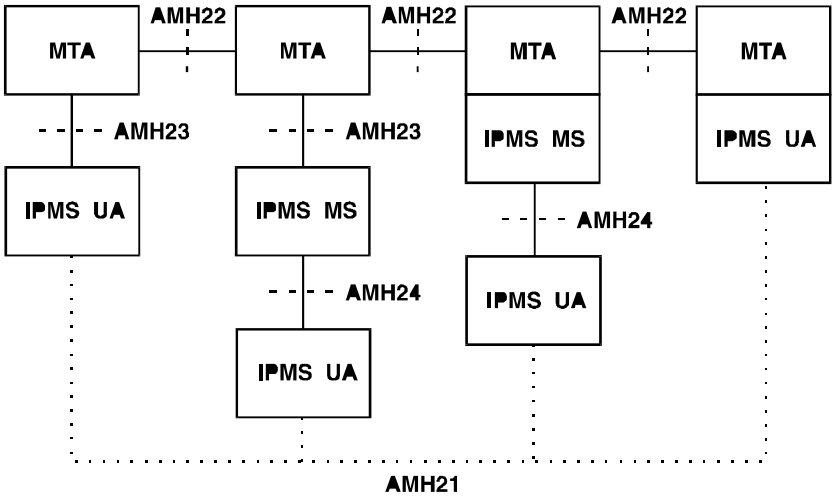
The remaining AMH2n profiles cover the other aspects of an IPM MHS environment, specifying additional requirements to those specified in the AMH1n Common Messaging set of profiles as appropriate to support an IPM service:

- AMH22 - IPM Requirements for Message Transfer (P1) - any additional MTA capabilities related to message transfer which are specific to support of an IPM environment (i.e., additional to the requirements of AMH11)

- AMH23 - IPM Requirements for MTS Access (P3) - any additional MTA and MTS-user capabilities related to MTS access which are specific to support of an IPM environment (i.e., additional to the requirements of AMH12)

- AMH24 - IPM Requirements for Enhanced MS Access (P7) - additional MS and MS-user capabilities related to MS access which are specific to support of an IPM environment (i.e., additional to the requirements of AMH13) and which allow an IPM UA to interact with an MS in a full and flexible manner without having to retrieve complete messages (minimal attribute support for MS access in an IPM environment can be specified by claiming conformance to AMH13 with an additional claim of IPM attribute support)

Each AMH2n profile specifies the conformance requirements for all relevant MHS functional objects (ie, MTA, UA, MS). Two or more AMH2n profiles can be combined to establish the conformance requirements for the various physical configurations that may be achieved within the scope of the MHS base standards, as illustrated in the following diagram.



2. *Relationship to other ISPs*

The AMH2n set of profiles covers Interpersonal Messaging - i.e., the application of the MHS base standards in an IPM content type-specific environment.

Profiles in the AMH2 set which cover IPM content type-specific use of MHS services do so by requiring conformance to the corresponding AMH1n Common Messaging profile plus support of any additional content type-specific requirements.

E. pDISP Development Process

1. *Origin and development history*

Reasonably mature regional MHS profiles had been developed by both OIW and EWOS/ETSI prior to the development of the MHS ISPs. However, there were significant differences between these regional profiles, particularly with respect to their overall taxonomy and structure.

The parts of pDISP nnnnn have been developed under the management of the MHS ISP Special Group (MISG). MISG was formed in early 1991 as a joint workshop initiative, comprising delegations from the MHS groups of the three regional workshops. It has provided a forum for developing and agreeing the MHS ISP taxonomy, resolving key issues and carrying out initial review of revised ISP drafts. All MISG decisions have been subject to ratification by the full meetings of the workshop MHS groups, which have also carried out detailed review of the ISP drafts.

MISG meetings to date are as follows:

1 May 29-31, 1991, Santa Monica, CA, USA

2 September 4-6, 1991, Brussels, Belgium

3 January 28-30, 1992, Tokyo, Japan

4 May 19-21, 1992, Vancouver, Canada

5 September 9-11, 1992, Oxford, UK

6 February 1-4, 1993, Kyoto, Japan

7 May 10-13, 1993, Bethesda, MD, USA

8 September 22-24, 1993, Stockholm, Sweden

2. *Degree of openness and harmonization*

The working drafts of pDISP nnnnn have been regularly reviewed by the MISG and separately by the MHS groups of all three regional workshops: AOW, EWOS/ETSI and OIW.

[The parts of pDISP nnnnn as submitted are fully harmonized between the three regional workshops and have been endorsed by the plenary assemblies of the three workshops (see appendix).]

3. *Joint planning*

A revised taxonomy for MHS profiles was agreed between the three workshops and submitted to SGFS in April 1992. It was approved at the June 1992 meeting of SGFS and is included in the current published version of ISO/IEC TR 10000-2 : 1992. A proposal for a minor further change to the taxonomy, to modify the title of profile AMH24, is attached.

Drafts of the parts of pDISP nnnnn were submitted to the SGFS Informal Quality Review service in April 1993, but no response has yet been received. The three regional workshops have since conducted their own final reviews and have approved the final texts for formal submission to SGFS subject to resolution of any outstanding issues to the satisfaction of the workshop delegations at the 8th MISG meeting in September 1993. This was achieved.

It is expected that all referenced base standards and ISPs will be ratified and published by mid 1994.

F. ISP Content and Format

1. *Compliance with the requirements of TR 10000-1*

The requirements of clauses 6.3, 8 and annex A of ISO/IEC TR 10000-1 on the content and format of an ISP have been met.

2. *Divergence from the requirements of TR 10000-1*

There is no divergence from the requirements of ISO/IEC TR 10000-1 on the content and format of an ISP.

3. *Multi-part ISP structure*

The AMH2n set of profiles is specified as a multipart ISP consisting of the following parts:

Part 1 : IPM MHS service support.

A common text part which provides functional description and specification of IPM-specific MHS service support and associated functionality as covered by the AMH2n set of profiles. It identifies what additional service support and functionality can be supported by each type of MHS component in an IPM environment (i.e., also covering the services supported by an IPMS UA, plus any additional MTA and MS aspects such as IPM body part conversion), divided into basic requirements and zero or more optional functional groups (see AMH1n). Such specifications are in many cases applicable to more than one MHS protocol or are

otherwise concerned with component functionality which, although it can be verified via protocol, is not just related to protocol support. The specification in this part is therefore designed for reference by the following parts (which specify conformance requirements by protocol for each MHS component) and is additional to the protocol-specific requirements specified in those parts. Thus, although this part contains normative requirements, there is no separate conformance to this part (i.e., it is not identified in the MHS taxonomy) since such requirements are only significant when referenced in the context of a particular protocol profile.

Part 2: AMH21 - IPM content.

This part covers IPMS UA functionality. It specifies support of the IPM content 'protocol' in terms of basic requirements and optional functional groups and defines conformance requirements for an IPMS UA with respect to support of IPM content and associated functionality (by reference to the common IPM specifications in part 1).

Part 3: AMH22 - IPM requirements for Message Transfer (P1).

This part covers message transfer between MTAs using the P1 Message Transfer Protocol to support an IPM environment. It specifies any additional P1 support to that specified in AMH1n and defines conformance requirements for an MTA which supports IPM transfer with respect to support of P1 and associated functionality (requiring conformance to AMH11 and by reference to the common IPM specifications in part 1).

Part 4: AMH23 - IPM requirements for MTS Access (P3).

This part covers access to an MTS using the P3 MTS Access Protocol to support an IPM environment. It specifies any additional P3 support to that specified in AMH1n and defines conformance requirements for an MTA which supports remote access for IPM use, and for a remote MTS-user in an IPM context (i.e., IPMS UA or MS), with respect to support of P3 and associated functionality (requiring conformance to AMH12 and by reference to the common IPM specifications in part 1).

Part 5: AMH24 - IPM requirements for Enhanced MS Access (P7).

This part covers access to an MS using the P7 MS Access Protocol to support an IPM environment. It specifies any additional P7 support to that specified in AMH1n and defines conformance requirements for an MS which supports remote access for IPM use, and for a remote MS-user in an IPM context (i.e., IPMS UA), with respect to support of P7 and associated functionality (requiring conformance to AMH13 and by reference to the common IPM specifications in part 1).

G. Any Other Information

None.

Appendices: Endorsement letters from the three regional workshops

Proposed change to ISO/IEC TR 10000-2

To: ISO/IEC JTC1/SGFS

cc: EWOS/ETSI EG MHS
OIW X.400 SIG
AOW MHS SIG
EWOS TLG

From: MHS ISP Special Group (MISG)

Date: 24th September 1993

Subject: **MHS ISP Taxonomy**

The MHS ISP Special Group (MISG) is a joint workshop initiative which comprises delegations from the MHS groups of the three regional workshops. It has provided a forum for developing and agreeing the MHS ISP taxonomy and managing the development of draft ISPs. All MISG decisions have been subject to ratification by the full meetings of the workshop MHS groups, which have also carried out detailed review of the ISP drafts.

The three regional workshops have now endorsed the submission of a multi-part pDISP covering the AMH2 Interpersonal Messaging profiles. During the development of this pDISP, it has been considered necessary to modify the titles of profiles AMH24 and AMH34 to reflect a minor change in the scope of these profiles, as follows:

5.3.2 Message Handling

AMH Message Handling

a b c Substructure

2 4 IPM Requirements for Enhanced MS Access (P7)

3 4 EDIM Requirements for Enhanced MS Access (P7)

NOTE - The profiles allow an IPM/EDIM UA to interact with an MS in a full and flexible manner without having to retrieve complete messages. Minimal attribute support for MS access in an IPM/EDIM environment can be specified by claiming conformance to AMH13 with an additional claim of IPM/EDIM attribute support.

TITLE: Information technology - International Standardized Profiles AMH2n - Message Handling Systems - Interpersonal Messaging - Part 1 : IPM MHS Service Support

SOURCE: Project Editor (Jon Stranger, UK)

STATUS: Final pDISP text. Fifth version, 1993-9-24

This document forms part of a draft multipart ISP for MHS covering Interpersonal Messaging requirements (AMH2), as identified in the Taxonomy for International Standardized Profiles (ISO/IEC TR 10000-2 : 1992).

This final pDISP version reflects resolution of all remaining outstanding issues at the 8th MHS ISP Special Group (MISG) meeting (Stockholm, September 22-24, 1993) and is intended for submission to ISO/IEC JTC1/SGFS. The content of this document is considered by the MHS expert groups of the three regional workshops as harmonized.

The technical content of this document has been derived wherever possible from the existing EWOS/ETSI and OIW regional profiles in this area. However, this document should not be considered as an internationally harmonized specification and differences between the content of this document and one or more regional profiles may exist.

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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 JTC1. In addition to developing International Standards, ISO/IEC JTC1 has created a Special Group on Functional Standardization for the elaboration of 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 set of functions.

Draft International Standardized Profiles 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.

International Standardized Profile ISO/IEC ISP xxxxx-1 was prepared with the collaboration of:

- Asia-Oceania Workshop (AOW)

- European Workshop for Open Systems (EWOS) [jointly with the European Telecommunications Standards Institute (ETSI)]

- OSE Implementors' Workshop (OIW)

ISO/IEC ISP xxxxx 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 - IPM Requirements for MTS Access (P3)*

- *Part 5 : AMH24 - IPM Requirements for Enhanced MS Access (P7*

This part of ISO/IEC ISP xxxxx contains three annexes, of which annexes A and B are normative and annex C is informative.

Introduction

This part of International Standardized Profile ISO/IEC ISP xxxxx 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 most important rôles for an ISP is to serve as the basis for the development (by organizations other than ISO and IEC) of internationally recognized tests and test centres. 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 xxxxx was 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). This part of ISO/IEC ISP xxxxx is harmonized between these three Workshops and it has been ratified by the plenary assemblies of all three Workshops.

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

Part 1 : IPM MHS Service Support

1 Scope

1.1 General

This part of ISO/IEC ISP xxxxx contains the overall specifications of the support of MHS Elements of Service and associated MHS functionality in an Interpersonal Messaging (IPM) environment which are generally not appropriate for consideration only from the perspective of a single MHS protocol. These specifications form part of the Interpersonal Messaging application functions, as defined in the parts of ISO/IEC ISP xxxxx, and are based on the Common Messaging content type-independent specifications in ISO/IEC ISP 10611. Such specifications are in many cases applicable to more than one MHS protocol or are otherwise concerned with component functionality which, although it can be verified via protocol, is not just related to protocol support. They are therefore designed to be referenced in the MHS Interpersonal Messaging application profiles ISO/IEC ISP xxxxx-2 (AMH21), ISO/IEC ISP xxxxx-3 (AMH22), ISO/IEC ISP xxxxx-4 (AMH23) and ISO/IEC ISP xxxxx-5 (AMH24), which specify the support of specific MHS protocols and associated functionality.

The specifications in this part of ISO/IEC ISP xxxxx are divided into **basic requirements**, which are required to be supported by all IPM MHS implementations, and a number of optional **functional groups**, which cover significant discrete areas of related functionality which are not required to be supported by all implementations.

1.2 Position within the taxonomy

This part of ISO/IEC ISP xxxxx is the first part, as common text, of a multipart ISP identified in ISO/IEC TR 10000-2 as “AMH2, Message Handling Systems - Interpersonal Messaging” (see also ISO/IEC TR 10000-1, 8.2 for the definition of multipart ISPs).

This part of ISO/IEC ISP xxxxx does not, on its own, specify any profiles.

2 Normative references

The following documents contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC ISP xxxxx. At the time of publication, the editions indicated were valid. All documents are subject to revision, and parties to agreements based on this part of ISO/IEC ISP xxxxx 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 are listed in annex B.

