

Implementation of
ENV 41213-3:1992

Information systems interconnection — Virtual terminal — Basic class — A-mode “Telnet” —

Part 3: Underlying layers check list

UDC 681.324.022:681.327.8

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National foreword

This Draft for Development is identical with the European Prestandard ENV 41213-3:1992 *Information systems interconnection — Virtual terminal — Basic class — A-mode “Telnet” — Part 3: Underlying layers check list*, 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/21 has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any queries on interpretation, or proposals for change, and 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 as a revised Draft for Development);
- withdrawal.

The future of this Draft for Development is therefore bound to that of the ENV and the Draft for Development will not be reviewed or developed separately.

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 and ii, the ENV title page, pages 2 to 23 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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Descriptors: Data processing, open systems interconnection, data transmission, mode of transmission, start-stop transmission, data terminal equipment, protocols, presentation layer, session layer,

English version

Information systems interconnection — Virtual terminal — Basic class — A-mode “Telnet” — Part 3: Underlying layers check list

Interconnexion de systèmes d'information —
Terminal virtuel — Classe de base —
Protocole Telnet en mode asynchrone —
Partie 3: Couches sous-jacentes

Kommunikation von Informationssystemen —
Virtuelles Terminal Grundklasse — A-Modus
“Telnet” — Teil 3: Anforderungen an
darunterliegende Schichten

This European Prestandard (ENV) was approved by CEN/CENELEC on 1992-06-24 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 a European Standard (EN).

CEN/CENELEC members are required to announce the existence of this ENV in the same way as for an 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 bodies and national electrotechnical committees, respectively, of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN/CENELEC

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Die Gemeinsame Europäische Normungsorganisation

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Foreword

This European Prestandard (ENV) was elaborated by the EWOS Expert Group Virtual Terminal (EWOS/EG VT).

It was submitted for formal vote by the CEN Central Secretariat to the members of CEN/CENELEC on 1991-05-22 with the deadline of 1991-08-22. The result of the formal vote was positive.

Annex A of this ENV is a normative annex which outlines the Transfer Syntax.

According to the CEN/CENELEC Common Rules, the following countries are bound to announce the existence of this European Prestandard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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1 Scope and conformity

This part specifies the ACSE, Transfer Syntax, Presentation and Session requirements for the support of the Virtual Terminal Functional Standard A/4117.

1.1 Conformity principles

Part 1 of this Functional Standard states VT service requirements upon systems for the purpose of achieving interworking. Part 2 of this Functional Standard states VT protocol requirements upon systems for the purpose of achieving interworking.

This part of this Functional Standard states requirements on the underlying protocol layers for the purpose of achieving interworking. Section 1.2 states the relationship between these requirements and those of the base standards. In addition, any supplier claiming conformity shall make available a statement of support or non-support of each recommendation identified in the Functional Standard.

NOTE this document is based on the versions of the PICS Proformas for the referenced International Standards current at the time of generation. An update is likely to be necessary when the ISO work achieves full IS status.

1.2 Relationship With Base Standards

1.2.1 Association Control Service Element (ACSE) conformity

To conform to the Association Control Service Element (ACSE) Protocol used in this Functional Standard, implementations shall implement the normal mode and shall implement all the supported (m) features identified the tables of clause 3 of this part of this Functional Standard and shall state which optionally supported (o) features are implemented.

Claims of conformity shall be defined in terms of clause 10 of ISO 8650.

1.2.2 Presentation Layer conformity

To conform to the Presentation Protocol used in this Functional Standard, implementations shall implement the normal mode and shall implement all the supported (m) features identified in the tables of clause 4 of this part of this Functional Standard and shall state which optionally supported (o) features are implemented.

Claims of conformity shall be defined in terms of clause 9 of ISO 8823.

1.2.3 Transfer Syntax conformity

An implementation conforming to this Functional Standard shall support the “Basic Encoding of a Single ASN.1 type” as specified in ISO 8825, together with the additional rules defined in clause 4.5 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.

1.2.4 Session Layer conformity

To conform to the Session Protocol used in this Functional Standard, implementations shall implement all the supported (m) features identified in the tables of clause 5 of this part of this Functional Standard and shall state which optionally supported (o) features are implemented.

