

**Implementation of
ENV 41202:1987**

**Information Systems
Interconnection;
Message Handling
Systems: User Agent
(UA) plus Message
Transfer Agent (MTA):
access to an
Administration
Management Domain
(ADMD)**

Cooperating organizations

The joint European Standards Institution (CEN/CENELEC), under whose supervision this European Prestandard was prepared, comprises the National Committees of the following countries:

Austria	Italy
Belgium	Luxemburg
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Finland	Norway
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National foreword

This Draft for Development is identical with the European Prestandard ENV 41202:1987 “*Information Systems Interconnection; Message Handling Systems; User Agent (UA) plus Message Transfer Agent (MTA): access to an Administration Management Domain (ADMD)*”, prepared by CEN/CENELEC whose members have committed themselves to making it available in an appropriate form. In the UK the Draft for Development is the form now chosen for ENVs in the information technology area.

This Draft for Development is published under the direction of the Information Systems Technology Standards Policy Committee whose Technical Committee IST/18 has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on interpretation, or proposals for change, and to keep UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

NOTE International and European Standards, as well as overseas standards, are available from BSI Sales Department, BSI, Linford Wood, Milton Keynes MK14 6LE.

After two years this ENV will be reviewed by CEN/CENELEC members with a view to its:

- conversion into a European Standard (which would be implemented in the UK as a British Standard);
- extension once for a further two years;
- replacement by a revised ENV (which would be published in the UK, probably as a revised Draft for Development);
- withdrawal.

The future of this Draft for Development is therefore dependent on that of the ENV.

This publication is not to be regarded as British Standard.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the ENV title page, pages 2 to 29 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

Information Systems Interconnection: Message Handling Systems: User Agent (UA) plus Message Transfer Agent (MTA): access to an Administration Management Domain (ADMD)

Interconnexion des systèmes d'information; Systèmes de messagerie; Agent d'utilisateur (UA) et agent de transfert de messages (MTA): accès à un domaine de gestion administratif.

Kommunikation von Informationssystemen; Mitteilungs-Uebermittlungs-Systemen: End-Systemteil (UA) und Transfer-Systemteil (MTA): Zugang zu einem oeffentlichen Versorgungsbereich (ADMD).

This European Prestandard (ENV) was accepted through correspondence by the members of CEN/CENELEC on 8 July 1987 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, Ireland, Italy, Luxemburg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN/CENELEC

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Brief History

This European Prestandard (ENV) was drawn up by Working Group TE of CEPT as requested by the CEN/CENELEC/CEPT Information Technology Steering Committee (ITSTC) on 1985-07-17.

This ENV was adopted by correspondence by CEN/CENELEC on 1987-04-24 on the strength of its acceptance by the following member countries: Austria, Belgium, Denmark, Finland, France, Greece, Ireland, Italy, Spain, Sweden, Switzerland, Netherlands, Portugal, United Kingdom, and confirmed by CEN/CENELEC and CEPT during a Joint meeting on 1987-07-08.

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0 Introduction

The concept and structure of Functional Standards for information systems interconnection are laid down in the CEN/CENELEC/CEPT memorandum M-IT-01. The purpose of a Functional Standard is to recommend when and how certain information technology standards should be used. This Functional Standard deals with communication in message handling systems of which one at least is a public domain, defined as function A/311 in the CEN/CENELEC/CEPT memorandum M-IT-02.

1 Scope and field of application

1.1 Statement of Function

This Functional Standard specifies functions and procedures to be used for interworking between message handling systems belonging to different management domains, where at least one of the management domains is an ADMD.

2 Conformity

Any MD, or equipment to fulfil that role, may claim conformity to this Functional Standard if it fulfils either the requirements in Clauses 2.1 through 2.5 if the IPM service is provided or it fulfils the requirements in Clauses 2.2 through 2.5 if the MT service only is provided.

2.1 UAL Conformity

An MD, UA + MTA system, shall provide correctly the services listed in clause 7.2 whether the peer UA entity is attached to an ADMD or to a PRMD.

The MD may be used interconnecting different management domains. In that case, the MTA within the MD shall transmit all the IP messages as long as those messages conform to the defined message requirements.

A UA within an MD shall support the BASIC IPM Services and the ESSENTIAL IPM optional user facilities of [X.401], see clause 7.2.

For Optional user facilities which are Additional for Origination and Essential for reception, this implies that implementations shall not be required to offer the service for sending but shall be able to offer the service for received messages.

An MD shall obey the protocol as specified in 7.3 and Body Parts as specified in 7.4.

An ADMD that implements this Functional Standard must relay all the protocol elements of the Functional Standard ENV 41201. Relaying of other protocol elements is outside the scope of this Functional Standard.

2.2 MTL Conformity

The MTA within an MD shall support the BASIC MT Services and the ESSENTIAL MT Optional user facilities of [X.401], see clause 8.2.