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

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.*

ISO/IEC 10021-1: 1990, *Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 1: Service Overview. [see also CCITT Recommendation X.400(1988)]*

ISO/IEC 10021-2: 1990, *Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 2: Overall Architecture. [see also CCITT Recommendation X.402(1988)]*

ISO/IEC 10021-4: 1990, *Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 4: Message Transfer System: Abstract Service Definition and Procedures. [see also CCITT Recommendation X.411(1988)]*

ISO/IEC 10021-5: 1990, *Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 5: Message Store: Abstract Service Definition. [see also CCITT Recommendation X.413(1988)]*

ISO/IEC 10021-7: 1990, *Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 7: Interpersonal Messaging System. [see also CCITT Recommendation X.420(1988)]*

ISO/IEC ISP 10611-1: ---[2], *Information technology - International Standardized Profiles - Message Handling Systems - Common Messaging - Part 1: MHS Service Support.*

CCITT Recommendation X.400(1988), *Message handling system and service overview.*

CCITT Recommendation X.402(1988), *Message handling systems: Overall architecture.*

CCITT Recommendation X.411(1988), *Message handling systems: Message transfer system: Abstract service definition and procedures.*

CCITT Recommendation X.413(1988), *Message handling systems: Message store: Abstract service definition.*

CCITT Recommendation X.420(1988), *Message handling systems: Interpersonal messaging system.*

MHS Implementors' Guide, Version 8, March 1992 (CCITT Special Rapporteur's Group on Message Handling Systems and ISO/IEC JTC1/SC18/WG4 SWG on Messaging).

3 Definitions

For the purposes of this part of ISO/IEC ISP xxxxx, the following definitions apply.

Terms used in this part of ISO/IEC ISP xxxxx 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

[2]To be published.

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 xxxxx).

3.2 Support classification

To specify the support level of Elements of Service for this part of ISO/IEC ISP xxxxx, the following terminology is defined.

mandatory support (**m**) :

for origination:

for MT and MS Elements of Service:

a service provider (i.e., an MTA or MS) shall be able to make the Element of Service available to a service user in the rôle of originator; a service user (i.e., a UA) shall be able to use the Element of Service in the rôle of originator.

for IPM Elements of Service:

a service provider (i.e., an IPM UA) shall implement all procedures specified in the base standards which are associated with the provision of the Element of Service, including use of the corresponding MT or MS Element(s) of Service, as appropriate; where specified in the base standards, a service provider shall make the Element of Service available to the service user in the rôle of originator; in all cases it shall be stated in the PICS whether the Element of Service is made available to the service user and, if so, how this is achieved.

for reception:

for MT and MS Elements of Service:

a service provider (i.e., an MTA or MS) shall be able to make the Element of Service available to a service user in the rôle of recipient; a service user (i.e., a UA) shall be able to use the Element of Service in the rôle of recipient.

for IPM Elements of Service:

a service provider (i.e., an IPM UA) shall implement all procedures specified in the base standards which are associated with the provision of the Element of Service, including use of the corresponding MT or MS Element(s) of Service, as appropriate; where specified in the base standards, a service provider shall make the Element of Service available to the service user in the rôle of recipient; in all cases it shall be stated in the PICS whether the Element of Service is made available to the service user and, if so, how this is achieved.

optional support (**o**) : an implementation is not required to support the Element of Service. If support is claimed, then the Element of Service shall be treated as if it were specified as mandatory support.

conditional support (**c**) : the Element of Service shall be supported under the conditions specified in this part of ISO/IEC ISP xxxxx. If these conditions are met, the Element of Service shall be treated as if it were specified as mandatory support. If these conditions are not met, the Element of Service shall be treated as if it were specified as optional support (unless otherwise stated).

out of scope (**i**) : the Element of Service is outside the scope of this part of ISO/IEC ISP xxxxx - i.e., it will not be the subject of an ISP conformance test. However, the handling of associated protocol elements may be specified separately in the subsequent parts of this ISP.

not applicable (**–**) : the Element of Service is not applicable in the particular context in which this classification is used.

4 Abbreviations

84IW	84 Interworking
AMH	Application Message Handling
ASN.1	Abstract Syntax Notation One
CV	Conversion
DIR	Use of Directory
DL	Distribution List
EoS	Element of Service
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
PDAU	Physical delivery access unit
RED	Redirection
RoC	Return of Contents
SEC	Security
UA	User agent

Support level for Elements of Service (see 3.2):

m	mandatory support
o	optional support
c	conditional support
i	out of scope
–	not applicable

5 Conformance

No conformance requirements are specified in this part of ISO/IEC ISP xxxxx.

NOTE - This part of ISO/IEC ISP xxxxx is a reference specification of the basic requirements and functional groups covered by the AMH2n set of profiles and is additional to the protocol-specific requirements specified in the following parts of ISO/IEC ISP xxxxx. Although this part of ISO/IEC ISP xxxxx contains normative requirements, there is no separate conformance to this part (i.e., it is not

identified in the MHS taxonomy in ISO/IEC TR 10000-2) since such requirements are only significant when referenced in the context of a particular protocol.

Conformance requirements are specified by protocol for each MHS component in the following parts of ISO/IEC ISP xxxxx with reference to the specifications in this part. Support of functionality as specified in this part may only be verifiable where the effect of implementation can be determined at a standardized external interface - i.e., via a standard OSI communications protocol. Further, the provision of Elements of Service and other functionality at a service interface will not necessarily be verifiable unless such interface is realized in the form of a standard OSI communications protocol. Other forms of exposed interface (such as a human user interface or a standardized programmatic interface) may be provided, but are not required for conformance to this version of ISO/IEC ISP xxxxx.

6 Basic requirements

Annex A specifies the basic requirements for support of MHS Elements of Service (EoS) for conformance to ISO/IEC ISP xxxxx. Basic requirements specify the level of support required by all IPM MHS implementations, as appropriate to each type of MHS component - i.e., MTA, MS or UA (as MTS-user or MS-user, as relevant).

An implementation conforming to the basic requirements of ISO/IEC ISP xxxxx shall conform to the basic requirements of ISO/IEC ISP 10611, as appropriate to the type of MHS component.

7 Functional groups

Annex A also specifies any additional requirements for support of MHS EoS if support of an optional functional group (FG) is claimed, as appropriate to each type of MHS component. The following clauses summarize the functionality supported by each of the optional FGs and identify any particular requirements or implementation considerations which are outside the scope of formal conformance to ISO/IEC ISP xxxxx. A summary of the functional groups, identifying which may be supported (Y) and which are not applicable (N) for each type of MHS component (i.e., MTA, MS or UA - whether as MTS-user or as MS-user is not distinguished), is given in the following table.

Table 1 - Summary of AMH2n optional functional groups

Functional Group	MTA	MS	UA
IPM Conversion (CV)	Y	N	Y
IPM Distribution List (DL)	Y	N	N
IPM Physical Delivery (PD)	Y	N	Y
IPM Manual Forwarding (FWD)	N	N	Y
IPM Redirection (RED)	Y	N	Y
IPM Latest Delivery (LD)	Y	N	Y
IPM Return of Contents (RoC)	Y	N	Y
IPM Security (SEC)	Y	Y	Y
IPM Use of Directory (DIR)	Y	N	Y
IPM 84 Interworking (84IW)	Y	N	Y

7.1 IPM Conversion (CV)

The IPM Conversion FG covers support of those EoS which provide the functionality required to perform the action of message body part conversion. Support of the IPM CV FG is applicable to an MTA or a UA. Support of the IPM CV FG by an MTA covers support of either or both of the Explicit Conversion and Implicit Conversion EoS. Support of the IPM CV FG by a UA covers support of the Explicit Conversion EoS only.

NOTE - Support of EoS associated with conversion prohibition is a basic MTA requirement, but this does not imply a capability to perform conversion.

A UA implementation conforming to the IPM CV FG shall support use of the MT Explicit Conversion EoS and the MT Conversion Prohibition in Case of Loss of Information EoS. It shall be stated in the PICS which encoded information type conversions the UA can request.

An MTA implementation conforming to the IPM CV FG shall conform to the Common Messaging CV FG as specified in ISO/IEC ISP 10611 in an IPM context (i.e., the ability to perform conversion of IPM content is required).

7.2 IPM Distribution List (DL)

The IPM Distribution List FG covers all issues relating to the performance of distribution list (DL) expansion. Support of the IPM DL FG is only applicable to an MTA.

An implementation conforming to the IPM DL FG shall conform to the Common Messaging DL FG as specified in ISO/IEC ISP 10611. There are no additional requirements for an MTA in an IPM environment.

7.3 IPM Physical Delivery (PD)

The IPM Physical Delivery FG is concerned with access to physical delivery (i.e., postal, courier, etc.) services. The IPM PD FG comprises two separate and distinct parts:

- support of PD EoS on origination and submission;
- support of a co-located physical delivery access unit (PDAU).

Support of PD EoS on submission is applicable to an MTA or a UA. Support of a PDAU is only applicable to an MTA.

An implementation conforming to the IPM PD FG shall conform to the Common Messaging PD FG as specified in ISO/IEC ISP 10611. There are no additional requirements for an MTA or UA in an IPM environment.

7.4 IPM Manual Forwarding (FWD)

The IPM Manual Forwarding FG covers support for forwarding of messages by the MHS user. Support of the IPM FWD FG is only applicable to a UA.

A UA implementation conforming to the IPM FWD FG shall support the Forwarded IP-message Indication EoS on origination.

7.5 IPM Redirection (RED)

The IPM Redirection FG covers support of those EoS which provide the functionality required to perform the actions associated with the delivery of a message to a recipient other than the one initially specified by the originator. Support of the IPM RED FG is applicable to an MTA or a UA.

An MTA implementation conforming to the IPM RED FG shall conform to the Common Messaging RED FG as specified in ISO/IEC ISP 10611. There are no additional requirements for an MTA in an IPM environment.

A UA implementation conforming to the IPM RED FG shall support use of the following MT EoS:

- Alternate Recipient Allowed
- Originator Requested Alternate Recipient
- Redirection of Incoming Messages

7.6 IPM Latest Delivery (LD)

The IPM Latest Delivery FG covers support of the Latest Delivery EoS - i.e., the functionality required to cause non-delivery to occur if a latest delivery time specified by the originator has expired. Support of the IPM LD FG is applicable to an MTA or a UA.

An implementation conforming to the IPM LD FG shall conform to the Common Messaging LD FG as specified in ISO/IEC ISP 10611. There are no additional requirements for an MTA or UA in an IPM environment.

7.7 IPM Return of Contents (RoC)

The IPM Return of Contents FG covers support of the Return of Contents EoS - i.e., the functionality required to cause the contents of a submitted message to be returned in any non-delivery notification if so requested by the originator. Support of the IPM RoC FG is applicable to an MTA or a UA.

NOTE - The IPM RoC FG is concerned only with the return of content in a non-delivery notification, not with return of an IPM in a non-receipt notification.

An implementation conforming to the IPM RoC FG shall conform to the Common Messaging RoC FG as specified in ISO/IEC ISP 10611. There are no additional requirements for an MTA or UA in an IPM environment.

7.8 IPM Security (SEC)

The IPM Security FG covers the provision of secure messaging in an IPM environment and is specified as three **security classes** which are incremental subsets of the security features available in the MHS base standards:

S0 This security class only requires security functions which are applicable between MTS-users. Consequently security mechanisms are implemented within the MTS-user. An MTA is only required to support the syntax of the security services on submission and delivery (support of the syntax on relaying is a basic requirement). An MTA is not expected to understand the semantics of the security services.

S1 This security class requires security functionality within both the MTS-user and the MTS. The MTS security functionality is only required to achieve secure access management. As with S0, most of the security mechanisms are implemented within an MTS user. S1 primarily provides integrity and authentication between MTS users. However, MTAs are expected to support digital signatures for peer-to-peer authentication, security labelling and security contexts.

S2 This security class adds security functions within MTAs and the MTS. The main security function added within this class is authentication within the MTS, and hence non-repudiation can also be provided.

In addition, each of the three security classes has a variant (denoted as **S0C**, **S1C** and **S2C**) which requires support of end-to-end content confidentiality.

Support of the SEC FG is applicable to an MTA, an MS or a UA (either as MTS-user or as MS-user) and requires as a minimum support of security class S0.

An implementation conforming to the IPM SEC FG shall conform to the Common Messaging SEC FG as specified in ISO/IEC ISP 10611. There are no additional requirements for an MTA, UA or MS in an IPM environment.

7.9 IPM Use of Directory (DIR)

The IPM Use of Directory functional group covers support of the Designation of Recipient by Directory Name EoS - i.e., allowing specification of a recipient by means of a directory name on submission, with access to a directory service by an MTA to obtain one or more O/R addresses corresponding to that directory name (either on submission or subsequently if an O/R address is absent or determined to be invalid and a directory name is also present).

NOTE - A directory may also be used directly by MHS users to obtain information to assist in the submission of messages. However, such use is not necessarily MHS-specific and is therefore outside the scope of this ISP.

Support of the IPM DIR FG is applicable to an MTA or a UA.

An implementation conforming to the IPM DIR FG shall conform to the Common Messaging DIR FG as specified in ISO/IEC ISP 10611. There are no additional requirements for an MTA or UA in an IPM environment.

7.10 IPM 84 Interworking (84IW)

The 84 Interworking functional group covers interworking between implementations conforming to ISO/IEC ISP xxxxx (hereafter referred to as '1988 systems') and implementations conforming to the CCITT X.400(1984) Recommendations (hereafter referred to as '1984 systems').

Support of the 84IW FG is applicable to an MTA or a UA.

An MTA implementation conforming to the IPM 84IW FG shall conform to the Common Messaging 84IW FG as specified in ISO/IEC ISP 10611. There are no additional requirements for an MTA in an IPM environment.

A UA implementation conforming to the IPM 84IW FG shall support origination and reception of IPM content identified as integer 22 or as integer 2 as specified in clause 20.2 of ISO/IEC 10021-7 and shall support origination of IA5 Text body parts.

Additional recommended practices for interworking with 1984 systems are described in annex C, covering procedures for downgrading IPM content type 22 to content type 2.

8 Naming and addressing

Implementations shall support naming and addressing capabilities as specified in clause 8 of ISO/IEC ISP 10611-1.

In addition, a UA implementation shall support use of the numeric and terminal O/R address forms to identify recipients (support of these forms to identify the UA itself is not required).

