

Private Message Handling System: User Agent and Message Transfer Agent: Private Management Domain to Private Management Domain

Cooperating organizations

The European Committee for Standardization, under whose supervision this European Standard was prepared, comprises the national standards organizations of the following Western European countries.

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Belgium	Institut belge de normalisation
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Finland	Suomen Standardisoimisliitto, r.y.
France	Association française de normalisation
Germany	Deutsches Institut für Normung e.V.
Greece	Hellenic Organization for Standardization
Iceland	Technological Institute of Iceland
Ireland	National Standards Authority of Ireland
Italy	Ente Nazionale Italiano di Unificazione
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Sweden	Standardiseringskommissionen i Sverige
Switzerland	Association suisse de normalisation
United Kingdom	British Standards Institution

This Draft for Development, having been prepared under the authority of the Standards Board and comes into effect on 28 June 1991

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National foreword

1.0 Introduction

This Draft for Development has been published under the direction of the Information Systems Technology Standards Policy Committee (IST/-). It is identical with the European Prestandard ENV 41201 “*Private Message Handling System: User Agent and Message Transfer Agent: Private Management Domain to Private Management Domain*”, (Revision 1, February 1988), prepared by the Joint European Standards Institution, CEN/CENELEC, in collaboration with the European Conference of Postal and Telecommunications Administrations (CEPT).

UK input to the preparatory work in ENV 41201 was carried out through collaboration between Technical Committees IST/18 and IST/21; however, responsibility for this Draft for Development is assigned to IST/18.

ENV 41201 is one of the series of European Prestandards (ENVs) fully described in CEN/CENELEC/CEPT Memorandum M-IT-02 (and its supplement)¹⁾.

This Draft for Development is for function A/3211 described in CEN/CENELEC/CEPT Memorandum M-IT-02 (and its supplement).

2.0 Objectives and requirements of Functional Standards

The concept and purpose of functional standardization is fully described in CEN/CENELEC/CEPT Memorandum M-IT-01¹⁾.

In summary, each Functional Standard defines the use of relevant base Open Systems Interconnection (OSI) standards to facilitate interworking between conforming systems. This, in turn, will enable reference to be made to Functional Standards for the purposes of procuring conforming systems.

Although there will also be other uses of Functional Standards, such an aim demands that the standard has clear, precise, non-ambiguous and objective technical requirements with associated clauses stating how compliance with the requirements is to be determined.

3.0 Status of this publication

This European Prestandard is not to be regarded as a European Standard (EN) or Harmonization Document (HD) and this Draft for Development is not to be regarded as a British Standard.

BSI has an obligation as a member of CEN and CENELEC to make ENVs available. The committee responsible for this Draft for Development will continue to monitor any proposed or actual changes to the ENV with a view to maintaining alignment between the ENV and this Draft for Development through revision or amendment. Progression of this Draft for Development is, therefore, not likely to occur independently of progression of the ENV.

This ENV is being issued in the Draft for Development series of publications as a prospective standard for provisional application in the field of Information Technology because there is an urgent need for guidance on how IT standards should be used to meet an identified need. However, attention is drawn to **5.0** of this foreword, in which further progress in the base standards referenced in this draft has already been identified. A further revision of this Draft for Development should be expected before a wholly stable situation prevails.

Therefore, this Draft for Development should be applied on a provisional basis so that information and experience of its practical application may be obtained.

¹⁾ These are available as BITS documents. For full details on the BITS service, please contact DISC, 205 Holland Park Avenue, London W11 4XB (Tel: 071 629 9000 Extension 3482)

A review of this Draft for Development will be carried out not later than two years after its publication. Notification of the state of the review period, with a request for the submission of comments from users of this Draft for Development will be made in an announcement in *BSI News*. The comments received will be reviewed by the BSI committee concerned, then transmitted to the CEN/CENELEC Technical Board as UK views on the ENV for decision in CEN/CENELEC on one of the following actions:

- a) conversion into an EN after final vote (see, however **5.0** of this foreword);
- b) extension of the life of the ENV for another two years (once only);
- c) replacement by a revised ENV approved in accordance with the CEN/CENELEC Common Rules for elaboration either through a technical body or through the questionnaire procedure and voting;
- d) withdrawal of the ENV;
- e) assignment to a technical body of the task of assisting the Technical Board to reach any of the decisions listed above.

Observations that are felt to need attention before the official call for comments will be welcomed.

