
**Information technology — Text Communication
— Message-Oriented Text Interchange Systems
(MOTIS) —**

**Part 7:
Interpersonal Messaging System
(standards.iteh.ai)**

*Technologies de l'information — Communication de texte — Systèmes d'échange
de texte en mode message —*
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Partie 7. Système de messagerie de personne à personne



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Foreword

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

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

International Standard ISO/IEC 10021-7 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*.

ISO/IEC 10021-7 consists of the following parts, under the general title: *Information technology — Text Communication — Message-Oriented Text Interchange Systems (MOTIS)* —

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- *Part 1: System and Service Overview*
- *Part 2: Overall Architecture*
- *Part 3: Abstract Service Definition Conventions*
- *Part 4: Message Transfer System: Abstract Service Definition and Procedures*
- *Part 5: Message Store: Abstract Service Definition*
- *Part 6: Protocol Specifications*
- *Part 7: Interpersonal Messaging System*

Annexes A, B, C, D, E, F, G, H, I, J and L form an integral part of this part of ISO/IEC 10021. Annexes K, M, N and O are for information only.

Introduction

This part of ISO/IEC 10021 is one of a number of parts of ISO/IEC 10021 (the International Standards for Message-Oriented Text Interchange Systems (MOTIS)). ISO/IEC 10021 provides a comprehensive blueprint for a Message Handling System (MHS) realized by any number of cooperating open systems.

The purpose of an MHS is to enable users to exchange messages on a store-and-forward basis. A message submitted on behalf of one user, the originator, is conveyed by the Message Transfer System (MTS) and subsequently delivered to the agents of one or more additional users, the recipients. Access units (AUs) link the MTS to communication systems of other kinds (e.g., postal systems). A user is assisted in the preparation, storage, and display of messages by a user agent (UA). Optionally, it is assisted in the storage of messages by a message store (MS). The MTS comprises a number of message transfer agents (MTAs) which collectively perform the store-and-forward message transfer function.

This part of ISO/IEC 10021 defines the Message Handling application called *Interpersonal Messaging*, specifying in the process the message content type and associated procedures known as *P2*.

The text of this part of ISO/IEC 10021 is the subject of joint CCITT-ISO agreement. The corresponding CCITT specification is Recommendation X.420.

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Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 7 : Interpersonal Messaging System

Section one - Introduction

1 Scope

This part of ISO/IEC 10021 defines **Interpersonal Messaging**, a form of Message Handling tailored for ordinary interpersonal business or private correspondence.

This part of ISO/IEC 10021 is one of a series on Message Handling. ISO/IEC 10021-2 constitutes the introduction to the series and identifies the other documents in it.

The architectural basis and foundation for Message Handling are defined in still other International Standards. ISO/IEC 10021-2 identifies those documents as well.

This part of ISO/IEC 10021 is structured as follows. Section one is this introduction. Section two defines the kinds of information objects exchanged in Interpersonal Messaging. Section three defines the associated abstract service. Section four specifies how it is provided. Annexes provide important supplemental information.

The requirements for conformance to this part of ISO/IEC 10021 are given in clause 22.

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2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC 10021. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO/IEC 10021 are encouraged to investigate the possibility of applying the most recent editions of the standards listed below. Members of ISO and IEC maintain registers of currently valid International Standards.

2.1 Open Systems Interconnection

This part of ISO/IEC 10021 cites the following OSI specification:

- ISO 8824:1990, *Information processing systems - Open Systems Interconnection - Specification of Abstract Syntax Notation One (ASN.1).*
- ISO 8825:1990, *Information processing systems - Open Systems Interconnection - Specification of Basic Encoding Rules for Abstract Syntax Notation One (ASN.1).*

2.2 Message Handling Systems

This part of ISO/IEC 10021 cites the following Message Handling System specifications:

- ISO/IEC 10021:1990, *Information technology - Text communication - Message-Oriented Text Interchange Systems (MOTIS) -
Part 1: Service and system overview.*

Part 2: Overall architecture.

Part 3: Abstract service definition conventions.

Part 4: Message transfer system : Abstract service definition and procedures.

Part 5: Message store : Abstract service definition.

Part 6: Protocol specifications.

CCITT X.408:1988 *Message handling systems: Encoded information type conversion rules.*

CCITT X.420:1984 *Message handling systems: Interpersonal messaging user agent layer.*

2.3 Directory Systems

This part of ISO/IEC 10021 cites the following Directory System specification:

ISO/IEC 9594-2:1990, *Information technology - Open Systems Interconnection - The Directory - Part 2: Models.*

2.4 Language Code

This part of ISO/IEC 10021 cites the following Language Code specification:

ISO 639:1988, *Code for the representation of names of languages.*

2.5 Character Sets

[ISO/IEC 10021-7:1990](https://standards.iteh.ai/catalog/standards/sist/f842790d-55b9-4db6-8a63-10021-7-1990)

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This part of ISO/IEC 10021 cites the following Character Set specifications:

ISO 2375:1985, *Data processing - Procedure for registration of escape sequences.*

ISO 8859-1:1987, *Information processing - 8-bit single-byte coded graphic character sets - Part 1: Latin alphabet No. 1.*

2.6 Telematic Services

This part of ISO/IEC 10021 cites the following Telematic Service specifications:

CCITT T.4:1988, *Standardization of group 3 facsimile apparatus for document transmission.*

CCITT T.30:1988, *Procedures for document facsimile transmission in the general switched telephone network.*

CCITT T.100:1988, *International information exchange for interactive videotex.*

CCITT T.101:1988, *International interworking for videotex services.*

CCITT T.330:1988, *Telematic access to IPMS.*

3 Definitions

For the purposes of this part of ISO/IEC 10021, the definitions given in ISO/IEC 10021-2 apply.