9 Error and exception handling

The upper bounds defined in annex K of ISO/IEC 10021-7 are normative for the purposes of this ISP.

An implementation shall not generate elements which exceed such bounds.

An implementation detecting a violation of such bounds may generate a size-constraint-violation, but is not required to do so.

An implementation is not required to be able to accept elements up to such bounds where an appropriate error indication (e.g., content-too-long, too-many-recipients) is defined in the base standards.

Annex A

(normative)

Elements of Service

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

A.1 MT Elements of Service

The requirements for support of MT EoS by an MTA are as specified in clause A.1 of ISO/IEC ISP 10611-1. The following tables specify the requirements for use of such services by an MTS-user in an IPM environment (i.e., IPM UA) for conformance to ISO/IEC ISP xxxxx. Whether such services are made available to the MHS user is covered in the AMH21 PICS proforma.

In the following tables, the "Basic" column reflects the basic requirements for conformance to ISO/IEC ISP xxxxx - i.e., the minimum level of support required by all IPM UA implementations (see clause 6). The "Functional Group" column specifies any additional support requirements if support of an optional functional group is claimed (see clause 7). Each column is then further subdivided into support for origination ("Orig") and reception ("Rec") as defined in 3.2, together with the abbreviated name of the functional group ("FG") in the case of the second column.

Table A.1 - Elements of Service Belonging to The Basic IPM Service (MT EoS)

Element of Service	Basic		Functional Group		
	Orig.	Rec.	FG	Orig.	Rec.
Access Management	m	m			
Content Type Indication	m	m			
Converted Indication	–	m			
Delivery Time Stamp Indication	–	m			
Message Identification	m	m			
Non-delivery Notification	m	–			
Original Encoded Information Types Indication	m	m			
Submission Time Stamp Indication	m	m			
User/UA Capabilities Registration	–	m			

Table A.1 - Elements of Service Belonging to The Basic IPM Service (MT EoS)

Table A.2 - IPM Optional User Facilities (MT EoS)

Element of Service	Basic		Functional Group		
	Orig.	Rec.	FG	Orig.	Rec.
Additional Physical Rendition	o	–			
Alternate Recipient Allowed	o	–	RED	m	
Alternate Recipient Assignment[2]	–	–			
Basic Physical Rendition	o	–	PD	m	
Content Confidentiality	o	o	SEC	c[1]	c[1]
Content Integrity	o	o	SEC	c[1]	c[1]
Conversion Prohibition	m	m			
Conversion Prohibition in Case of Loss of Information	o	o	CV	m	m
Counter Collection	o	–	PD	m	
Counter Collection with Advice	o	–			
Deferred Delivery	m	–			
Deferred Delivery Cancellation[3]	m	–			
Delivery Notification	m	–			
Delivery via Bureaufax Service	o	–			
Designation of Recipient by Directory Name	o	–	DIR	m	
Disclosure of Other Recipients	o	m			
DL Expansion History Indication	–	m			
DL Expansion Prohibited	m[4]	–			
EMS (Express Mail Service)	o	–	PD	m	
Explicit Conversion	o	–	CV	m	
Grade of Delivery Selection	m	m			
Hold for Delivery	–	i			
Implicit Conversion	–	–			
Latest Delivery Designation	o	–	LD	m	
Message Flow Confidentiality	i	i			
Message Origin Authentication	o	o	SEC	c[1]	c[1]
Message Security Labelling	o	o	SEC	c[1]	c[1]

Message Sequence Integrity	o	o			
Multi-destination Delivery	m	–			
Non-repudiation of Delivery	o	o	SEC	c[1]	c[1]
Non-repudiation of Origin	o	o	SEC	c[1]	c[1]
Non-repudiation of Submission	i	–	SEC	c[1]	
Ordinary Mail	o	–	PD	m	
Originator Requested Alternate Recipient	o	–	RED	m	
Physical Delivery Notification by MHS	o	–			
Physical Delivery Notification by PDS	o	–			
Physical Forwarding Allowed	o	–	PD	m	
Physical Forwarding Prohibited	o	–	PD	m	
Prevention of Non-delivery Notification	o	–			
Probe	o	–			
Probe Origin Authentication	i	–	SEC	c[1]	
Proof of Delivery	o	o	SEC	c[1]	c[1]
Proof of Submission	i	–	SEC	c[1]	
Redirection Disallowed by Originator	m[4]	–			
Redirection of Incoming Messages[5]	–	o	RED		m
Registered Mail	o	–			
Registered Mail to Addressee in Person	o	–			
Report Origin Authentication	i	i	SEC	c[1]	c[1]
Request for Forwarding Address	o	–			
Requested Preferred Delivery Method	o	–			
Restricted Delivery	–	i			
Return of Content	o	–	RoC	m	
Secure Access Management	o	o	SEC	c[1]	c[1]
Special Delivery	o	–	PD	m	
Undeliverable Mail with Return of Physical Message	o	–	PD	m	
Use of Distribution List	m[6]	–			

NOTES

1 Support is according to the security class for which support is claimed - see clause A.1 of ISO/IEC ISP 10611-1

2 The method by which an alternate recipient is specified to the MTA is outside the scope of this ISP

3 Performance of this EoS is not guaranteed if the message has already been transferred from the submitting MTA

4 Support of this EoS has been made mandatory as the default is "allowed" (the capability to generate both the "prohibited" value and the "allowed" value is required)

5 It is not required that support of this EoS is achieved using the Register operation

6 Use of Distribution List on submission is always possible as DLs cannot be distinguished from other O/R addresses

A.2 MS Elements of Service

The requirements for support of MS EoS by an MS are as specified in clause A.2 of ISO/IEC ISP 10611-1. The following tables specify the requirements for use of such services by an MS-user in an IPM environment (i.e. IPM UA) for conformance to ISO/IEC ISP xxxxx. Whether such services are made available to the MHS user is covered in the AMH21 PICS proforma.

In the following tables, the "Basic" column reflects the basic requirements for conformance to ISO/IEC ISP xxxxx - i.e., the minimum level of support required by all IPM UA implementations (see clause 6). The "Functional Group" column specifies any additional support requirements if support of an optional functional group is claimed (see clause 7), together with the abbreviated name of the functional group ("FG").

Table A.3 - Base Message Store

Element of Service	Basic	Functional Group	
	UA	FG	UA
MS Register	o		
Stored Message Deletion	m		
Stored Message Fetching	m		
Stored Message Listing	m		
Stored Message Summary	m		

Table A.4 - MS Optional User Facilities

Element of Service	Basic	Functional Group	
	UA	FG	UA
Stored Message Alert	o		
Stored Message Auto-forward	o		

A.3 IPM-specific Elements of Service

The following tables specify the requirements for support of IPM-specific Elements of Service by an MTS-user in an IPM environment (i.e., IPM UA) for conformance to ISO/IEC ISP xxxxx. Whether such services are made available to the MHS user is covered in the AMH21 PICS proforma.

In the following tables, the "Basic" column reflects the basic requirements for conformance to ISO/IEC ISP xxxxx - i.e., the minimum level of support required by all IPM UA implementations (see clause 6). The "Functional Group" column specifies any additional support requirements if support of an optional functional group is claimed (see clause 7). Each column is then further subdivided into support for origination ("Orig") and reception ("Rec") as defined in 3.2, together with the abbreviated name of the functional group ("FG") in the case of the second column.

Table A.5 - Elements of Service Belonging to The Basic IPM Service (IPM EoS)

Element of Service	Basic		Functional Group		
	Orig.	Rec.	FG	Orig.	Rec.
IP-message Identification	m	m			
Typed Body	m	m			

Table A.6 - IPM Optional User Facilities (IPM EoS)

Element of Service	Basic		Functional Group		
	Orig.	Rec.	FG	Orig.	Rec.
Authorizing Users Indication	o	m			
Auto-forwarded Indication	o	m			
Blind Copy Recipient Indication	o	m			
Body Part Encryption Indication	o	m			
Cross-referencing Indication	o	m			
Expiry Date Indication	o	m			
Forwarded IP-message Indication	o	m	FWD	m	
Importance Indication	o	m			
Incomplete Copy Indication	o	m			
Language Indication	o	m			
Multi-part Body	m	m			
Non-receipt Notification Request Indication	o	m[1]			
Obsoleting Indication	o	m			
Originator Indication	m	m			
Primary and Copy Recipients Indication	m	m			
Receipt Notification Request Indication	o	o			
Reply Request Indication	o	m			
Replying IP-message Indication	m	m			
Sensitivity Indication	o	m			
Subject Indication	m	m			

NOTES

1 The capability to generate a non-receipt notification does not have to be demonstrated for an implementation in which a non-receipt condition cannot occur

Table A.6 - IPM Optional User Facilities (IPM EoS)

Annex B

(normative)

Amendments and corrigenda

International Standards are subject to constant review and revision by the ISO/IEC Technical Committees concerned. The following amendments and corrigenda are approved by ISO/IEC JTC1 and are considered as normative references in this part of ISO/IEC ISP xxxxx.

NOTE - Corresponding corrigenda to the equivalent CCITT Recommendations are contained in the joint CCITT/ISO MHS Implementor's Guide.

MOTIS

ISO/IEC 10021-1/Cor.1:1991

ISO/IEC 10021-1/Cor.2:1991

ISO/IEC 10021-1/Cor.3:1992

ISO/IEC 10021-1/Cor.4:1992

ISO/IEC 10021-1/Cor.5:1992

ISO/IEC 10021-2/Cor.1:1991

ISO/IEC 10021-2/Cor.2:1991

ISO/IEC 10021-2/Cor.3:1992

ISO/IEC 10021-2/Cor.4:1992

ISO/IEC 10021-4/Cor.1:1991

ISO/IEC 10021-4/Cor.2:1991

ISO/IEC 10021-4/Cor.3:1992

ISO/IEC 10021-4/Cor.4:1992

ISO/IEC 10021-4/Cor.5:1992

ISO/IEC 10021-5/Cor.1:1991

ISO/IEC 10021-5/Cor.2:1991

ISO/IEC 10021-5/Cor.3:1992

ISO/IEC 10021-5/Cor.4:1992

ISO/IEC 10021-7/Cor.1:1991

ISO/IEC 10021-7/Cor.2:1991

ISO/IEC 10021-7/Cor.3:1992

ISO/IEC 10021-7/Cor.4:1992

ISO/IEC 10021-7/Cor.5:1992

Annex C

(informative)

Additional recommended practices for 1984 interworking

C.1 Introduction

This annex provides some additional recommendations concerning interworking between IPM UA implementations conforming to ISO/IEC ISP xxxxx (hereafter referred to as '1988 systems') and IPM UA implementations conforming to earlier versions of the MHS base standards (hereafter referred to as '1984 systems').

Such recommendations are additional to the requirements of the IPM 84 Interworking functional group, either because the interworking issue in question is outside the scope of the MHS base standards (and hence also outside the scope of formal conformance to this ISP) or because it is anticipated that the issue should be resolved in the MHS base standards.

The recommendations in this annex are concerned with the downgrading of interpersonal messages (IPMs) and interpersonal notifications (IPNs) from content type 22 to content type 2. Such a capability could be implemented in an originating IPM UA or elsewhere in the message path.

This annex does not specify the conditions under which an implementation may invoke these procedures, or how a requirement for downgrading of a particular IPM or IPN should be determined. Such determination will require knowledge of the recipient's capabilities, bilateral agreements, configuration or some other appropriate means. Without such knowledge it may be inappropriate to invoke these procedures, and it is strongly recommended that content downgrading is only performed when it is known that it is appropriate to do so.

NOTE - Recommended practices for interworking between 1988 and 1984 MTA implementations are covered in annex D of ISO/IEC ISP 10611-1.

C.2 Downgrading an Interpersonal Message (IPM)

Downgrading of an IPM of content type 22 is as follows.

If the delivered content type of an IPM in a Message body part is 22, then these rules are also applied recursively to that IPM.

Downgrading of an IPM containing both 1984 and 1988 recipients should only be performed for 1984 recipients (i.e., such an IPM will need to be split).

C.2.1 Extensions

If the extensions field is present in the heading, or any recipient extensions field is present in a recipient specifier, then each such field is deleted.

C.2.2 O/R Descriptors

If an O/R descriptor contains a formal-name (an O/R name), then the O/R name is downgraded as specified in clause B.2.7 of ISO/IEC 10021-6. The additional downgrading rule in clause D.3 of ISO/IEC ISP 10611-1 may also be observed.

[**Editor's Note** : The previous sentence will be removed if the downgrading of common-name is covered in an agreed ISO corrigendum.]

NOTE - O/R descriptors occur in each of the originator, authorizing-users, primary-recipients, copy-recipients, blind-copy-recipients and reply-recipients heading fields.

For an originator O/R descriptor, if, after applying these rules, the formal-name has not been downgraded, then downgrading of the content always fails and a non-delivery notification should be returned.

For other O/R descriptors, if, after applying these rules, downgrading has failed, then information from the directory name and/or the original O/R address may be captured in an implementation-defined manner (for example, it may be placed in the free-form-name or in a domain-defined attribute) and the formal-name may then be deleted. In the case of a recipient O/R descriptor, however, any notification-requested or reply-requested flag should also be removed (see also item a) of clause 7.1.3 of ISO/IEC 10021-7).

C.2.3 IPM Identifiers

If an IPM identifier contains an O/R name, then the O/R name is downgraded as specified in clause B.2.7 of ISO/IEC 10021-6. The additional downgrading rule in clause D.3 of ISO/IEC ISP 10611-1 may also be observed.

[**Editor's Note** : The previous sentence will be removed if the downgrading of common-name is covered in an agreed ISO corrigendum.]

NOTE - IPM identifiers occur in each of the this-IPM, replied-to-IPM, obsoleted-IPMs and related-IPMs heading fields.

If the O/R name cannot be downgraded, then it is deleted. In such a case, if it is not known that the user-relative-identifier is sufficient on its own for reference purposes, then a string value of "..." should be appended to the user-relative-identifier to indicate that significant information may have been lost.

