

Implementation of
ENV 41211-1:1992

Information systems interconnection — Virtual terminal — Basic class — A-mode X.3 —

Part 1: Virtual terminal service

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National foreword

This Draft for Development is identical with the European Prestandard ENV: 41211-1:1992 *Information systems interconnection — Virtual terminal — Basic class — A-mode X.3 — Part 1: Virtual terminal service*, 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 18 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, services

English version

Information systems interconnection —
Virtual terminal — Basic class — A-mode X.3 —
Part 1: Virtual terminal service

Interconnexion de systèmes d'information —
Terminal virtuel — Classe de base — Fonction
X.3 en mode asynchrone — Partie 1: Service
de terminal virtuel

Kommunikation von Informationssystemen —
Virtuelles Terminal Grundklasse — A-Modus
X.3 — Teil 1: Virtuelles Terminal Dienste

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 1991-05-29 with the deadline of 1991-08-29. The result of the formal vote was positive.

Annex A of this ENV is an informative annex which lists the values of the ASN.1 Object Identifiers reference in the Functional Standard.

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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0 Introduction

The concept and structure of Functional Standards for Information Systems Interconnection are laid down in 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 is Part 1 of a three-part Functional Standard. It specifies Application Function A/4113 as defined in the CEN/CENELEC/CEPT Memorandum M-IT-02 by giving the requirements of the Virtual Terminal Service and referencing the checklists given in Part 2 for the requirements of the Virtual Terminal Protocol and in Part 3 for the requirements of the Underlying Layers.

1 Scope and field of application

1.1 Scope

This Functional Standard provides a method of interactive operation using OSI Virtual Terminal Service and Protocol which is equivalent to the CCITT X.3 PAD functionality and X.29 protocol commonly used over virtual circuits of X.25 packet switched networks. It includes a modelling of the X.3 PAD Parameters and associated X.29 operations using VT concepts.

This Functional Standard supports applications where the terminal representation of the interactive data stream is character orientated and where the terminal end system is associated with a function equivalent to an X.3 PAD as defined in the CCITT Recommendations. This Functional Standard only supports a transparent repertoire since X.3 and X.29 do not support character repertoire declaration. This Functional Standard does not constrain the syntax or semantics of information transferred in this transparent repertoire syntax.

This Functional Standard does not include a specification of those capabilities of the Virtual Terminal that must be realised in the real terminal device since again X.3 and X.29 do not provide any similar facilities. It is expected that users of this Functional Standard will wish to agree the capabilities of the real device by means outside the scope of this Functional Standard.

Reference to ENV 41901 may be useful for the information and guidance it gives on the use of the X.3 PAD Parameter values.

1.2 Field of application

The Virtual Terminal Service and Protocol have been so designed that they can be used by pairs of applications or by pairs of terminals as well as the more usual case where one each of these roles is involved.

This Functional Standard defines an inherent asymmetry in the role of the two VT-users in that one of them is assumed to provide the PAD-like function and be controlled by the PAD parameter values. (This asymmetry is determined from the values of profile arguments when the VTE-profile is brought into use.)

This Functional Standard is intended mainly for transitional use in application environments where it is necessary for a terminal population to be able to access different applications running on a variety of host computers from diverse suppliers and where part of the overall network is non-OSI and uses and will continue to use the X.29 protocol over an X.25 network or equivalent. This Functional Standard may be specified for procurement where this environment pertains and also where it can be foreseen that a single supplier environment will expand as the result of future procurement to encompass a mixture of hardware and suppliers. In certain circumstances use of this Functional Standard can make terminal system procurement independent of the main application system procurement. Use of this Functional Standard will enable terminal procurement to be made resulting in a mix of terminal systems from different suppliers.

This Functional Standard does not, however, provide a definition of real device characteristics or device information encoding syntax and it is likely that the users will need to agree such definition by means outside the scope of this Functional Standard. In certain cases such definition may be deducible from addressing or other information exchanged during the establishment of the VTE-profile.

This Functional Standard may be used when it is intended to expand an existing application environment which does not currently use VT.

This may be done as part of a migration strategy where the application environment is seen as evolving and is likely to have an extended lifetime.

This Functional Standard may be used where the connection between a terminal system and an application host is local, is made across a LAN or a WAN, or is made across a concatenation of such networks.

2 Conformity

2.1 Conformity principles

The body of this Functional Standard states requirements upon systems for the purpose of achieving interworking.

A claim of conformity to this Functional Standard is a claim that all requirements in the body of each of Parts 1, 2 and 3 of this Functional Standard are satisfied. Section 2.2 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 or optional feature identified in this Functional Standard.

2.2 Relationship with Base Standards

This Functional Standard specifies implementation options or selections such that conformant implementations will satisfy the conformance requirements of clause 13 of ISO 9041-1.

Products conforming to this Functional Standard shall implement all the supported (s) features (identified in Table 1 – Table 9 below and the tables of Parts 2 and 3 of this Functional Standard) and shall state which optionally supported (os) features are implemented.

Claims of conformity shall be defined in terms of clause 13 of ISO 9041-1.

3 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.

3.1 Base References

ISO 646:1983, *Information Processing — ISO 7-Bit Coded Character Set for Information Interchange*.

ISO 2022:1982, *Information Processing — ISO 7-Bit and 8-Bit Coded Character Sets — Code Extension Techniques*.

ISO 2375:1985, *Data Processing — Procedure for Registration of Escape Sequences*.

ISO 9040:1990, *Information technology — Open Systems Interconnection — Virtual Terminal Basic Class Service*.

ISO 9041:1990, *Information technology — Open Systems Interconnection — Virtual Terminal Basic Class Protocol*:

ISO 9041-1, *Part 1: Specification*.

ISO 9041-2, *Part 2: PICS Proforma*.

3.2 Additional references

M-IT-01:1986, *CEN/CENELEC/CEPT Memorandum on the Concept and Structure of Functional Standards for Information Technology*.

M-IT-02:1989, *CEN/CENELEC/CEPT Memorandum on Directory of Functional Standards*.

ENV 41211-2:1990, *Application function A/4113 — Basic Class VT — A-mode X3 Functional Standard — Part 2: VT Protocol Checklist*.

ENV 41211-3:1990, *Application function A/4113 — Basic Class VT — A-mode X3 Functional Standard — Part 3: Underlying Layers Checklist*.

OIW Stable Agreements V3E1:1989, *NIST Stable Implementation Agreements for Open Systems Interconnection Protocols, Version 3 Edition 1 (December 1989)*.

CCITT Recommendations X.3 and X.29 (1984 versions were used for the preparation of this Functional Standard)

ENV 41901: CEN/CENELEC Profiles Y/11 and Y/12 for the use of X.3 PAD Parameters and X.29 and X.28 protocols

4 Definitions

The terms used in this Functional Standard are defined in the base references.

5 Abbreviations

EWOS	European Workshop for Open Systems
NIST	National Institute of Standards and Technology (USA Department of Commerce organisation)
OIW	NIST OSI Implementors' Workshop (North American Regional Workshop for Open Systems)

The remaining abbreviations used in this Functional Standard are defined in the base references.

6 Scenario description

This Functional Standard describes the operations that may be made on the Conceptual Communications Area (CCA) and the service provided by the VT service provider to VT service users, together with the necessary communications between the two communicating implementations.