A number of ADDITIONAL MT optional facilities classified in clause 8.2 may not be provided by an ADMD. An MD may offer them as local services or remotely by bilateral agreement. The corresponding protocol elements may be generated but no specific processing shall be required in a relaying or delivery domain. A relaying domain must at least relay the semantics of the element.

For routing all ADMDs should support all Form 1 Variants of O/R name. All ADMD UAs shall be capable of generating all Forms and Variants of O/R names as specified in clause 8.4. All PRMDs should support at least Form 1, Variant 1 form of ORName.

When “copying” an O/R name of an incoming message into a DeliveryReport MPDU or an SR-UAPDU (e.g. the originator of the original message), all attributes (also UNSUPPORTED attributes) shall be copied.

An MD shall not generate protocol element lengths of greater length than the length limitations in this Functional Standard and the relaying or receiving system must accept protocol elements up to this length.

An ADMD that implements this Functional Standard must relay all the protocol elements of the Functional Standard ENV 41201. Relaying of other protocol elements is outside the scope of this Functional Standard.

2.3 RTS Conformity

Implementations shall support RTS Service Option Selection as described in clause 9.3, and shall obey the RTS protocol, with the restrictions described in clause 9.4 and Table 8.

2.4 Transfer Syntax Conformity

Implementations shall support Presentation Transfer Syntax requirements described in clauses **10.2** and **10.3**. Implementations must not generate protocol elements which violate these requirements and must accept all elements which do conform to these requirements.

2.5 Session Conformity

Implementations shall support Session Service Option Selection as described in clause **11.2**, Session Protocol Operation as described in clause **11.3**, and the restrictions on Transport Layer described in clause **11.4**.

3 References

CCITT X.400	Message Handling Systems: system model-service elements (Red Book 1984).
CCITT X.401	Message Handling Systems: basic service elements and optional user facilities (Red Book 1984).
CCITT X.408	Message Handling Systems: encoded information type conversion rules (Red Book 1984).
CCITT X.409	Message Handling Systems: presentation transfer syntax and notation (Red Book 1984).
CCITT X.410	Message Handling Systems: remote operation and reliable transfer server (Red Book 1984).
CCITT X.411	Message Handling Systems: message transfer layer (Red Book 1984).
CCITT X.420	Message Handling Systems: interpersonal messaging user agent layer (Red Book 1984).
CCITT	X.400/Series Implementors Guide (version 5 — 3 October 1986).
CCITT X.215	Session service definition for open systems interconnection for CCITT applications (Red Book 1984).
CCITT X.225	Session protocol specification for open systems interconnection for CCITT applications (Red Book 1984).
CCITT X.121	International Numbering Plan for Public Data Networks (1985).
CCITT T.50	International alphabet no. 5.
CCITT T.61	Character repertoire and coded character sets for the international teletex service.
A/3211 CEN/CLC	see ENV 41201.
Q/211 CEN/CLC	Contents types, Character-coded text, Teletex Repertoire
Q/212 CEN/CLC	Contents types, Character-coded text, ISO 7-bit Repertoire
Q/213 CEN/CLC	Contents types, Character-coded text, Teletex Repertoire
Q/113 CEPT	Document interchange format, Image formats, Text image format
Q/114 CEPT	Document interchange format, Image formats, Mixed image format 1
Q/221 CEPT	Content types, Photographically coded images, Group 4 Facsimile code (<T.6> as in TIF.0 of <T.73>)
Q/222 CEPT	Content types, Photographically coded images, Group 4 Facsimile code (<T.6> as in TIF.1 of <T.73>)
Q/241 CEPT	Content types, Videotex, CEPT
Q/121 CEPT	Document interchange format, Processable formats, Text processable formats.
ENV 41201	Private Message Handling System: User Agent and Message Transfer Agent: Private Management Domain to Private Management Domain. (identified as function A/3211 in Memorandum M-IT-02)

CEN/CENELEC/CEPT/ITSTC	Memorandum M-IT-01 (March 1986) on the concept and structure of Functional Standards for information systems interconnection.
CEN/CENELEC/CEPT/ITSTC	Memorandum M-IT-02 (Issue 2 — March 1987) on directory of Functional Standards.
ISO 3166	Codes for the representation of the names of countries (1981).

4 Definitions

4.1 Functional Standard Classification

This Functional Standard defines the required support for Service and Protocol elements. To describe this support, use is made of the following classification scheme:

4.1.1 Definition of Service Classification

The classification of service elements is used to define characteristics of equipment. Equipment can claim SUPPORT or NON-SUPPORT of a service; a separate classification is given for origination and reception.

The following classes are recognised: —

SUPPORT = S

This means:—

- i) That the service provider makes the service element available to the service user.
- ii) That the service user gives adequate support to the user of the MHS to invoke the service element or make information associated with the service element available.