C.2.4 Delivery Envelope

The delivery-envelope, if present in the parameters element of a Message body part, is downgraded according to the following rules. If the delivery-envelope cannot be downgraded, then it is deleted.

If the content-identifier is present, then it is deleted.

If the extensions element is present, then it is deleted.

NOTE - Criticality indicators do not apply.

NOTE - The redirection-history extension should not be transformed into the equivalent format as specified in the suspended 1986 version of MOTIS, since the latter's use of tag [9] conflicts with the use of this tag value for the extensions element in OtherMessageDeliveryFields in ISO/IEC 10021-4.

If the delivered content type is 22, then it is changed to 2.

All O/R names are downgraded as specified in clause B.2.7 of ISO/IEC 10021-6. The additional downgrading rule in clause D.3 of ISO/IEC ISP 10611-1 may also be observed.

[**Editor's Note** : The previous sentence will be removed if the downgrading of common-name is covered in an agreed ISO corrigendum.]

If the originator-name or this-recipient-name cannot be downgraded, then the delivery-envelope cannot be downgraded.

If the originally-intended-recipient-name cannot be downgraded, then either it is deleted or the delivery-envelope cannot be downgraded.

If an other-recipient-name cannot be downgraded, then either that name is deleted or all the other-recipient-names are deleted.

Encoded information types are downgraded as specified in clause B.2.9 of ISO/IEC 10021-6.

C.2.5 Body

If the syntax element is present in the parameters element of a Videotex body part, then it is deleted.

If an IA5Text body part or a Message body part is represented as an Externally Defined body part, then it is transformed into the corresponding basic body part type. If an Externally Defined body part is of an extended body part type other than IA5Text or Message, and that body part type has a basic body part type defined, then the Externally Defined body part may be transformed into the corresponding basic body part type. Annex B of ISO/IEC 10021-7 identifies the equivalences between basic body part types and extended body part types. That list is supplemented by the equivalence for the ODA body part type, as follows:

- ODA extended body part type - defined in annex E of ISO 8613-1.

- ODA basic body part type - defined in annex B of ISO/IEC ISP 10610-1; encoded information type bits 0 and 10 are set.

NOTE - These transformations are not considered to be conversion, since they do not affect the semantics of the encoded information types in the message envelope, and hence are not controlled by any prohibition on implicit conversion or conversion with loss.

Any other extended body part types may either be transformed into basic body parts by bilateral agreement, or else downgrading fails.

NOTE - As such transformation is outside the scope of CCITT Recommendation X.408, an implementation may use its own conversion rules. For example, it may encapsulate the complete body part, or alternatively may encapsulate just the data element of the body part. Which body part type is used is a local matter. In the most extreme case, the body part may be replaced with an IA5 Text body part containing an indication of the presence of the original body part, although the objective should be to capture the body part in an encoding compatible with the 1984 standards without loss of information if possible. It should, however, be noted that any associated encoded information types in the message envelope will be mapped to 'undefined' according to the rules in annex B of ISO/IEC 10021-6.

C.3 Downgrading an Interpersonal Notification (IPN)

Downgrading of an IPN of content type 22 is as follows.

If the IPN is an Other Notification (ON), then downgrading fails.

C.3.1 Extensions

If any of the notification-extensions, rn-extensions or nrn-extensions fields is present, then it is deleted.

C.3.2 O/R Descriptors

Downgrading of an O/R descriptor is as specified in C.2.2.

C.3.3 Common Fields

If the ipn-originator or the ipm-preferred-recipient cannot be downgraded, then either the field is deleted or downgrading fails.

If the subject-ipm contains an O/R name, then the O/R name is downgraded as specified in C.2.3.

The conversion-eits field, if present, is downgraded as specified in clause B.2.9 of ISO/IEC 10021-6.

C.3.4 Non-receipt Fields

The returned-ipm field, if present, is either downgraded as specified in C.2, or else is deleted.

NOTE - The NRN contains no indication as to whether the returned IPM is of content type 22 or 2.

C.3.5 Receipt Fields

The suppl-receipt-info field, if present and longer than 64 characters, is truncated to 64 characters.

TITLE: Information technology - International Standardized Profiles AMH2n - Message Handling Systems - Interpersonal Messaging - Part 2 : AMH21 - IPM Content

SOURCE: Project Editor (Jon Stranger, UK)

STATUS: Final pDISP text. Fifth version, 1993-9-24

This document forms part of a draft multipart ISP for MHS covering Interpersonal Messaging requirements (AMH2), as identified in the Taxonomy for International Standardized Profiles (ISO/IEC TR 10000-2 : 1992).

This final pDISP version reflects resolution of all remaining outstanding issues at the 8th MHS ISP Special Group (MISG) meeting (Stockholm, September 22-24, 1993) and is intended for submission to ISO/IEC JTC1/SGFS. The content of this document is considered by the MHS expert groups of the three regional workshops as harmonized.

The technical content of this document has been derived wherever possible from the existing EWOS/ETSI and OIW regional profiles in this area. However, this document should not be considered as an internationally harmonized specification and differences between the content of this document and one or more regional profiles may exist.

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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 JTC1. In addition to developing International Standards, ISO/IEC JTC1 has created a Special Group on Functional Standardization for the elaboration of 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 set of functions.

Draft International Standardized Profiles 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.

International Standardized Profile ISO/IEC ISP xxxxx-2 was prepared with the collaboration of:

- Asia-Oceania Workshop (AOW)

- European Workshop for Open Systems (EWOS) [jointly with the European Telecommunications Standards Institute (ETSI)]

- OSE Implementors' Workshop (OIW)

ISO/IEC ISP xxxxx 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 - IPM Requirements for MTS Access (P3)*

- *Part 5 : AMH24 - IPM Requirements for Enhanced MS Access (P7)*

This part of ISO/IEC ISP xxxxx contains two annexes, A and B, which are normative.

Introduction

This part of International Standardized Profile ISO/IEC ISP xxxxx 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 most important rôles for an ISP is to serve as the basis for the development (by organizations other than ISO and IEC) of internationally recognized tests and test centres. 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 xxxxx was 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). This part of ISO/IEC ISP xxxxx is harmonized between these three Workshops and it has been ratified by the plenary assemblies of all three Workshops.

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

Part 2 : AMH21 - IPM Content

1 Scope

1.1 General

This part of ISO/IEC ISP xxxxx covers the interchange of messages between Interpersonal Messaging (IPM) User Agents (UAs) (see also figure 1). These specifications form part of the Interpersonal Messaging application functions, as defined in the parts of ISO/IEC ISP xxxxx, and are based on the Common Messaging content type-independent specifications in ISO/IEC ISP 10611.

1.2 Position within the taxonomy

This part of ISO/IEC ISP xxxxx is the second part of a multipart ISP identified in ISO/IEC TR 10000-2 as “AMH2, Message Handling Systems - Interpersonal Messaging” (see also ISO/IEC TR 10000-1, 8.2 for the definition of multipart ISPs).

This part of ISO/IEC ISP xxxxx specifies the following profile:

AMH21 - IPM Content

The AMH21 profile may optionally be combined with profile AMH23 or profile AMH24 (see ISO/IEC TR 10000) specifying OSI MHS communications protocols and supporting services for an IPM UA.

1.3 Scenario

The model used is one of indirect interchange of interpersonal messages (content types 22 and 2) between IPM UAs via an intermediate Message Transfer System (MTS), as shown in figure 1. The provision of, and access to, the MTS is outside the scope of this profile.

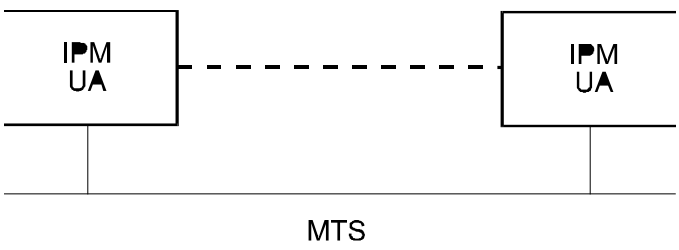

Figure 1 - AMH21 scenario

The MHS services and functions covered by the AMH21 profile are specified in ISO/IEC 10021-7. There are no OSI upper layer services and protocols within the scope of the AMH21 profile.

2 Normative references

The following documents contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC ISP xxxxx. At the time of publication, the editions indicated were valid. All documents are subject to revision, and parties to agreements based on this part of ISO/IEC ISP xxxxx 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 are listed in annex B.

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

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.*

ISO/IEC 10021-1: 1990, *Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 1: Service Overview. [see also CCITT Recommendation X.400(1988)]*

ISO/IEC 10021-2: 1990, *Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 2: Overall Architecture. [see also CCITT Recommendation X.402(1988)]*

ISO/IEC 10021-7: 1990, *Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 7: Interpersonal Messaging System. [see also CCITT Recommendation X.420(1988)]*

ISO/IEC ISP xxxxx-1: ---[3], *Information technology - International Standardized Profiles - Message Handling Systems - Interpersonal Messaging - Part 1: IPM MHS Service Support.*

CCITT Recommendation X.400(1988), *Message handling system and service overview.*

CCITT Recommendation X.402(1988), *Message handling systems: Overall architecture.*

CCITT Recommendation X.420(1988), *Message handling systems: Interpersonal messaging system.*

MHS Implementors' Guide, Version 8, March 1992 (CCITT Special Rapporteur's Group on Message Handling Systems and ISO/IEC JTC1/SC18/WG4 SWG on Messaging).

3 Definitions

[3]To be published.

For the purposes of this part of ISO/IEC ISP xxxxx, the following definitions apply.

Terms used in this part of ISO/IEC ISP xxxxx 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 xxxxx).

3.2 Support classification

To specify the support level of information objects and items for this part of ISO/IEC ISP xxxxx, the following terminology is defined.

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

The classification of information objects and items (elements) is relative to that of the containing information 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 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.

NOTE - Where required by the base standards, mandatory support also implies that the IPM UA implementation shall be able to pass the element on the origination port/reception port to/from the corresponding element on the submission port/delivery port/retrieval port.

optional support (**o**) : an implementation is not required to support the element. If support is claimed, then the element shall be treated as if it were specified as mandatory support.

conditional support (**c**) : the element shall be supported under the conditions specified in this part of ISO/IEC ISP xxxxx. If these conditions are met, the element shall be treated as if it were specified as mandatory support. If these conditions are not met, the element shall be treated as if it were specified as optional support (unless otherwise stated).

out of scope (**i**) : the element is outside the scope of this part of ISO/IEC ISP xxxxx - i.e., it will not be the subject of an ISP conformance test.

not applicable (**–**) : the element is not applicable in the particular context in which this classification is used.

4 Abbreviations

AMH Application Message Handling
ASN.1 Abstract Syntax Notation One
EoS Element of Service
FG Functional group
IPM Interpersonal Messaging / Interpersonal Message
IPN Interpersonal Notification
ISP International Standardized Profile
MHS Message Handling Systems
MS Message store
MT Message transfer
MTA Message transfer agent
MTS Message Transfer System
OSI Open Systems Interconnection
UA User agent

Support level for information objects (see 3.2):

m mandatory support
o optional support
c conditional support
i out of scope
– not applicable

5 Conformance

The scope of conformance to profile AMH21 covers IPM UAs only. Conformance to profile AMH21 does not imply the provision of a standard OSI communications protocol for access to the MTS. Conformance to profile AMH21 does not imply the provision of an exposed IPM service interface (whether a human user interface or a standardized programmatic interface).

This part of ISO/IEC ISP xxxxx states requirements upon implementations to achieve interworking. A claim of conformance to this part of ISO/IEC ISP xxxxx 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 of this part of ISO/IEC ISP xxxxx are satisfied. Annex A states the relationship between these requirements and those of the base standards.

5.1 Conformance statement

For each implementation claiming conformance to profile AMH21 as specified in this part of ISO/IEC ISP xxxxx, a PICS shall be made available stating support or non-support of each option identified in this part of ISO/IEC ISP xxxxx.

5.2 MHS conformance

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

Implementations conforming to profile AMH21 as specified in this part of ISO/IEC ISP xxxxx shall implement all the mandatory support (m) features in annex A and shall state which optional support (o) features are

implemented. They shall also support corresponding MHS Elements of Service and associated procedures as specified in ISO/IEC ISP xxxxx-1, as appropriate to the scope of this profile.

Implementations conforming to profile AMH21 as specified in this part of ISO/IEC ISP xxxxx shall state whether or not they support any of the optional functional groups as specified in ISO/IEC ISP xxxxx-1 which are applicable to the scope of this profile. For each functional group for which support is claimed, an implementation shall support MHS Elements of Service and associated procedures as specified in ISO/IEC ISP xxxxx-1, as appropriate to the scope of this profile.

Annex A[1]

(normative)

ISPICS Proforma

for ISO/IEC ISP xxxxx-2 (AMH21)

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

This annex specifies the support constraints and characteristics of ISO/IEC ISP xxxxx-2 on what shall or may appear in the implementation columns of an ISPICS.

[**Editor's Note** : It had been intended that this annex would eventually be based on the ISO/IEC 10021 P2 PICS proforma. However, the current version of the latter (as contained in ISO/IEC CD 10021-15) is defective and the whole ISO/IEC work item for the development of MOTIS PICS proformas has now been suspended. As a result, it has been necessary to turn the P2 IPRL in this annex into a complete ISPICS proforma (the alternative approach of a separate annex containing the assumed base standard PICS proforma was not considered appropriate in this case). This annex broadly follows the final draft of CCITT Recommendation X.481 (April 1992), but the structure has been modified to some extent to take account of profiling requirements and the somewhat different conformance objectives.]

Clause A.1 specifies the basic requirements for conformance to profile AMH21. 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 xxxxx. 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).

[**Editor's Note** : The identification of the base standard requirement has in some cases had to be interpreted or varied from that specified in the current CCITT PICS proforma, either due to the different classification scheme employed or where the base standard is unclear and it has been considered that the CCITT PICS proforma is in error.]