Claims of conformity shall be defined in terms of clause 9 of ISO 8327.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of this Functional Standard. At the time of publication, the editions indicated were valid. All documents are subject to revision, and parties to agreement based on this Functional Standard are warned against automatically applying any more recent editions of the documents listed below, since the nature of references made by Functional Standards 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 other publications.

2.1 Base references

ISO 8649:1988, *Information processing systems — Open Systems Interconnection — Service Definition for the Association Control Service Element*.

ISO 8650:1988, *Information processing systems — Open Systems Interconnection — Protocol Specification for the Association Control Service Element*.

ISO/IEC 8650-2, *Information technology — Open Systems Interconnection — Protocol Specification for the Association Control Service Element — Part 2: Protocol Implementation Conformance Statement Proforma (SC21 N5024)*.

ISO 8824:1987, *Information processing systems — Open Systems Interconnection — Specification of Abstract Syntax Notation One (ASN.1)*.

ISO 8825:1987, *Information processing systems — Open Systems Interconnection — Specification of Basic Encoding Rules for Abstract Syntax Notation 1 (ASN.1)* ISO 8822:1988, *Information processing systems — Open Systems Interconnection — Connection Oriented Presentation Service Definition*.

ISO 8823:1988, *Information processing systems — Open Systems Interconnection — Connection Oriented Presentation Protocol Specification*.

ISO/IEC 8823-2, *Information technology — Open Systems Interconnection — Connection-oriented Presentation Protocol Specification — Part 2: Presentation Protocol Implementation Conformance Statement Proforma (PICS) (SC21 N5025)*.

ISO 8326:1987, *Information processing systems — Open Systems Interconnection — Basic Connection Oriented Session Service Definition*.

ISO 8327:1987, *Information processing systems — Open Systems Interconnection — Basic Connection Oriented Session Protocol Specification*.

ISO/IEC 8327-2, *Information technology — Open Systems Interconnection Basic Connection Oriented Session Protocol Specification — Part 2: Protocol Implementation Conformance Statement Proforma (PICS) (SC21 N5022)*.

ISO 8326 AD2, *Information processing systems — Open Systems Interconnection — Basic Connection Oriented Session Service Definition — Addendum 2 to Incorporate Unlimited User Data*.

ISO 8327 AD2, *Information processing systems — Open Systems Interconnection — Basic Connection Oriented Session Protocol Specification — Addendum 2 to Incorporate Unlimited User Data*.

3 ACSE protocol

This clause lists in tables the ACSE functions, PDUs and PDU parameters that are required to support this Functional Standard. Throughout this clause, to specify the level of support for each feature, the following classification is used:

The “Base” column reflects the definitions and specifications in ISO 8650. Each entry in this column is chosen from the following list:

- m : mandatory
- o : optional

The “F/S” column reflects the requirement of this Functional Standard. Each entry in this column is chosen from the following list:

- m : supported
- o : optionally supported
- : not required

3.1 Supported Functions

This sub-clause identifies the functions required of implementations claiming conformance to this Functional Standard.

Ref	Protocol mechanism	Base	F/S
1	Normal Mode	o	m
2	X.410 Mode	o	—
3	Rules for Extensibility	m	m
4	Supports operation of Session V2	o	m

3.2 Supported APDUs

This sub-clause identifies the APDUs that have to be supported by implementations claiming conformance to this Functional Standard

Ref	APDU	Sending		Receiving	
		Base	F/S	Base	F/S
1	AARQ	m	m	m	m
2	AARE	m	m	m	m
3	RLRQ	o	m	m	m
4	RLRE	m	m	m	m
5	ABRT	m	m	o	m

3.3 Initiator/Responder Capability

This sub-clause identifies the initiator/responder capabilities that have to be supported by implementations claiming conformance to this Functional Standard.

Ref	Capability	Base	F/S
1	Association Initiator	o	m
2	Association Responder	o	m

3.4 Supported Parameters

This sub-clause identifies the parameters associated with ACSE APDUs that have to be supported by implementations claiming conformance to this Functional Standard.

Each APDU parameter is described by a data type. The data type for each parameter is defined in ISO 8650, as are any mandatory restrictions on the value of specific parameters.

Pass-through Presentation parameters are specified later.