Support for Origination means: —

- i) That the service provider makes the service element available to the service user for invocation.
- ii) That the service user gives adequate support to the user of the MHS to invoke the service element or make information associated with the service element available.

Support for Reception means: —

- i) That the service provider makes information associated with the service element available to the service user.

Note that a service element can only carry information from originator to recipient if (1) the service element is available to the originator and (2) the service element is available to the recipient and (3) all intermediate steps carry the information.

NON-SUPPORT = N

This means that the service provider is not required to make the service element available to the service user. However, the service provider should not regard the occurrence of the corresponding protocol elements as an error, and should be able to relay such elements.

NOT USED = NU

This means that although the standards allow this service element, this Functional Standard does not use it.

NOT APPLICABLE = NA

This means that the service element is not applicable at this point (origination or reception point).

4.1.2 Definition of Protocol Classification

The classification protocol elements defines characteristics of their occurrence in PDUs and on the ability of equipment to manipulate them. The classification of each protocol element is relative with respect to its containing element.

UNSUPPORTED = X

These elements may be generated, but no specific processing should be expected in a relaying or delivering domain. A relaying domain must at least relay the semantics of the element. The absence of these elements should not be assumed, in a relaying or delivering domain, to convey any significance.

SUPPORTED = H

These elements may be generated. However, implementations are not required to be able to generate these elements. Appropriate actions shall be taken in a relaying or delivering domain.

GENERATABLE = G

Implementations must be able to generate and handle these protocol elements, although they are not necessarily present in all PDUs generated by implementations of this Functional Standard. Appropriate actions shall be taken in a relaying or delivering domain. Conditions for generation are indicated in the Functional Standard.

REQUIRED = R

Implementations of this Functional Standard must always generate this protocol element. However, its absence cannot be regarded as a protocol violation as other MHS implementations may not require this protocol element. Appropriate actions shall be taken in a relaying or delivering domain.

MANDATORY = M

Must occur in each PDU as given in the reference standards; absence is a protocol violation. Appropriate actions shall be taken in a relaying or delivering domain.

5 Abbreviations

The following list of abbreviations are used in this Functional Standard in addition to some of those from the reference documents: —

CEN	Comite Europeene de Normalisation
CENELEC	Comite Europeene de Normalisation de Electrotechnique
chars	characters
Fax	Facsimile
ffs	for further study
ref	reference
std	standard
TSDU	Transport Service Data Unit

The following list of abbreviations are used in the reference documents, some of these abbreviations are also used in this Functional Standard

A	Additional Optional User Facility
ADMD	Administration Management Domain
AE	Application Entity
APDU	Application Protocol Data Unit
BNF	Backus-Naur Form
BS	Backspace
cc	Courtesy copy
CCITT	International Telegraph and Telephone Consultative Committee
CR	Carriage Return
DCS	Digital Command Signal
DIF	Document Interchange Format
E	Essential Optional User Facility
EOC	End-of-contents
FF	Form Feed
FIF	Facsimile Information Field
FS	Further Study
G3	Group 3
G3 Fax	Group 3 Facsimile
HT	Horizontal Tabulation
IA	International Alphabet

IA5	International Alphabet No. 5
ID	Identifier/Identification
IGS	Identify Graphic Subrepertoire
IM-UAPDU	IP-message User Agent Protocol Data Unit
ITA	International Telegraph Alphabet
I/O	Input/Output
IPM	Interpersonal Messaging
IPMS	Interpersonal Messaging System
LSB	Least Significant Bit
MSB	Most Significant Bit
LF	Line Feed
MD	Management Domain
MH	Message Handling
MHS	Message Handling System
MPDU	Message Protocol Data Unit
MT	Message Transfer
MTA	Message Transfer Agent
MTL	Message Transfer Layer
MTAE	Message Transfer Agent Entity
MTS	Message Transfer System
NA	Not Applicable
NDN	Non-delivery Notification
NSDU	Network Service Data Unit
OPDU	Operation Protocol Data Unit
O/R	Originator/Recipient
OSI	Open Systems Interconnection
P1	Message Transfer Protocol
P2	Interpersonal Messaging Protocol
P3	Submission and Delivery Protocol
Pc	Family of Content Protocols
PDU	Protocol Data Unit
PRMD	Private Management Domain
PFS	Page Format Selection
PLD	Partial Line Down
PLU	Partial Line Up
Pt	Family of Interactive Terminal to System Protocols
RLF	Reverse Line Feed
RTS	Reliable Transfer Server
SDE	Submission and Delivery Entity
SFD	Simple Formattable Document Type
SGR	Select Graphic Rendition
SHS	Select Horizontal Spacing
SMPDU	Service Message Protocol Data Unit
SP	Space