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

Y	the element or feature is fully supported
N	the element or feature is not supported
– 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)

---

[1]**Copyright 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.

Where support for origination and support for reception cannot be covered by a single indication, then both support levels shall be indicated, separated by a solidus (e.g., "N/Y").

Identification of the implementation

Identification of PICS

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

Identification of IUT

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

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	

Identification of protocol

Ref	Question	Response
1	Title, reference number and date of publication of the protocol standard	
2	Protocol version(s)	
3	Addenda/amendments/corrigenda implemented	
4	Defect reports implemented	

Global statement of conformance

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

Statement of profile conformance

Ref	Question	Response	Comments

1	Are all mandatory requirements of profile AMH21 implemented?		
2	Are all mandatory requirements of any of the following optional functional groups implemented?		
2.1	IPM Security (SEC)		class(es):
2.2	IPM Physical Delivery (PD)		
2.3	IPM Conversion (CV)		
2.4	IPM Manual Forwarding (FWD)		
2.4	IPM Redirection (RED)		
2.5	IPM Latest Delivery (LD)		
2.6	IPM Return of Contents (RoC)		
2.7	IPM Use of Directory (DIR)		
2.8	IPM 84 Interworking (84IW)		

A.1 Basic requirements

A.1.1 Supported information objects

Ref	Element	Origination		Reception		Support	Notes/References
		Base	Profile	Base	Profile		
1	Interpersonal Message (IPM)	m	m	m	m		
1.1	heading	m	m	m	m		see A.1.2
1.2	body	m	m	m	m		see A.1.3
2	Interpersonal Notification (IPN)	m	m	o	m		see A.1.4

A.1.2 IPM heading fields

Ref	Element	Origination		Reception		Support	Notes/References
		Base	Profile	Base	Profile		
1	this-IPM	m	m	m	m		see A.1.5/3
2	originator	m	m	m	m		see A.1.5/2
3	authorizing-users	o	o	m	m		see A.1.5/2
4	primary-recipients	m	m	m	m		see A.1.5/1
5	copy-recipients	m	m	m	m		see A.1.5/1
6	blind-copy-recipients	o	o	m	m		see A.1.5/1
7	replied-to-IPM	m	m	m	m		see A.1.5/3
8	obsoleted-IPMs	o	o	m	m		see A.1.5/3
9	related-IPMs	o	o	m	m		see A.1.5/3
10	subject	m	m	m	m		
11	expiry-time	o	o	m	m		
12	reply-time	o	o	m	m		
13	reply-recipients	o	o	m	m		see A.1.5/2
14	importance	o	o	m	m		
15	sensitivity	o	o	m	m		
16	auto-forwarded	o	o	m	m		
17	extensions						
17.1	incomplete-copy	o	o	o	o		
17.2	languages	o	o	m	m		

A.1.3 IPM body

Ref	Element	Origination		Reception		Support	Notes/References
		Base	Profile	Base	Profile		
1	ia5-text	o	o	o	m		
1.1	parameters	m	m	m	m		
1.1.1	repertoire	o	o	m	m		
1.2	data	m	m	m	m		
2	voice	i	i	i	i		
3	g3-facsimile	o	o	o	o		
3.1	parameters	m	m	m	m		
3.1.1	number-of-pages	o	o	o	m		
3.1.2	non-basic-parameters	o	o	o	m		
3.2	data	m	m	m	m		
4	g4-class-1	o	o	o	o		
5	teletex	o	o	o	o		
5.1	parameters	m	m	m	m		
5.1.1	number-of-pages	o	o	o	m		
5.1.2	telex-compatible	o	o	m	m		
5.1.3	non-basic-parameters	o	o	o	m		
5.2	data	m	m	m	m		
6	videotex	o	o	o	o		
6.1	parameters	m	m	m	m		
6.1.1	syntax	o	o	o	m		
6.2	data	m	m	m	m		
7	encrypted	i	i	i	i		
8	message	o	o	m	m		
8.1	parameters	m	m	m	m		
8.1.1	delivery-time	o	o	o	m		
8.1.2	delivery-envelope	o	o	o	m		
8.2	data	m	m	m	m		

9	mixed-mode	o	o	o	o		
10	bilaterally-defined	o	o	o	o		
11	nationally-defined	o	o	o	o		
12	externally-defined	o	m1	o	m1		
12.1	general-text	o	m2	o	m2		
12.2	(ia5-text)	o	o	o	m		
12.3	(message)	o	o	o	m		
12.4	(oda)	o	o	o	o		see ISO 8613-1

m1 - it shall be stated in A.3.4 whether any other specific extended body part types are supported

m2 - it shall be stated in A.3.5 which character repertoires are supported for support of the general-text body part type

A.1.4 IPN fields

Ref	Element	Origination		Reception		Support	Notes/References
		Base	Profile	Base	Profile		
1	subject-ipm	m	m	m	m		see A.1.5/3
2	ipn-originator	o	m	m	m		see A.1.5/2
3	ipm-preferred-recipient	m	m	m	m		see A.1.5/2
4	conversion-eits	o	o	m	m		
5	notification-extensions	o	i	o	i		
6	non-receipt-fields	m	m	o	m		
6.1	non-receipt-reason	m	m	m	m		
6.2	discard-reason	m	m	m	m		
6.3	auto-forward-comment	o	o	m	m		
6.4	returned-ipm	o	o	o	o		
6.5	nrn-extensions	o	i	o	i		
7	receipt-fields	o	o	o	m		
7.1	receipt-time	m	m	m	m		
7.2	acknowledgment-mode	o	o	m	m		
7.3	suppl-receipt-info	o	o	o	o		
7.4	rn-extensions	o	i	o	i		
8	other-notification-type-fields	o	i	o	i		

A.1.5 Common data types

Ref	Element	Origination		Reception		Support	Notes/References
		Base	Profile	Base	Profile		
1	RecipientSpecifier						
1.1	recipient	m	m	m	m		see A.1.5/2
1.2	notification-requests	o	o	m	m		
1.2.1	rn	o	o	o	o		
1.2.2	nrn	o	o	m	m		
1.2.3	ipm-return	o	o	o	o		
1.3	reply-requested	o	o	m	m		

1.4	recipient-extensions	o	i	o	i		
2	ORDescriptor						
2.1	formal-name	m	m1	m	m1		
2.2	free-form-name	o	o	o	m		
2.3	telephone-number	o	o	o	m		
3	IPMIdentifier						
3.1	user	m	m	m	m		
3.2	user-relative-identifier	m	m	m	m		

m1 - the requirements for support of O/R names are specified in clause 8 of ISO/IEC ISP xxxxx-1 (i.e. a claim of support of the formal-name element means that at least the minimum requirements of ISO/IEC ISP xxxxx-1 with respect to the component elements of O/R names are met)

A.2 Optional functional groups

The following requirements are additional to those specified in A.1 if support of the functional group is claimed (there are no additional requirements for support of P2 information objects for support of any of the IPM optional functional groups except as specified in this clause).

A.2.1 IPM Manual Forwarding (FWD)

A.2.1.1 IPM body

Ref	Element	Profile	
		Orig.	Rec.
8	message	m	

A.2.2 IPM 84 Interworking (84IW)

A.2.2.1 IPM body

Ref	Element	Profile	
		Orig.	Rec.
1	ia5-text	m	

A.3 Additional information

A.3.1 IPM Element of Service support

The following table shall be completed to indicate (Y or 3), for each IPM Element of Service, whether the Element of Service is made available to the MHS user and, if so, how this is achieved.

The columns have the following meanings:

Service — the EoS can be made dynamically selectable by the MHS user (i.e., for invocation and/or notification, as appropriate) without requiring reconfiguration of the UA or other intervention in each instance (whether the semantics of the EoS are available at a human user interface, programmatic interface or by other means may be specified in the Comments column)

Auto — the EoS is automatically invoked/actioned by the UA without reference to the MHS user (whether selection is dynamically determined based on some other knowledge or criteria may be specified in the Comments column)

Config — the UA may be configured to select the EoS by the execution of some offline process

Other — any other means of using the EoS

Ref	Encoded Information Type	Service	Auto	Config	Comments/Other
1	Access Management				
2	Additional Physical Rendition				
3	Alternate Recipient Allowed				
4	Alternate Recipient Assignment				
5	Authorizing Users Indication				
6	Auto-forwarded Indication				
7	Basic Physical Rendition				
8	Blind Copy Recipient Indication				
9	Body Part Encryption Indication				
10	Content Confidentiality				
11	Content Integrity				
12	Content Type Indication				
13	Conversion Prohibition				
14	Conversion Prohibition in Case of Loss of Information				
15	Converted Indication				
16	Counter Collection				
17	Counter Collection with Advice				
18	Cross-referencing Indication				
19	Deferred Delivery				
20	Deferred Delivery Cancellation				
21	Delivery Notification				
22	Delivery Time Stamp Indication				
23	Delivery via Bureaufax Service				
24	Designation of Recipient by Directory Name				
25	Disclosure of Other Recipients				
26	DL Expansion History Indication				
27	DL Expansion Prohibited				
28	EMS (Express Mail Service)				
29	Expiry Date Indication				
30	Explicit Conversion				

31	Forwarded IP-message Indication				
32	Grade of Delivery Selection				
33	Hold for Delivery				
34	Implicit Conversion				
35	Importance Indication				
36	Incomplete Copy Indication				
37	IP-message Identification				
38	Language Indication				
39	Latest Delivery Designation				
40	Message Flow Confidentiality				
41	Message Identification				
42	Message Origin Authentication				
43	Message Security Labelling				
44	Message Sequence Integrity				
45	MS Register				
46	Multi-destination Delivery				
47	Multi-part Body				
48	Non-delivery Notification				
49	Non-receipt Notification Request Indication				
50	Non-repudiation of Delivery				
51	Non-repudiation of Origin				
52	Non-repudiation of Submission				
53	Obsoleting Indication				
54	Ordinary Mail				
55	Original Encoded Information Types Indication				
56	Originator Indication				
57	Originator Requested Alternate Recipient				
58	Physical Delivery Notification by MHS				
59	Physical Delivery Notification by PDS				
60	Physical Forwarding Allowed				
61	Physical Forwarding Prohibited				
62	Prevention of Non-delivery Notification				
63	Primary and Copy Recipients Indication				
64	Probe				
65	Probe Origin Authentication				
66	Proof of Delivery				
67	Proof of Submission				
68	Receipt Notification Request Indication				
69	Redirection Disallowed by Originator				
70	Redirection of Incoming Messages				
71	Registered Mail				
72	Registered Mail to Addressee in Person				
73	Reply Request Indication				
74	Replying IP-message Indication				
75	Report Origin Authentication				
76	Request for Forwarding Address				
77	Requested Preferred Delivery Method				
78	Restricted Delivery				
79	Return of Content				
80	Secure Access Management				
81	Sensitivity Indication				
82	Special Delivery				
83	Stored Message Alert				
84	Stored Message Auto-forward				
85	Stored Message Deletion				
86	Stored Message Fetching				

87	Stored Message Listing				
88	Stored Message Summary				
89	Subject Indication				
90	Submission Time Stamp Indication				
91	Typed Body				
92	Undeliverable Mail with Return of Physical Message				
93	Use of Distribution List				
94	User/UA Capabilities Registration				

A.3.2 Encoded information type conversion requests supported

The following table shall be completed if support of the IPM Conversion FG is claimed, to indicate (Y or 3) which encoded information type conversions the implementation can request (see clause 7.1 of ISO/IEC ISP xxxxx-1).

Ref	Encoded Information Type Conversion	Supported	Comments
1.1	ia5-text-to-teletex (0)		
1.2	ia5-text-to-g3-facsimile (8)		
1.3	ia5-text-to-g4-class-1 (9)		
1.4	ia5-text-to-videotex (10)		
1.5	teletex-to-ia5-text (11)		
1.6	teletex-to-g3-facsimile (12)		
1.7	teletex-to-g4-class-1 (13)		
1.8	teletex-to-videotex (14)		
1.9	videotex-to-ia5-text (16)		
1.10	videotex-to-teletex (17)		

A.3.3 Non-standard integer body part types supported

The following table shall be completed to indicate (Y or 3) which (if any) non-standard integer body part types the implementation is capable of originating and/or receiving.

Ref	Body Part Type	Orig.	Rec.	Comments
1	ODA (12)			
2	ISO6937Text (13)			
3	USA nationally-defined body part types (310)			
4	JIS-1 (440)			
5	other (specify)			

NOTE - Use of such non-standard body part types for messaging between 1988 UAs is deprecated. Any rules for accepting or rejecting submission of such body parts will be a local matter.

A.3.4 Extended body part types supported

The following table shall be completed to indicate (Y or 3) which (if any) specific extended body part types the implementation is capable of originating and/or receiving (in addition to those specified in A.1.3), and the object identifier value(s) supported in each case.

Ref	Extended Body Part Type	Orig.	Rec.	Object Identifier Value(s)
1				
2				
3				
4				
5				

It should be indicated below whether the implementation can be configured to allow other externally-defined body part types to be used, and how this is achieved.

A.3.5 General text body part repertoire support

The following table shall be completed to indicate (Y or 3) which specific character repertoires the implementation is capable of originating and/or receiving for support of the general-text body part type. It shall be stated in the Comments column how such capability is implemented.

NOTE - The table identifies some useful repertoire sets as proposed by the three regional workshops, but this should not be seen as a comprehensive list. Repertoire set {1,6} is considered to be the minimum support level. It is expected that the European and North American regional profiles will also require support of repertoire set {1,6,100}.