4.0 General concept of Functional Standards

As fully described in CEN/CENELEC/CEPT M-IT-01, the purpose of a Functional Standard (which this Draft for Development is intended to become) is summarized as follows:

- a) to stabilize the way in which one or more standards are used in combination in a particular environment to meet a particular requirement;
- b) to promote the early use of stable drafts of standards in a controlled manner;
- c) to provide a system of referencing the various uses of standards that is meaningful to users and suppliers alike;
- d) as the reference document for claiming conformity to the set of standards as used in that environment.

5.0 Guidance on implementation of this Draft for Development

The ISO draft International Standards and draft proposals referenced in clause 3 of this Draft for Development are available as BITS documents.

This Draft for Development reflects draft standards assembled by ISO to meet the need to interconnect private messaging networks. In doing this, ISO identified certain requirements of the functional description, and of messaging service elements, beyond those specified by CCITT²⁾ in their X.400-1984 Recommendations, and incorporated them in these draft standards.

Subsequently, as a result of an agreement with CCITT on the production of joint text which incorporates these requirements, work on the referenced draft standards was terminated in 1986. A new direction was then taken, to produce a common series of recommendations/International Standards which meet the needs of both public and private messaging networks.

This harmonization process has resulted in a revised X.400-1988 series of CCITT Recommendations, and a multi-part International Standard ISO/IEC 10021. These harmonized recommendations/International Standards do not describe any migratory path from the earlier ISO draft standards, as the latter never became International Standards. They do however describe interworking with a CCITT X. 400-1984 Management Domain.

²⁾ CCITT publications may be obtained from BSI Sales Department, Linford Wood, Milton Keynes, MK14 6LE.

ENV 41201 was revised in February 1988, both to correct identified errors and to include text pointing the direction for migration to CCITT X.400-1988 based interworking.

New ENVs are under development based on the harmonized CCITT X.400-1988 Recommendations and ISO/IEC 10021, and it is not expected that ENV 41201 will proceed to EN status.

This publication is not to be regarded as a British Standard

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, the ENV title page, pages 2 to 34, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

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English version

Private Message Handling System; User Agent and Message Transfer Agent; Private Management Domain to Private Management Domain

Système de Messagerie Privé;
Agent d'Utilisateur et Agent de Transfert de
Messages;
Domaine de Gestion Privé à Domaine de
Gestion Privé

Privates elektronisches Übermittlungs System
für Mitteilungen;
Anwender Vermittler und Transfer Vermittler
für Mitteilungen;
Kommunikation zwischen privaten
Netzbereichen

This European Prestandard (ENV) was accepted by a technical body of CEN/CENELEC on 18 February 1988 as a prospective standard for provisional application. The period of validity of this ENV is limited initially to three years. After two years the members of CEN/CENELEC will be requested to submit their comments, particularly on the question whether the ENV can be converted into an EN.

CEN/CENELEC members are required to announce the existence of this ENV in the same way as for EN and to make the ENV available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the ENV) until the final decision about the possible conversion of the ENV into an EN is reached.

CEN/CENELEC members are the national standards organizations and national electrotechnical committees, respectively, of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxemburg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN/CENELEC

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Organisation Commune Européenne de Normalisation
Die Gemeinsame Europäische Normungsorganisation

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Brief history

This European Prestandard (ENV) was drawn up by Working Group CEN/CENELEC/WG-PMHS (Secretariat held by AFNOR) which was established by the CEN/CENELEC/CEPT Information Technology Steering Committee (ITSTC) on 1985-07-17.

This ENV was adopted by CEN/CENELEC on the strength of its acceptance by the following member countries: Belgium, France, Germany, Sweden, United Kingdom.

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0 Introduction

0.1 Purpose

0.1.1 This is a European Functional Standard which makes recommendations concerning the use of ISO standards in order to support the inter-operation of private messaging systems. These recommendations are intended to provide guidance to the designers and implementors of such systems.

0.1.2 The concept and structure of Functional Standards for information technology is described in the Joint CEN/CENELEC/CEPT memorandum M-IT-01. In summary, these Functional Standards are intended to make recommendations as to when and how certain information technology standards shall be used to support a specific operational requirement.

0.1.3 In the CEN/CENELEC/CEPT memorandum M-IT-02 (Directory of Functional Standards), this Functional Standard is identified as A/3211.

