SLOVENSKI STANDARD

SIST EN 82045-2:2006

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Ravnanje z dokumenti - 2. del: Elementi metapodatkov in model sklicevanja na informacije (IEC 82045-2:2004)

(istoveten EN 82045-2:2005)

Document management – Part 2: Metadata elements and information reference model (IEC 82045-2:2004)

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EN 82045-2

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English version

Document management
Part 2: Metadata elements and information reference model
(IEC 82045-2:2004)

Gestion de documents
Partie 2 : Eléments de metadonnées et modèle d'information de référence
(CEI 82045-2:2004)

Dokumentenmanagement
Teil 2: Metadaten und Informationsreferenzmodelle
(IEC 82045-2:2004)

This European Standard was approved by CENELEC on 2004-12-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

CENELEC
European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 3/712/FDIS, future edition 1 of IEC 82045-2, prepared by IEC TC 3, Information structures, documentation and graphical symbols, in co-operation with SC 1, Basic conventions, and SC 8, Construction documentation, of ISO TC 10, Technical product documentation, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 82045-2 on 2004-12-01.

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2005-10-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2007-12-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 82045-2:2004 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

ISO 7200	NOTE	Harmonized as EN ISO 7200:2004 (not modified).
ISO 9660	NOTE	Harmonized as EN 29660:1989 (not modified).
ISO 10303-11	NOTE	Harmonized as EN ISO 10303-11:1995 (not modified).
ISO 10303-31	NOTE	Harmonized as EN ISO 10303-31:1995 (not modified).
IEC 61286	NOTE	Harmonized as EN 61286:2002 (modified).
IEC 61360-1	NOTE	Harmonized as EN 61360-1:2002 (not modified).

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE Where an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 61346	Series	Industrial systems, installations and equipment and industrial products - Structuring principles and reference designations	EN 61346-1	Series
IEC 61355	1997	Classification and designation of documents for plants, systems and equipment	EN 61355	1997
IEC 82045-1	2001	Document management Part 1: Principles and methods	EN 82045-1	2001
ISO 31-0	1992	Quantities and units Part 0: General principles	-	-
ISO 639-1	2002	Codes for the representation of names of languages Part 1: Alpha-2 code	-	-
ISO/IEC 2382-1	1993	Information technology - Vocabulary Part 1: Fundamental terms	-	-
ISO 3166-1	1997	Codes for the representation of names of countries and their subdivisions Part 1: Country codes	EN ISO 3166-1	1997
ISO 5455	1979	Technical drawings - Scales	EN ISO 5455	1994
ISO 5457	1999	Technical product documentation - Sizes and layout of drawing sheets	EN ISO 5457	1999
ISO 8601	2000	Data elements and interchange formats - Information interchange - Representation of dates and times	-	-
ISO 10303-1	1994	Industrial automation systems and integration - Product data representation and exchange Part 1: Overview and fundamental principles	ENV ISO 10303-1	1995

NORME INTERNATIONALE

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IEC 82045-2

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Partie 2: Eléments de métadonnées et modèle d'information de référence

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Part 2: Metadata elements and information reference model

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CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

DOCUMENT MANAGEMENT –

Part 2: Metadata elements and information reference model

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 82045-2 has been prepared by IEC technical committee 3: Information structures, documentation and graphical symbols, in co-operation with ISO subcommittees SC 1: Basic conventions and SC 8: Construction documentation of ISO technical committee 10: Technical product documentation.

This publication is published as a double logo standard.

The text of this standard is based on the following documents of IEC:

FDIS	Report on voting
3/712/FDIS	3/748/RVD

Full information on the voting for the approval of this part of this standard can be found in the report on voting indicated in the above table. In ISO, the standard has been approved by 17 P members out of 21 having cast a vote.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

In order to collect all requirements concerning the metadata on documents within one numerical series, ISO technical committee 10 and IEC technical committee 3 agreed to publish all parts of this International Standard within the IEC 82045 series.

IEC 82045 consists of the following parts under the general title *Document Management:*

Part 1: 2001, Principles and methods *(published by IEC)*

Part 2: 2004, Metadata elements and information reference model *(published by IEC)*

Further parts specific to individual application field requirements are under consideration.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

INTRODUCTION

This part of IEC 82045 presents information for the management of documents throughout their life cycle. It is based on the document concepts and the overall framework established in IEC 82045-1. It is composed of the following items:

a) A table collecting metadata element identifiers and their language-dependent labels including their definitions etc., shown in Clause 8.

b) Annex A: an EXPRESS based language-independent information model serving as an implementation-independent information reference model used in data exchange and for ease of implementation of document management systems. It provides the context of metadata elements associated with document management systems.

c) Annex B: an XML (eXtensible Markup Language) DTD (Document Type Definition) based on the information reference model and the metadata collection.