Ref	Repertoire set description	Repertoire identifier(s)	Orig.	Rec.	Comments
1	Basic (ISO 646)	{1,6}			
2	Basic-1 (ISO 8859-1)	{1,6,100}			
3	Basic + Chinese (1)	{1,6,58}			
4	Basic + Chinese (2)	{1,6,165}			
5	Basic + Japanese (1)	{1,6,13,87}			
6	Basic + Japanese (2)	{1,6,13,168}			
7	Basic + Korean	{1,6,149}			
8	Basic-1 + Greek (ISO 8859-7)	{1,6,100,126}			
9	Full Latin (1)	{1,6,100,154}			
10	Full Latin (2) (ISO 6937)	{1,6,156}			
11	Teletex Basic Latin (T.61)	{102,103,106,107}			
12	other (specify)				

Annex B

(normative)

Amendments and corrigenda

International Standards are subject to constant review and revision by the ISO/IEC Technical Committees concerned. The following amendments and corrigenda are approved by ISO/IEC JTC1 and are considered as normative references in this part of ISO/IEC ISP xxxxx.

NOTE - Corresponding corrigenda to the equivalent CCITT Recommendations are contained in the joint CCITT/ISO MHS Implementor's Guide.

MOTIS

ISO/IEC 10021-1/Cor.1:1991

ISO/IEC 10021-1/Cor.2:1991

ISO/IEC 10021-1/Cor.3:1992

ISO/IEC 10021-1/Cor.4:1992

ISO/IEC 10021-1/Cor.5:1992

ISO/IEC 10021-2/Cor.1:1991

ISO/IEC 10021-2/Cor.2:1991

ISO/IEC 10021-2/Cor.3:1992

ISO/IEC 10021-2/Cor.4:1992

ISO/IEC 10021-7/Cor.1:1991

ISO/IEC 10021-7/Cor.2:1991

ISO/IEC 10021-7/Cor.3:1992

ISO/IEC 10021-7/Cor.4:1992

ISO/IEC 10021-7/Cor.5:1992

TITLE: Information technology - International Standardized Profiles AMH2n - Message Handling Systems - Interpersonal Messaging - Part 3 : AMH22 - IPM Requirements for Message Transfer (P1)

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This document forms part of a draft multipart ISP for MHS covering Interpersonal Messaging requirements (AMH2), as identified in the Taxonomy for International Standardized Profiles (ISO/IEC TR 10000-2 : 1992).

This final pDISP version reflects resolution of all remaining outstanding issues at the 8th MHS ISP Special Group (MISG) meeting (Stockholm, September 22-24, 1993) and is intended for submission to ISO/IEC JTC1/SGFS. The content of this document is considered by the MHS expert groups of the three regional workshops as harmonized.

The technical content of this document has been derived wherever possible from the existing EWOS/ETSI and OIW regional profiles in this area. However, this document should not be considered as an internationally harmonized specification and differences between the content of this document and one or more regional profiles may exist.

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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 JTC1. In addition to developing International Standards, ISO/IEC JTC1 has created a Special Group on Functional Standardization for the elaboration of 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 set of functions.

Draft International Standardized Profiles 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.

International Standardized Profile ISO/IEC ISP xxxxx-3 was prepared with the collaboration of:

- Asia-Oceania Workshop (AOW)

- European Workshop for Open Systems (EWOS) [jointly with the European Telecommunications Standards Institute (ETSI)]

- OSE Implementors' Workshop (OIW)

ISO/IEC ISP xxxxx 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 - IPM Requirements for MTS Access (P3)*

- *Part 5 : AMH24 - IPM Requirements for Enhanced MS Access (P7)*

This part of ISO/IEC ISP xxxxx contains two annexes, A and B, which are normative.

Introduction

This part of International Standardized Profile ISO/IEC ISP xxxxx 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 most important rôles for an ISP is to serve as the basis for the development (by organizations other than ISO and IEC) of internationally recognized tests and test centres. 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 xxxxx was 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). This part of ISO/IEC ISP xxxxx is harmonized between these three Workshops and it has been ratified by the plenary assemblies of all three Workshops.

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

Part 3 : AMH22 - IPM Requirements for Message Transfer (P1)

1 Scope

1.1 General

This part of ISO/IEC ISP xxxxx covers message transfer between Message Transfer Agents (MTAs) in an Interpersonal Messaging (IPM) environment using the P1 Message Transfer Protocol (see also figure 1). These specifications form part of the Interpersonal Messaging application functions, as defined in the parts of ISO/IEC ISP xxxxx, and are based on the Common Messaging content type-independent specifications in ISO/IEC ISP 10611.

1.2 Position within the taxonomy

This part of ISO/IEC ISP xxxxx is the third part of a multipart ISP identified in ISO/IEC TR 10000-2 as “AMH2, Message Handling Systems - Interpersonal Messaging” (see also ISO/IEC TR 10000-1, 8.2 for the definition of multipart ISPs).

This part of ISO/IEC ISP xxxxx specifies the following profile:

AMH22 - IPM Requirements for Message Transfer (P1)

The AMH22 profile 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 two or more MTAs intercommunicating within a Message Transfer System (MTS) using the P1 protocol, as shown in figure 1.

Figure 1 - AMH22 scenario

The AMH22 profile covers all aspects of the MTA Abstract Service, as defined in clause 12 of ISO/IEC 10021-4, when realized using the P1 protocol in an IPM environment.

The OSI upper layer services and protocols to support the Message Handling Systems functions covered by the AMH22 profile are specified in the set of standards identified in table 1.

Table 1 - AMH22 profile model

Application Layer	MHS	ISO/IEC 10021-6
	RTSE	see ISO/IEC ISP 10611-2
	ACSE	see ISO/IEC ISP 10611-2
Presentation Layer		see ISO/IEC ISP 10611-2
Session Layer		see ISO/IEC ISP 10611-2

2 Normative references

The following documents contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC ISP xxxxx. At the time of publication, the editions indicated were valid. All documents are subject to revision, and parties to agreements based on this part of ISO/IEC ISP xxxxx 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 are listed in annex B.

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

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.*

ISO/IEC 10021-1: 1990, *Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 1: Service Overview. [see also CCITT Recommendation X.400(1988)]*

ISO/IEC 10021-2: 1990, *Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 2: Overall Architecture. [see also CCITT Recommendation X.402(1988)]*

ISO/IEC 10021-4: 1990, *Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 4: Message Transfer System: Abstract Service Definition and Procedures. [see also CCITT Recommendation X.411(1988)]*

ISO/IEC 10021-6: 1990, *Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 6: Protocol Specifications. [see also CCITT Recommendation X.419(1988)]*

ISO/IEC ISP 10611-2: ---[2], *Information technology - International Standardized Profiles - Message Handling Systems - Common Messaging - Part 2: Specification of ROSE, RTSE, ACSE, Presentation and Session Protocols for use by MHS.*

ISO/IEC ISP 10611-3: ---[1], *Information technology - International Standardized Profiles - Message Handling Systems - Common Messaging - Part 3: AMH11 - Message Transfer (P1).*

ISO/IEC ISP xxxxx-1: ---[1], *Information technology - International Standardized Profiles - Message Handling Systems -*

[2]To be published.

Interpersonal Messaging - Part 1: IPM MHS Service Support.

CCITT Recommendation X.400(1988)*, Message handling system and service overview.*

CCITT Recommendation X.402(1988)*, Message handling systems: Overall architecture.*

CCITT Recommendation X.411(1988)*, Message handling systems: Message transfer system: Abstract service definition and procedures.*

CCITT Recommendation X.419(1988)*, Message handling systems: Protocol specifications.*

MHS Implementors' Guide, Version 8, March 1992 (CCITT Special Rapporteur's Group on Message Handling Systems and ISO/IEC JTC1/SC18/WG4 SWG on Messaging).

3 Definitions

For the purposes of this part of ISO/IEC ISP xxxxx, the following definitions apply.

Terms used in this part of ISO/IEC ISP xxxxx 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 xxxxx).

3.2 Support classification

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

NOTE - No classifications are used in this part of ISO/IEC ISP xxxxx, as the requirements for support of arguments, results and other protocol features by an MTA are as specified in ISO/IEC 10611-3.

4 Abbreviations

AMH Application Message Handling
EoS Element of Service
FG Functional group
IPM Interpersonal Messaging
ISP International Standardized Profile
MHS Message Handling Systems

MS Message store
MT Message transfer
MTA Message transfer agent
MTS Message Transfer System
OSI Open Systems Interconnection
UA User agent

5 Conformance

This part of ISO/IEC ISP xxxxx states requirements upon implementations to achieve interworking. A claim of conformance to this part of ISO/IEC ISP xxxxx 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 of this part of ISO/IEC ISP xxxxx are satisfied.

5.1 Conformance statement

For each implementation claiming conformance to profile AMH22 as specified in this part of ISO/IEC ISP xxxxx, a PICS shall be made available stating support or non-support of each option identified in this part of ISO/IEC ISP xxxxx.

The scope of conformance to profile AMH22 is restricted to MTAs. A claim of conformance to profile AMH22 shall state whether the implementation supports profile AMH111 and/or profile AMH112 (jointly referenced as AMH11 in this part of ISO/IEC ISP xxxxx where a distinction is unnecessary) as specified in ISO/IEC ISP 10611-3.

5.2 MHS conformance

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

Implementations conforming to profile AMH22 as specified in this part of ISO/IEC ISP xxxxx shall as a minimum conform to the basic requirements of profile AMH11, as specified in ISO/IEC ISP 10611-3.

Implementations conforming to profile AMH22 as specified in this part of ISO/IEC ISP xxxxx shall additionally implement all the mandatory support (m) features identified as basic requirements in annex A. They shall also support corresponding MHS Elements of Service and associated procedures as specified in ISO/IEC ISP xxxxx-1, as appropriate to the scope of this profile.

Implementations conforming to profile AMH22 as specified in this part of ISO/IEC ISP xxxxx shall state whether or not they support any of the optional functional groups as specified in ISO/IEC ISP xxxxx-1 which are applicable to the scope of this profile. 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 A. They shall also support corresponding MHS Elements of Service and associated procedures as specified in ISO/IEC ISP xxxxx-1, as appropriate to the scope of this profile.

Implementations conforming to profile AMH22 as specified in this part of ISO/IEC ISP xxxxx shall state the P1 application context(s) for which conformance is claimed.

5.3 Underlying layers conformance

Implementations conforming to profile AMH22 as specified in this part of ISO/IEC ISP xxxxx shall also conform to ISO/IEC ISP 10611-2 in accordance with the P1 application context(s) for which conformance is claimed.

Annex A

(normative)

ISPICS Requirements List

for ISO/IEC ISP xxxxx-3 (AMH22)

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

This annex specifies the support constraints and characteristics of ISO/IEC ISP xxxxx-3 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 10611-3 (reference numbers correspond to items in that annex).

Clause A.1 specifies the basic requirements for conformance to profile AMH22. 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.

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 profile AMH22 is claimed should complete the Support column of the tables in annex A of ISO/IEC ISP 10611-3 in accordance with the requirements contained therein together with any additional requirements in this annex.

A.1 Basic requirements

No additional requirements.

A.2 Optional functional groups

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

A.2.1 IPM Security (SEC)

There are no additional requirements to those specified for the Common Messaging SEC FG in annex A.2.1 of ISO/IEC ISP 10611-3.

A.2.2 IPM Physical Delivery (PD)

There are no additional requirements to those specified for the Common Messaging PD FG in annex A.2.2 of ISO/IEC ISP 10611-3.

A.2.3 IPM Conversion (CV)

There are no additional requirements to those specified for the Common Messaging CV FG in annex A.2.3 of ISO/IEC ISP 10611-3.

A.2.4 IPM Redirection (CV)

There are no additional requirements to those specified for the Common Messaging RED FG in annex A.2.4 of ISO/IEC ISP 10611-3.

A.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 10611-3.

A.2.6 IPM Return of Contents (RoC)

There are no additional requirements to those specified for the Common Messaging RoC FG in annex A.2.6 of ISO/IEC ISP 10611-3.

A.2.7 IPM Distribution List (CV)

There are no additional requirements to those specified for the Common Messaging DL FG in annex A.2.7 of ISO/IEC ISP 10611-3.

A.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 10611-3.

Annex B

(normative)

Amendments and corrigenda

International Standards are subject to constant review and revision by the ISO/IEC Technical Committees concerned. The following amendments and corrigenda are approved by ISO/IEC JTC1 and are considered as normative references in this part of ISO/IEC ISP xxxxx.

NOTE - Corresponding corrigenda to the equivalent CCITT Recommendations are contained in the joint CCITT/ISO MHS Implementor's Guide.

MOTIS

ISO/IEC 10021-1/Cor.1:1991

ISO/IEC 10021-1/Cor.2:1991

ISO/IEC 10021-1/Cor.3:1992

ISO/IEC 10021-1/Cor.4:1992

ISO/IEC 10021-1/Cor.5:1992

ISO/IEC 10021-2/Cor.1:1991

ISO/IEC 10021-2/Cor.2:1991

ISO/IEC 10021-2/Cor.3:1992

ISO/IEC 10021-2/Cor.4:1992

ISO/IEC 10021-4/Cor.1:1991

ISO/IEC 10021-4/Cor.2:1991

ISO/IEC 10021-4/Cor.3:1992

ISO/IEC 10021-4/Cor.4:1992

ISO/IEC 10021-4/Cor.5:1992

ISO/IEC 10021-6/Cor.1:1991

ISO/IEC 10021-6/Cor.2:1991

ISO/IEC 10021-6/Cor.3:1992

ISO/IEC 10021-6/Cor.4:1992

ISO/IEC 10021-6/Cor.5:1992

TITLE: Information technology - International Standardized Profiles AMH2n - Message Handling Systems - Interpersonal Messaging - Part 4 : AMH23 - IPM Requirements for MTS Access (P3)

SOURCE: Project Editor (Jon Stranger, UK)

STATUS: Final pDISP text. Fifth version, 1993-9-24

This document forms part of a draft multipart ISP for MHS covering Interpersonal Messaging requirements (AMH2), as identified in the Taxonomy for International Standardized Profiles (ISO/IEC TR 10000-2 : 1992).

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Foreword

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ISO/IEC ISP xxxxx 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 - IPM Requirements for MTS Access (P3)*

- *Part 5 : AMH24 - IPM Requirements for Enhanced MS Access (P7)*

This part of ISO/IEC ISP xxxxx contains two annexes, A and B, which are normative.