0.2 Status

This functional Standard is a second issue clarifying and correcting the original issue dated June 1986. That issue was based on ISO Standards at DP and DIS Status, which were in turn based on the published CCITT 1984 X.400 series of Recommendations.

This was necessary to meet the urgent needs to unify European market requirements in the subject area. It was the expectation that these ISO documents would progress to International Standard Status.

However, in 1987 ISO made a decision to discontinue progressing most of these ISO documents, and instead started to produce ISO standards harmonized with the 1988 version of the corresponding CCITT Recommendations. In consequence the DP and DIS documents referenced by this ENV have to be regarded as “frozen” at the date identified in the reference section of this document.

Readers of this ENV must take care to ensure that they refer to the correct ISO draft as identified (by date) in the reference section of this document.

The reissuing of this ENV is a reflexion on the large number implementations which have been developed on the first issue, and the continuing need to unify European market requirements in the subject area.

1 Scope and field of application

1.1 Statement of Function

This Functional Standard specifies functions and procedures to be used for interworking between private message handling systems belonging to different private management domains, based on MTA to MTA interconnection without utilising the services of an intermediate administration domain.

1.2 Scenario Description

This Functional Standard deals with interpersonal messaging and describes services of and communication between:

- IPM UAs (Interpersonal Messaging User Agent Entities using P2 protocol) using
- MTAs (Message Transfer Agent Entities using P1 protocol),

when located in different PRMDs; see Figure 1.

For the overall protocol structure of this Functional Standard refer to Figure 2.

End user services and local UA (User Agent) functions are not part of this Functional Standard, neither are protocols and interfaces used for interaction between the users and their UA's, nor between UA's and their MTA's.

This Functional Standard does not require a PRMD to act as a relay between PRMD's, but this service may optionally be provided.

This Functional Standard refers to Q/XXX-Functional Standards to define the formats (e.g. document formats) of certain IP-Message body parts.

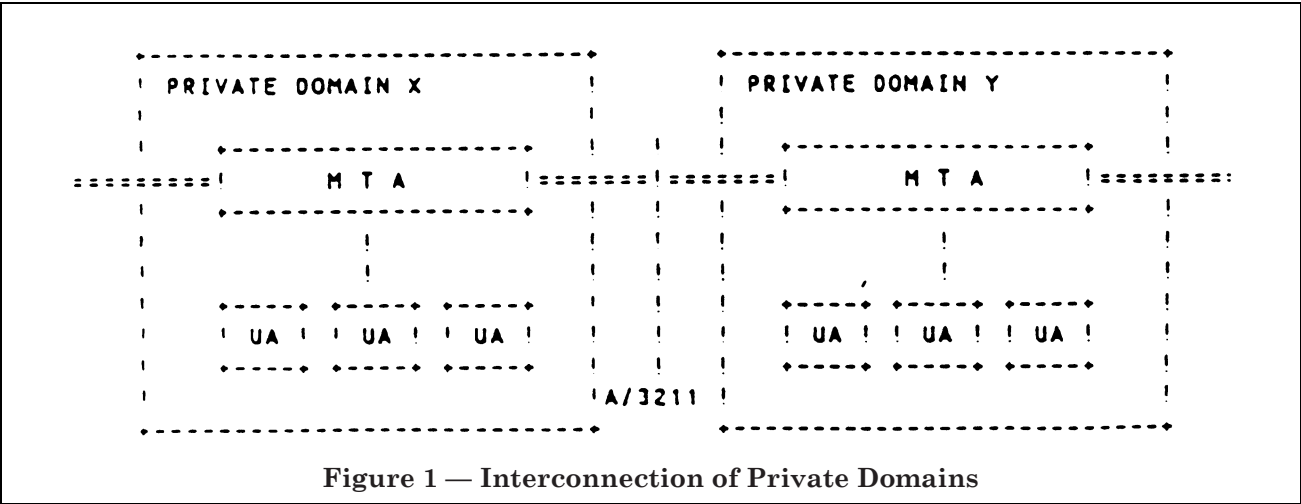


Figure 1 — Interconnection of Private Domains

User Agent Sub-Layer	ISO 9065
Message Transfer Sub-Layer	ISO 8883
Reliable Transfer Server	ISO 9066 ^a
Session Layer	ISO 8327
^a ISO 9066 embodies some presentation layer functions for use by the RTS (Reliable Transfer Server)	

Figure 2 — Model of this Functional Standard

The UAs and MTAs need access to Directory and Routing services. It is a matter beyond the scope of this Functional Standard how such UAs and MTAs locate users and route messages.