These parts use different modelling methods, with different limitations:

– The EXPRESS modelling method, using entities, relations and attributes and by which a complex network of entities and relations can be modelled;

– The XML DTD modelling method, using elements and (XML) attributes, but with the limitation that it has to be hierarchical;

– The table of document attributes (metadata elements) with an entirely flat structure, incapable of expressing even hierarchical relations, but simple and sufficient for many purposes.

In order to make the resulting descriptions equivalent, starting from the EXPRESS model:

– to make the document attributes fit into the hierarchical DTD model some entities and relations must be specialised and also renamed to take account of their original relations.

– to make the attributes fit into the table structure, they need to be even further specialised and the complete structure hidden in the names (identifiers) of the attributes, to the extent necessary to make them unambiguous in the actual context.

Therefore the names (identifiers) used in the table are often slightly different, but related, to those used to identify corresponding attributes in the EXPRESS model or in the XML DTD.

Relation to ISO 10303

Within the ISO 10303 series, parts 212 [17] and 214 [18] [1] have been developed using a common information model core. Both parts have been designed for the purpose of product data management in their respective application fields. Although the actual parts of ISO 10303 series contain some document related concepts they have not been developed focusing on document management requirements.

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[1] Numbers in square brackets refer to the bibliography.

It was originally envisaged to extend the above model subset with respect to document management requirements whilst keeping the technology used within the ISO 10303 series. During the development of this part of IEC 82045 however, it was found that doing so would limit the application possibilities of this standard and would force system developers to implement implicitly also the technologies used within the ISO 10303 series.

Therefore, the EXPRESS reference model in this standard is independent of any part of ISO 10303, although relevant concepts have been reused where possible.

This standard provides a concept that allows establishing relations from the information model of this standard to any other object of interest available within an information model external to this standard. The approach chosen in this part of IEC 82045 allows establishing in a flexible way relationships to items of interest for a document management system, available in an external information system, for example a PDM (Product Data Management) system.

DOCUMENT MANAGEMENT –

Part 2: Metadata elements and information reference model

1 Scope

This part of IEC 82045 provides a comprehensive set of standardized metadata elements for document management in accordance with IEC 82045-1.

To enable this, a standardized EXPRESS-based information reference model [30] is provided in Annex A. The information reference model is the basis from which the metadata elements are derived.

The information reference model also provides a standardized framework for data exchange and a basis for the implementation of a document management system.

This document also provides a standardized DTD (Document Type Definition) based on the XML (eXtensible Markup Language) language for the purpose of document exchange, see Annex B.

It is directed towards end users of document management systems. The Annexes are in addition directed primarily to developers of software for such systems.

The document is intended as a general basic resource for document management.

This part of IEC 82045 does not specify physical locations nor arrangements of labels on documents, nor layouts of drawings, documents etc.

Physical implementation of the information reference model or exchange formats are not part of this standard.

NOTE Although sometimes closely related to the document management, the following items are outside of scope of this standard: planning, product data management, workflow management, configuration change management, and electronic file management. These items may, however, be referred to as external objects.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61346 (all parts), *Industrial systems, installations and equipment and industrial products – Structuring principles and reference designations*

IEC 61355:1997, *Classification and designation of documents for plants, systems and equipment*

IEC 82045-1:2001, *Document management – Part 1: Principles and methods*

ISO 31-0:1992, *Quantities and units – Part 0: General principles*

ISO 639-1:2002, *Codes for the representation of names of languages – Part 1: Alpha-2 code*

ISO/IEC 2382-1:1993, *Information technology – Vocabulary – Part 1: Fundamental terms*

ISO 3166-1:1997, *Codes for the representation of names of countries and their subdivisions – Part 1: Country codes*

ISO 5455:1979, *Technical drawings – Scales*

ISO 5457:1999, *Technical product documentation – Sizes and layout of drawing sheets*

ISO 8601:2000, *Data elements and interchange formats – Information interchange – Representation of dates and times*

ISO 10303-1:1994, *Industrial automation systems and integration – Product data representation and exchange – Part 1: Overview and fundamental principles*

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this part of IEC 82045, the definitions of IEC 82045-1 and the following terms and definitions apply.

3.1.1
information model

conceptual model that describes a specific organization of data to provide communication for a given application context

[ISO 10303-1, 3.2.21, modified]

3.1.2
application reference model
information model that formally describes the information requirements and constraints for an application area

[ISO 10303-1, 3.2.8, modified]

3.1.3
data
representation of facts, concepts, or instructions in a formalized manner suitable for communication, interpretation, or processing by human beings or by automatic means

[ISO/IEC 2382-1, 01.01.02, modified]

3.1.4
context
frame of reference in which a construct is specified

[ISO 10303-1, 3.2.4, modified]