Introduction

This part of International Standardized Profile ISO/IEC ISP xxxxx 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.

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

Part 4 : AMH23 - IPM Requirements for MTS Access (P3)

1 Scope

1.1 General

This part of ISO/IEC ISP xxxxx 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 xxxxx, and are based on the Common Messaging content type-independent specifications in ISO/IEC ISP 10611.

1.2 Position within the taxonomy

This part of ISO/IEC ISP xxxxx is the fourth part of a multipart ISP identified in ISO/IEC TR 10000-2 as “AMH2, Message Handling Systems - Interpersonal Messaging” (see also ISO/IEC TR 10000-1, 8.2 for the definition of multipart ISPs).

This part of ISO/IEC ISP xxxxx specifies the following profile:

AMH23 - IPM Requirements for MTS Access (P3)

The AMH23 profile 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.

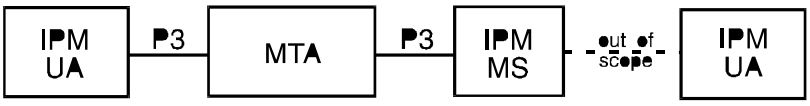

Figure 1 - AMH23 scenario

The AMH23 profile 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 profile are specified in the set of standards identified in table 1.

Table 1 - AMH23 profile model

Application Layer	MHS	ISO/IEC 10021-6
	ROSE	see ISO/IEC ISP 10611-2
	RTSE	see ISO/IEC ISP 10611-2
	ACSE	see ISO/IEC ISP 10611-2
Presentation Layer		see ISO/IEC ISP 10611-2
Session Layer		see ISO/IEC ISP 10611-2

2 Normative references

The following documents contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC ISP xxxxx. At the time of publication, the editions indicated were valid. All documents are subject to revision, and parties to agreements based on this part of ISO/IEC ISP xxxxx 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 are listed in annex B.

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

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.*

ISO/IEC 10021-1: 1990, *Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 1: Service Overview. [see also CCITT Recommendation X.400(1988)]*

ISO/IEC 10021-2: 1990, *Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 2: Overall Architecture. [see also CCITT Recommendation X.402(1988)]*

ISO/IEC 10021-4: 1990, *Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 4: Message Transfer System: Abstract Service Definition and Procedures. [see also CCITT Recommendation X.411(1988)]*

ISO/IEC 10021-6: 1990, *Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 6: Protocol Specifications. [see also CCITT Recommendation X.419(1988)]*

ISO/IEC ISP 10611-2: ---[3], *Information technology - International Standardized Profiles - Message Handling Systems - Common Messaging - Part 2: Specification of ROSE, RTSE, ACSE, Presentation and Session Protocols for use by MHS.*

ISO/IEC ISP 10611-4: ---[1], *Information technology - International Standardized Profiles - Message Handling Systems - Common Messaging - Part 4: AMH12 - MTS Access (P3).*

ISO/IEC ISP xxxxx-1: ---[2], *Information technology - International Standardized Profiles - Message Handling Systems -*

[3] To be published.

Interpersonal Messaging - Part 1: IPM MHS Service Support.

ISO/IEC ISP xxxxx-2: ---[4], *Information technology - International Standardized Profiles - Message Handling Systems - Interpersonal Messaging - Part 2: IPM Content.*

CCITT Recommendation X.400(1988), *Message handling system and service overview.*

CCITT Recommendation X.402(1988), *Message handling systems: Overall architecture.*

CCITT Recommendation X.411(1988), *Message handling systems: Message transfer system: Abstract service definition and procedures.*

CCITT Recommendation X.419(1988), *Message handling systems: Protocol specifications.*

MHS Implementors' Guide, Version 8, March 1992 (CCITT Special Rapporteur's Group on Message Handling Systems and ISO/IEC JTC1/SC18/WG4 SWG on Messaging).

3 Definitions

For the purposes of this part of ISO/IEC ISP xxxxx, the following definitions apply.

Terms used in this part of ISO/IEC ISP xxxxx 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 xxxxx).

3.2 Support classification

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

The following classifications are used in this part of ISO/IEC ISP xxxxx 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.

[4]To be published.

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
EoS Element of Service
FG Functional group
IPM Interpersonal Messaging
ISP International Standardized Profile
MHS Message Handling Systems
MS Message store
MT Message transfer
MTA Message transfer agent
MTS Message Transfer System
OSI Open Systems Interconnection
UA User agent

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

m mandatory support

5 Conformance

This part of ISO/IEC ISP xxxxx states requirements upon implementations to achieve interworking. A claim of conformance to this part of ISO/IEC ISP xxxxx 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 of this part of ISO/IEC ISP xxxxx are satisfied.

5.1 Conformance statement

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

The scope of conformance to profile AMH23 covers both MTAs and MTS-users. A claim of conformance to profile AMH23 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.

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 AMH23 as a UA shall confirm that the implementation supports profile AMH21

as specified in ISO/IEC ISP xxxxx-2.

5.2 MHS conformance

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

Implementations conforming to profile AMH23 as specified in this part of ISO/IEC ISP xxxxx shall as a minimum conform to the basic requirements of profile AMH12, as specified in ISO/IEC ISP 10611-4, as appropriate to the type of implementation (i.e., MTA or MTS-user) for which conformance is claimed.

Implementations conforming to profile AMH23 as specified in this part of ISO/IEC ISP xxxxx shall additionally implement all the mandatory support (m) features identified as basic requirements in annex A. They shall also support corresponding MHS Elements of Service and associated procedures as specified in ISO/IEC ISP xxxxx-1, as appropriate to the scope of this profile.

Implementations conforming to profile AMH23 as specified in this part of ISO/IEC ISP xxxxx shall state whether or not they support any of the optional functional groups as specified in ISO/IEC ISP xxxxx-1 which are applicable to the scope of this profile. 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 A. They shall also support corresponding MHS Elements of Service and associated procedures as specified in ISO/IEC ISP xxxxx-1, as appropriate to the scope of this profile.

Implementations conforming to profile AMH23 as specified in this part of ISO/IEC ISP xxxxx shall state the P3 application context(s) for which conformance is claimed.

5.3 Underlying layers conformance

Implementations conforming to profile AMH23 as specified in this part of ISO/IEC ISP xxxxx shall also conform to ISO/IEC ISP 10611-2 in accordance with the P3 application context(s) for which conformance is claimed.

Annex A

(normative)

ISPICS Requirements List

for ISO/IEC ISP xxxxx-4 (AMH23)

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

This annex specifies the support constraints and characteristics of ISO/IEC ISP xxxxx-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 10611-4 (reference numbers correspond to items in that annex).

NOTE - 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 A.1 specifies the basic requirements for conformance to profile AMH23. 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.

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 profile AMH23 is claimed should complete the Support column of the tables in annex A of ISO/IEC ISP 10611-4 in accordance with the requirements contained therein together with any additional requirements in this annex in the case of an MTS-user implementation.

A.1 Basic requirements

A.1.1 Supported application contexts

No additional requirements.

A.1.2 Supported operations

A.1.2.2 Message Submission Service Element (MSSE)

Ref	Operation	Profile
3	CancelDeferredDelivery	m

A.1.3 Operation arguments/results

No additional requirements.

A.1.4 MessageSubmissionEnvelope

Ref	Element	Profile
7	deferred-delivery-time	m

A.1.5 ProbeSubmissionEnvelope

No additional requirements.

A.1.6 MessageDeliveryEnvelope

Ref	Element	Profile
3.12.19	dl-expansion-history	m

A.1.7 ReportDeliveryEnvelope

No additional requirements.

A.1.8 Common data types

No additional requirements.

A.1.9 Extension data types

No additional requirements.

A.1.10 O/R names

Ref	O/R Name Form	Profile
2	numeric O/R address	m
3	terminal O/R address	m

A.2 Optional functional groups

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

A.2.1 IPM Security (SEC)

There are no additional requirements to those specified for the Common Messaging SEC FG in annex A.2.1 of ISO/IEC ISP 10611-4.

A.2.2 IPM Physical Delivery (PD)

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

A.2.3 IPM Conversion (CV)

A.2.3.1 MessageSubmissionEnvelope

Ref	Element	Profile
8.3	conversion-with-loss-prohibited	m
9.3	explicit-conversion	m

A.2.3.2 ProbeSubmissionEnvelope

Ref	Element	Profile
7.3	conversion-with-loss-prohibited	m
8.3	explicit-conversion	m

A.2.4 IPM Redirection (RED)

A.2.4.1 MessageSubmissionEnvelope

Ref	Element	Profile
9.4.1	originator-requested-alternate-recipient	m

A.2.4.2 ProbeSubmissionEnvelope

Ref	Element	Profile
8.4.1	originator-requested-alternate-recipient	m

A.2.4.3 MessageDeliveryEnvelope

Ref	Element	Profile
3.12.18	redirection-history	m

A.2.4.4 ReportDeliveryEnvelope

Ref	Element	Profile
6.7.1	redirection-history	m

A.2.4.5 Common data types

Ref	Element	Profile
5.3	alternate-recipient-allowed	m

A.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.

A.2.6 IPM Return of Contents (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.

A.2.7 IPM Use of Directory (DIR)

There are no additional requirements to those specified for the Common Messaging DIR FG in annex A.2.7 of ISO/IEC ISP 10611-4.

Annex B

(normative)

Amendments and corrigenda

International Standards are subject to constant review and revision by the ISO/IEC Technical Committees concerned. The following amendments and corrigenda are approved by ISO/IEC JTC1 and are considered as normative references in this part of ISO/IEC ISP xxxxx.

NOTE - Corresponding corrigenda to the equivalent CCITT Recommendations are contained in the joint CCITT/ISO MHS Implementor's Guide.

MOTIS

ISO/IEC 10021-1/Cor.1:1991

ISO/IEC 10021-1/Cor.2:1991

ISO/IEC 10021-1/Cor.3:1992

ISO/IEC 10021-1/Cor.4:1992

ISO/IEC 10021-1/Cor.5:1992

ISO/IEC 10021-2/Cor.1:1991

ISO/IEC 10021-2/Cor.2:1991

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ISO/IEC 10021-4/Cor.1:1991

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TITLE: Information technology - International Standardized Profiles AMH2n - Message Handling Systems - Interpersonal Messaging - Part 5 : AMH24 - IPM Requirements for Enhanced MS Access (P7)

SOURCE: Project Editor (Jon Stranger, UK)

STATUS: Final pDISP text. Fifth version, 1993-9-24

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

Part 5 : AMH24 - IPM Requirements for Enhanced MS Access (P7)

1 Scope

1.1 General

This part of ISO/IEC ISP xxxxx covers access to a message store (MS) in an Interpersonal Messaging (IPM) environment using the P7 MS 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 xxxxx, and are based on the Common Messaging content type-independent specifications in ISO/IEC ISP 10611.

The type of MS access specified in this part of ISO/IEC ISP xxxxx allows an IPM user agent (UA) to interact with an MS in a full and flexible manner without having to retrieve complete messages. Minimal attribute support for MS access in an IPM environment can be specified by claiming conformance to profile AMH13 with an additional claim of support of IPM MS attributes (see clause A.3.1 of ISO/IEC ISP 10611-5).

[**Editor's Note** : It is proposed to amend clause A.3.1 of ISO/IEC ISP 10611-5 (Content types supported) to allow support of MS attributes also to be claimed if support of the content type on retrieval is claimed. A claim of support of MS attributes in this context will mean that any mandatory requirements in the relevant content type-specific base standards for support of MS attributes are met.]

1.2 Position within the taxonomy

This part of ISO/IEC ISP xxxxx is the fifth part of a multipart ISP identified in ISO/IEC TR 10000-2 as "AMH2, Message Handling Systems - Interpersonal Messaging" (see also ISO/IEC TR 10000-1, 8.2 for the definition of multipart ISPs).

This part of ISO/IEC ISP xxxxx specifies the following profile:

AMH24 - IPM Requirements for Enhanced MS Access (P7)

The AMH24 profile 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 a IPM message store (MS) by an IPM MS-user - specifically, the intercommunication between an IPM MS and an IPM MS-user (i.e., an IPM user agent) using the P7 protocol, as shown in figure 1.

The AMH24 profile covers all aspects of the MS Abstract Service, as defined in ISO/IEC 10021-5, when realized using the P7 protocol in an IPM environment.

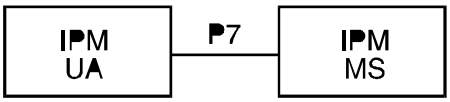

Figure 1 - AMH24 scenario

The OSI upper layer services and protocols to support the Message Handling Systems functions covered by the AMH24 profile are specified in the set of standards identified in table 1.

Table 1 - AMH24 profile model

Application Layer	MHS	ISO/IEC 10021-6
	ROSE	see ISO/IEC ISP 10611-2
	RTSE	see ISO/IEC ISP 10611-2
	ACSE	see ISO/IEC ISP 10611-2
Presentation Layer		see ISO/IEC ISP 10611-2
Session Layer		see ISO/IEC ISP 10611-2

2 Normative references

The following documents contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC ISP xxxxx. At the time of publication, the editions indicated were valid. All documents are subject to revision, and parties to agreements based on this part of ISO/IEC ISP xxxxx 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 are listed in annex B.