2 Conformity

2.1 General

This section of this Functional Standard specifies the requirements for implementations claiming conformity to this Functional Standard.

The following are general conformity requirements:

An implementation shall not generate protocol element lengths greater than the length limitations in this Functional Standard and shall accept protocol elements up to this length.

The reaction of the receiving implementations to a violation of this restriction is not defined by this Functional Standard.

Any protocol implementation conformity statement shall state specifically whether relaying is offered or not.

Implementations which offer relaying shall relay all protocol elements listed in this Functional Standard semantically unchanged.

2.2 UASL Conformity

Implementations conforming to this Functional Standard shall support services as required by 5.2. Any protocol implementation conformity statement shall state specifically which, if any, additional services are supported.

Implementations conforming to this Functional Standard shall obey the protocol classification as specified in 5.3 and 5.4.

2.3 MTSL Conformity

Implementations conforming to this Functional Standard shall obey the protocol as specified in 6.2 and address attribute generation as specified in 6.3.

When “copying” an ORName of an incoming message into a DeliveryReportMPDU or an SR-UAPDU (e.g. the originator of the original message), all attributes (also UNSUPPORTED attributes) shall be copied.

The presence of ORName attributes not required by this Functional Standard, but defined in ISO 8883 shall not be regarded as protocol error.

Any protocol implementation conformity statement shall specify which of the UNSUPPORTED ORName attributes are available to the user.

2.4 RTS Conformity

Implementations conforming to this Functional Standard shall support RTS service option selection as described in 7.2 and shall obey the RTS protocol, with the restrictions described in Table 8.

All implementations conforming to this Functional Standard shall be capable of operating according to the default settings listed in Annex B of ISO 8883.

2.5 Transfer Syntax Conformity

An implementation conforming to this Functional Standard shall use the encoding rules specified in ISO 8825 together with the additional rules contained in 8.2, 8.3 and 8.4 of this Functional Standard for the generation of protocol encodings specified in ASN.1.

An implementation conforming to this Functional Standard shall be prepared to decode any protocol encoding it receives that has been encoded using the encoding rules specified in ISO 8825 together with the additional rules contained in clauses 8.2, 8.3 and 8.4 of this Functional Standard.

The action taken by an implementation conforming to this Functional Standard on receipt of a protocol encoding that conforms to the encoding rules defined in ISO 8825 but not to some or all of the additional rules specified in 8.2, 8.3 and 8.4 of this Functional Standard is not defined.

2.6 Session Layer Conformity

NOTE An implementation conforming to this Functional Standard of the session protocol may be capable of supporting other session service and protocol options. This Functional Standard only requires that it be capable of operation in accordance with the constraints specified in this clause.

2.6.1 An implementation conforming to this Functional Standard shall support the use of the functional units identified in ISO 9066 on a session connection.

2.6.2 An implementation conforming to this Functional Standard shall be capable of initiating a session connection (by sending a CONNECT SPDU) and responding to the receipt of a CONNECT SPDU (by sending an ACCEPT or REFUSE SPDU).

2.6.3 An implementation conforming to this Functional Standard shall not use extended concatenation.

2.6.4 An implementation conforming to this Functional Standard need not support the use of segmenting, but its use is not prohibited by this Functional Standard ; however an implementation shall be capable of operation without its use.

NOTE An implementation conforming to this Functional Standard has to be able to handle unlimited length TSDUs when segmenting is not in operation.

2.6.5 An implementation conforming to this Functional Standard need not support the re-use of transport connections, but is not prohibited from so doing by this Functional Standard.

2.6.6 An implementation conforming to this Functional Standard shall not generate an EXCEPTION REPORT SPDU containing a “reflect parameter values” field with a length greater than 1 024 octets. It shall be prepared to receive an EXCEPTION REPORT SPDU where this field has a greater length, but it may discard that part of the field contents beyond the length limit.

2.6.7 An implementation conforming to this Functional Standard need not support the use of session layer addressing, but its use is not prohibited by this Functional Standard; however an implementation conforming to this Functional Standard shall be capable of operation without its use.

2.6.8 An implementation conforming to this Functional Standard shall not use the transport expedited data transfer service in the provision of the session services required by ISO 9066.