4 Abbreviations

For the purposes of this part of ISO/IEC 10021, the abbreviations given in ISO/IEC 10021-2 apply.

5 Conventions

This part of ISO/IEC 10021 uses the descriptive conventions identified below.

5.1 ASN.1

This part of ISO/IEC 10021 uses for the indicated purposes the following ASN.1-based descriptive conventions:

- a) To define the information objects of Interpersonal Messaging, and other data types and values of all kinds, ASN.1 itself.
- b) To define the functional objects of Interpersonal Messaging, the OBJECT and REFINE macros of ISO/IEC 10021-3.
- c) To define the abstract service of Interpersonal Messaging, the PORT and ABSTRACT-OPERATION and -ERROR macros of ISO/IEC 10021-3.
- d) To define the *heading extensions*, the HEADING-EXTENSION macro of clause 7.2.17.
- e) To define *extended body part types*, the EXTENDED-BODY-PART-TYPE macro of clause 7.3.12.
- f) To define MS attributes, the ATTRIBUTE macro of ISO/IEC 9594-2.

The various uses of the ASN.1 notation are summarized in Table 1. With the two exceptions evident from the table, whenever ASN.1 is employed, it appears both in the body of this part of ISO/IEC 10021 to aid the exposition, and again, largely redundantly, in an annex for reference.

Table 1
Uses of the ASN.1 Notation

| Subject Matter | Exposition | Reference |
|------------------------------|--------------------|-----------|
| Object Identifiers | - | annex D |
| Abstract information objects | section two | annex E |
| Functional objects | clauses 10, 11, 16 | annex F |
| Abstract service | clauses 12-13 | annex G |
| Heading extensions | annex A | annex H |
| Extended body part types | annex B | annex I |
| Message store attributes | annex C | annex J |
| Upper bounds | - | annex K |

If differences are found between the ASN.1 used in the exposition and that supplied for reference, a specification error is indicated.

ASN.1 tags are implicit throughout the ASN.1 module the annex defines; the module is definitive in that respect.

NOTES

1. The use of ASN.1 to describe a class or piece of information does not in itself imply that that information is transported between open systems. The fact that the information, by virtue of its description in ASN.1 and of ASN.1's Basic Encoding Rules, has a concrete transfer syntax may be immaterial. Information actually conveyed between systems is designated as such by its inclusion in an application protocol.

2. The use of the **ABSTRACT-OPERATION** and **-ERROR** macros, derived from the correspondingly named macros of Remote Operations, does not imply that the abstract operations and errors are invoked and reported across the boundary between open systems. The fact that the abstract operations and errors, by virtue of their description using these macros and with minimal additional specification, actually could be invoked via ROS is immaterial in the present context.

5.2 Grade

This part of ISO/IEC 10021 uses the concept of grade as developed in ISO/IEC 10021-2.

5.3 Terms

Throughout this part of ISO/IEC 10021, terms are rendered in **bold** when defined, in *italic* when referenced prior to their definitions, without emphasis upon all other occasions.

Terms that are proper nouns are capitalized, generic terms are not.

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Section two - Abstract Information Objects

6 Overview

This section abstractly describes the information objects that users exchange in Interpersonal Messaging. They are of two kinds, *interpersonal messages (IPMs)* and *interpersonal notifications (IPNs)*. One of the latter acknowledges a user's receipt of one of the former.

```
InformationObject ::= CHOICE {
    ipm [0] IPM,
    ipn [1] IPN}
```

This section covers the following topics:

- a) Interpersonal messages;
- b) Interpersonal notifications.

NOTES

1. The use, throughout this section, of words such as "originator" and "recipient" anticipates the fact that *IPMs* and *IPNs* are conveyed between users as the contents of messages (see clause 20). These words, therefore, refer to the roles users and DLs play in such transmittals.

2. An *IPM* may appear (see clause 7.3.8) in the *Body* of another *IPM* which itself is conveyed as the content of a message. The words "originator" and "recipient" shall be understood in the context of an *IPM*'s conveyance as the (entire) content of a message, not as a component of the *Body* of another *IPM* so conveyed.

3. An *IPM* or *IPN* makes various assertions about its own transmittal (e.g., who originates the message containing it). Furthermore, an *IPN* makes assertions about the transmittal of the *IPM* to which it responds. All of these assertions are unverified.

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7 Interpersonal Messages

An **interpersonal message (IPM)** is a member of the primary class of information object conveyed between users in Interpersonal Messaging.

```
IPM ::= SEQUENCE {
    heading Heading,
    body Body}
```

It has the following components:

- a) **Heading:** A Set of **heading fields** (or **fields**), each an information item that gives a characteristic of the IPM (e.g., its importance).
- b) **Body:** A Sequence of **body parts**, each an information object that the IPM is intended to convey between users (e.g., a document).

```
Body ::= SEQUENCE OF BodyPart
```

The structure of an IPM is depicted in Figure 1.