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

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.*

ISO/IEC 10021-1: 1990*, Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 1: Service Overview. [see also CCITT Recommendation X.400(1988)]*

ISO/IEC 10021-2: 1990*, Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 2: Overall Architecture. [see also CCITT Recommendation X.402(1988)]*

ISO/IEC 10021-5: 1990*, Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 5: Message Store: Abstract Service Definition. [see also CCITT Recommendation X.413(1988)]*

ISO/IEC 10021-6: 1990*, Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 6:*

Protocol Specifications. [see also CCITT Recommendation X.419(1988)]

ISO/IEC ISP 10611-2: ---[5], *Information technology - International Standardized Profiles - Message Handling Systems - Common Messaging - Part 2: Specification of ROSE, RTSE, ACSE, Presentation and Session Protocols for use by MHS.*

ISO/IEC ISP 10611-5: ---[1], *Information technology - International Standardized Profiles - Message Handling Systems - Common Messaging - Part 5: AMH13 - MS Access (P7).*

ISO/IEC ISP xxxxx-1: ---[1], *Information technology - International Standardized Profiles - Message Handling Systems - Interpersonal Messaging - Part 1: IPM MHS Service Support.*

ISO/IEC ISP xxxxx-2: ---[1], *Information technology - International Standardized Profiles - Message Handling Systems - Interpersonal Messaging - Part 2: IPM Content.*

CCITT Recommendation X.400(1988), *Message handling system and service overview.*

CCITT Recommendation X.402(1988), *Message handling systems: Overall architecture.*

CCITT Recommendation X.413(1988), *Message handling systems: Message store: Abstract service definition.*

CCITT Recommendation X.419(1988), *Message handling systems: Protocol specifications.*

MHS Implementors' Guide, Version 8, March 1992 (CCITT Special Rapporteur's Group on Message Handling Systems and ISO/IEC JTC1/SC18/WG4 SWG on Messaging).

3 Definitions

For the purposes of this part of ISO/IEC ISP xxxxx, the following definitions apply.

Terms used in this part of ISO/IEC ISP xxxxx 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 xxxxx).

[5]To be published.

3.2 Support classification

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

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

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 fully 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. Mandatory support of an MS attribute requires that it is supported in the context of all applicable supported operation arguments and results and also for use within a selector to the level of support claimed for the filter item. The way in which attribute values are stored by an MS implementation, or used by a UA implementation, is otherwise a local matter.

optional support (**o**) : an implementation is not required to support the element or feature. If support is claimed, the element shall be treated as if it were specified as mandatory support. If support is not claimed, and the element is an argument, then an implementation shall generate an appropriate error if the element is received. If support is not claimed, and the element is a result, then an implementation may ignore the element if it is received.

4 Abbreviations

AMH	Application Message Handling
EoS	Element of Service
FG	Functional group
IPM	Interpersonal Messaging
ISP	International Standardized Profile
MHS	Message Handling Systems
MS	Message store
MT	Message transfer
MTA	Message transfer agent
MTS	Message Transfer System
OSI	Open Systems Interconnection
UA	User agent

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

m	mandatory support
o	optional support

5 Conformance

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

5.1 Conformance statement

For each implementation claiming conformance to profile AMH24 as specified in this part of ISO/IEC ISP xxxxx, a PICS shall be made available stating support or non-support of each option identified in this part of ISO/IEC ISP xxxxx.

The scope of conformance to profile AMH24 covers both MSs and MS-users (i.e., UAs). A claim of conformance to profile AMH24 shall confirm that the implementation supports profile AMH13 as specified in ISO/IEC ISP 10611-5 and shall state whether the implementation claims conformance as an MS or as an MS-user.

A claim of conformance to profile AMH24 as an MS-user shall confirm that the implementation supports profile AMH21 as specified in ISO/IEC ISP xxxxx-2.

5.2 MHS conformance

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

Implementations conforming to profile AMH24 as specified in this part of ISO/IEC ISP xxxxx shall as a minimum conform to the basic requirements of profile AMH13, as specified in ISO/IEC ISP 10611-5.

Implementations conforming to profile AMH24 as specified in this part of ISO/IEC ISP xxxxx shall additionally implement all the mandatory support (m) features identified as basic requirements in annex B. They shall also support corresponding MHS Elements of Service and associated procedures as specified in ISO/IEC ISP xxxxx-1, as appropriate to the scope of this profile and to the role (i.e., MS or MS-user) for which conformance is claimed.

Implementations conforming to profile AMH24 as specified in this part of ISO/IEC ISP xxxxx shall state whether or not they support any of the optional functional groups as specified in ISO/IEC ISP xxxxx-1 which are applicable to the scope of this profile and to the role (i.e., MS or MS-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. They shall also support corresponding MHS Elements of Service and associated procedures as specified in ISO/IEC ISP xxxxx-1, as appropriate to the scope of this profile and to the role (i.e., MS or MS-user) for which conformance is claimed.

Implementations conforming to profile AMH24 as specified in this part of ISO/IEC ISP xxxxx shall state the P7 application context(s) for which conformance is claimed.

5.3 Underlying layers conformance

Implementations conforming to profile AMH24 as specified in this part of ISO/IEC ISP xxxxx shall also conform to ISO/IEC ISP 10611-2 in accordance with the P7 application context(s) for which conformance is claimed.

Annex A[1]

(normative)

P7 ISPICS Proforma

(supplementary)

The tables contained in this annex shall be completed and appended to a P7 PICS based on the proforma as contained in annex A of ISO/IEC ISP 10611-5.

AutoForwardRegistration Parameter

The following elements are additional to those specified in annex A.1.6 of ISO/IEC ISP 10611-5.

Ref	Element	UA Base	MS Base	Support	Notes/References
4	other-parameters				
4.1	auto-forwarding-comment	o	o		
4.2	cover-note	o	o		
4.3	this-ipm-prefix	o	o		

IPM-specific attributes

Ref	Attribute	UA Base	MS Base	Support	Notes/References
1	acknowledgment-mode	o	o		
2	authorizing-users	o	o		
3	auto-forward-comment	o	o		
4	auto-forwarded	o	o		
5	bilaterally-defined-body-parts	o	o		
6	blind-copy-recipients	o	o		
7	body	m	m		
8	conversion-eits	o	o		

[1]**Copyright 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.

9	copy-recipients	o	o		
10	discard-reason	o	o		
11	encrypted-body-parts	o	o		
12	encrypted-data	o	o		
13	encrypted-parameters	o	o		
14	expiry-time	o	o		
15	extended-body-part-types	o	o		
16	g3-facsimile-body-parts	o	o		
17	g3-facsimile-data	o	o		
18	g3-facsimile-parameters	o	o		
19	g4-class1-body-parts	o	o		
20	heading	m	m		
21	ia5-text-body-parts	o	o		
22	ia5-text-data	o	o		
23	ia5-text-parameters	o	o		
24	importance	o	o		
25	incomplete-copy	o	o		
26	ipm-entry-type	m	m		
27	ipm-preferred-recipient	o	o		
28	ipm-synopsis	o	o		
29	ipn-originator	o	o		
30	languages	o	o		
31	message-body-parts	o	o		
32	message-data	o	o		
33	message-parameters	o	o		
34	mixed-mode-body-parts	o	o		
35	nationally-defined-body-parts	o	o		
36	non-receipt-reason	o	o		
37	nrn-requestors	o	o		

38	obsoleted-ipms	o	o		
39	originator	o	o		
40	primary-recipients	o	o		
41	receipt-time	o	o		
42	related-ipms	o	o		
43	replied-to-ipm	o	o		
44	reply-recipients	o	o		
45	reply-requestors	o	o		
46	reply-time	o	o		
47	returned-ipm	o	o		
48	rn-requestors	o	o		
49	sensitivity	o	o		
50	subject	o	o		
51	subject-ipm	m	m		
52	suppl-receipt-info	o	o		
53	teletex-body-parts	o	o		
54	teletex-data	o	o		
55	teletex-parameters	o	o		
56	this-ipm	m	m		
57	videotex-body-parts	o	o		
58	videotex-data	o	o		
59	videotex-parameters	o	o		
60	voice-body-parts	o	o		
61	voice-data	o	o		
62	voice-parameters	o	o		

Annex B

(normative)

ISPICS Requirements List

for ISO/IEC ISP xxxxx-5 (AMH24)

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

This annex specifies the support constraints and characteristics of ISO/IEC ISP xxxxx-5 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 10611-5 (reference numbers correspond to items in that annex) and in annex A of this part of ISO/IEC ISP xxxxx.

Clause B.1 specifies the basic requirements for conformance to profile AMH24. 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 profile AMH24 is claimed should complete the Support column of the tables in annex A of ISO/IEC ISP 10611-5 and in annex A of this part of ISO/IEC ISP xxxxx in accordance with the requirements contained therein together with any additional requirements in this annex for the type of implementation (i.e., MS or MS-user) in question.

B.1 Basic requirements

B.1.1 Supported application contexts

No additional requirements.

B.1.2 Supported operations

B.1.2.2 Message Submission Service Element (MSSE)

Ref	Operation	Profile	
		UA	MS
1	Summarize	m	m
2	List	m	m

B.1.3 Operation arguments/results

No additional requirements.

B.1.4 MessageSubmissionEnvelope

No additional requirements.

B.1.5 ProbeSubmissionEnvelope

No additional requirements.

B.1.6 AutoForwardRegistrationParameter

Ref	Element	Profile	
		UA	MS
4	other-parameters		c1
4.1	auto-forwarding-comment		m
4.2	cover-note		m
4.3	this-ipm-prefix		m

c1 - if the MS supports autoforwarding then m else o

B.1.7 AutoAlertRegistrationParameter

No additional requirements.

B.1.8 Common data types

No additional requirements.

B.1.9 Extension data types

No additional requirements.

B.1.10 O/R names

Ref	O/R Name Form	UA	MS
2	numeric O/R address	m	
3	terminal O/R address	m	

B.1.11 General attributes

Ref	Attribute	UA	MS
4	content-correlator		m
5	content-identifier		m
8	content-returned		m
10	conversion-with-loss-prohibited		m
11	converted-eits		m
14	delivery-flags		m
15	dl-expansion-history		m
18	intended-recipient-name		m
20	message-delivery-identifier		m
21	message-delivery-time		m
24	message-submission-time		m
26	original-eits		m
29	other-recipient-names		m
34	redirection-history		m
36	reporting-dl-name		m
42	this-recipient-name		m

[**Editor's Note** : It is intended to amend clause A.1.11 of ISO/IEC ISP 10611-5 to make support of the originator-name attribute (28) mandatory and such a change has also been proposed to the base standard.]

B.1.12 IPM-specific attributes

Ref	Attribute	Profile	
		UA	MS
1	acknowledgment-mode		m
2	authorizing-users		m
3	auto-forward-comment		m
4	auto-forwarded		m
6	blind-copy-recipients		m
8	conversion-eits		m
9	copy-recipients		m
10	discard-reason		m
14	expiry-time		m
15	extended-body-part-types		m
21	ia5-text-body-parts		m
24	importance		m
27	ipm-preferred-recipient		m
28	ipm-synopsis		m
29	ipn-originator		m
30	languages		m
31	message-body-parts		m
36	non-receipt-reason		m
37	nrn-requestors		m
38	obsoleted-ipms		m
39	originator		m
40	primary-recipients		m
41	receipt-time		m
42	related-ipms		m
43	replied-to-ipm		m
44	reply-recipients		m

45	reply-requestors		m
46	reply-time		m
48	rn-requestors		m
49	sensitivity		m
50	subject		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 Security (SEC)

There are no additional requirements to those specified for the Common Messaging SEC FG in annex A.2.1 of ISO/IEC ISP 10611-5.

B.2.2 IPM Physical Delivery (PD)

There are no additional requirements to those specified for the Common Messaging PD FG in annex A.2.2 of ISO/IEC ISP 10611-5.

B.2.3 IPM Conversion (CV)

B.2.3.1 MessageSubmissionEnvelope

Ref	Element	Profile	
		UA	MS
8.3	conversion-with-loss-prohibited	m	
9.3	explicit-conversion	m	

B.2.3.2 ProbeSubmissionEnvelope

Ref	Element	Profile	
		UA	MS
7.3	conversion-with-loss-prohibited	m	
8.3	explicit-conversion	m	

B.2.4 IPM Redirection (RED)

B.2.4.1 MessageSubmissionEnvelope

Ref	Element	Profile	
		UA	MS
9.4.1	originator-requested-alternate-recipient	m	

B.2.4.2 ProbeSubmissionEnvelope

Ref	Element	Profile	
		UA	MS
8.4.1	originator-requested-alternate-recipient	m	

B.2.4.3 Common data types

Ref	Element	Profile	
		UA	MS
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.2.3 of ISO/IEC ISP 10611-5.

B.2.6 IPM Return of Contents (RoC)

There are no additional requirements to those specified for the Common Messaging RoC FG in annex A.2.4 of ISO/IEC ISP 10611-5.

B.2.7 IPM Use of Directory (DIR)

There are no additional requirements to those specified for the Common Messaging DIR FG in annex A.2.5 of ISO/IEC ISP 10611-5.

Annex C

(normative)

Amendments and corrigenda

International Standards are subject to constant review and revision by the ISO/IEC Technical Committees concerned. The following amendments and corrigenda are approved by ISO/IEC JTC1 and are considered as normative references in this part of ISO/IEC ISP xxxxx.

NOTE - Corresponding corrigenda to the equivalent CCITT Recommendations are contained in the joint CCITT/ISO MHS Implementor's Guide.

MOTIS

ISO/IEC 10021-1/Cor.1:1991

ISO/IEC 10021-1/Cor.2:1991

ISO/IEC 10021-1/Cor.3:1992

ISO/IEC 10021-1/Cor.4:1992

ISO/IEC 10021-1/Cor.5:1992

ISO/IEC 10021-2/Cor.1:1991

ISO/IEC 10021-2/Cor.2:1991

ISO/IEC 10021-2/Cor.3:1992

ISO/IEC 10021-2/Cor.4:1992

ISO/IEC 10021-4/Cor.1:1991

ISO/IEC 10021-4/Cor.2:1991

ISO/IEC 10021-4/Cor.3:1992

ISO/IEC 10021-4/Cor.4:1992

ISO/IEC 10021-4/Cor.5:1992

ISO/IEC 10021-5/Cor.1:1991

ISO/IEC 10021-5/Cor.2:1991

ISO/IEC 10021-5/Cor.3:1992

ISO/IEC 10021-6/Cor.1:1991

ISO/IEC 10021-6/Cor.2:1991

ISO/IEC 10021-6/Cor.3:1992

ISO/IEC 10021-6/Cor.4:1992

ISO/IEC 10021-6/Cor.5:1992

ISO/IEC 10021-5/Cor.4:1992

ISO/IEC 10021-5/Cor.5:1992