



SLOVENSKI STANDARD

SIST EN 62361-100:2016

01-november-2016

Harmonizacija kod kakovosti v TC 57 - 100. del: Pravila za poimenovanje in načrtovanje profilov CIM po shemi preslikave XML

Harmonization of quality codes across TC 57 - Part 100: Naming and design rules for CIM profiles to XML schema mapping

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Harmonisation des codes qualité à travers le TC 57 - Partie 100: Règles de désignation et de conception dans la mise en correspondance des profils CIM avec les schémas XML

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EUROPEAN STANDARD

EN 62361-100

NORME EUROPÉENNE

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ICS 33.200

English Version

Power systems management and associated information
exchange - Interoperability in the long term -
Part 100: CIM profiles to XML schema mapping
(IEC 62361-100:2016)

Gestion des systèmes de puissance et échanges
d'informations associés - Interopérabilité à long terme -
Partie 100: Mapping des profils CIM avec le schéma XML
(IEC 62361-100:2016)

Management von Systemen der Energietechnik und
zugehöriger Datenaustausch - Langfristige Interoperabilität -
Teil 100: Abbilden von CIM Profilen auf XML Schemen
(IEC 62361-100:2016)

This European Standard was approved by CENELEC on 2016-07-20. 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.

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Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

EN 62361-100:2016**European foreword**

The text of document 57/1704/FDIS, future edition 1 of IEC 62361-100, prepared by IEC/TC 57 "Power systems management and associated information exchange" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62361-100:2016.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2017-04-20
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-07-20

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The text of the International Standard IEC 62361-100:2016 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:

IEC 61968	NOTE	Harmonized in EN 61968 series.
IEC 62325	NOTE	Harmonized in EN 62325 series.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61968-11	-	Application integration at electric utilities - System interfaces for distribution management - Part 11: Common information model (CIM) extensions for distribution	EN 61968-11	-
IEC/TS 61970-2	-	Energy management system application program interface (EMS-API) - Part 2: Glossary	CLC/TS 61970-2	-
IEC 61970-301	-	Energy management system application program interface (EMS-API) - Part 301: Common information model (CIM) base	EN 61970-301	-
IEC 62325-301	-	Framework for energy market communications - Part 301: Common information model (CIM) extensions for markets	EN 62325-301	-
IEC 62325-450	2013	Framework for energy market communications - Part 450: Profile and context modelling rules	EN 62325-450	2013
W3C XML Schema Part 1	2004	XML Schema - Part 1: Structures	-	-
IETF RFC 3986	2005	Uniform Resource Identifier (URI): Generic Syntax	-	-

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INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Power systems management and associated information exchange –
Interoperability in the long term –
Part 100: CIM profiles to XML schema mapping**

**Gestion des systèmes de puissance et échanges d'informations associés –
Interopérabilité à long terme –
Partie 100: Mapping des profils CIM avec le schéma XML**

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ELECTROTECHNICAL
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**POWER SYSTEMS MANAGEMENT AND ASSOCIATED INFORMATION
EXCHANGE – INTEROPERABILITY IN THE LONG TERM –**

Part 100: CIM profiles to XML schema mapping

FOREWORD

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International Standard IEC 62361-100 has been prepared by IEC technical committee 57: Power systems management and associated information exchange.

This is the first edition of the standard.

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

FDIS	Report on voting
57/1704/FDIS	57/1735/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

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

In this document, the following print types are used:

- Words printed in **Arial Black** apply to terms that are defined as contextual model artefacts in 4.4.2,
- Words printed `Courier New` apply to terms that are used as XML Schema representation (as defined in 4.6) or in XML examples,
- Words printed “between quotes” apply to terms that are used as tokens in the normative clauses or that are defined as CIM artefacts.

A list of all parts of the IEC 62361 series, under the general title: *Power systems management and associated information exchange – Interoperability in the long term*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website 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.

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INTRODUCTION

The IEC 62361 series defines standards which address areas of interest that impact multiple standards and provide consistency for implementations.

This part of the IEC 62361 series describes a mapping from CIM profiles to W3C XML Schemas and defines the rules that CIM XML message payloads shall adhere to.

The principle objective of this part of IEC 62361 is to facilitate the exchange of information in the form of XML documents whose semantics are defined by the IEC CIM and whose syntax is defined by a W3C XML schema. This will facilitate the integration of all applications that use the XML Schema message payloads developed by the WGs and implemented independently by different vendors into their systems.

The common information model (CIM) specifies the basis for the semantics for message payload exchanges defined by the IEC. The profile specifications, which are contained in other parts of the IEC 62361 series, specify the content of the message payloads exchanged. The format/syntax of those payloads is specified in this part of IEC 62361.

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POWER SYSTEMS MANAGEMENT AND ASSOCIATED INFORMATION EXCHANGE – INTEROPERABILITY IN THE LONG TERM –

Part 100: CIM profiles to XML schema mapping

1 Scope

This part of IEC 62361 describes a mapping from CIM profiles to W3C XML Schemas.

The purpose of this mapping is to facilitate the exchange of information in the form of XML documents whose semantics are defined by the IEC CIM and whose syntax is defined by a W3C XML schema.

2 Normative references

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

IEC 61968-11, *Application integration at electric utilities – System interfaces for distribution management – Part 11: Common information model (CIM) extensions for distribution*

IEC TS 61970-2, *Energy management system application program interface (EMS-API) – Part 2: Glossary* <https://standards.iteh.ai/catalog/standards/sist/f0ca5e6e-5705-474a-bc95-31657f805dc5/sist-en-62361-100-2016>

IEC 61970-301, *Energy management system application program interface (EMS-API) – Part 301: Common information model (CIM) base*

IEC 62325-301, *Framework for energy market communications – Part 301: Common information model (CIM) extensions for markets*

IEC 62325-450:2013, *Framework for energy market communications – Part 450: Profile and context modelling rules*

XML Schema Part 1: Structures Second Edition W3C Recommendation 28 October 2004

IETF RFC 3986 Uniform Resource Identifier (URI): Generic Syntax January 2005

Semantic Annotations for WSDL and XML Schema W3C Recommendation 28 August 2007

3 Terms and definitions

For the purposes of this document, the terms and definitions of IEC TS 61970-2 apply, as well as the following.

NOTE Refer to the International Electrotechnical Vocabulary, IEC 60050, for general glossary definitions.

3.1 artefact

element of a model that represents objects of a given domain and their characteristics

3.2

canonical model

abstract model that represents all the major objects of a given domain (energy, electricity...) with artefacts

3.3

common information model

CIM

canonical model (abstract model) that represents all the major objects in an electric utility enterprise typically needed to model the operational aspects of a utility

Note 1 to entry: CIM is defined in the IEC 61968, IEC 61970 and IEC 62325 series.

Note 2 to entry: This note applies to the French language only.

3.4

contextual model

restricted subset of CIM artefacts

3.5

extensible markup language

XML

markup language that defines a set of rules for encoding documents in a format that is both human-readable and machine-readable

Note 1 to entry: This is defined in the XML Specification produced by the World Wide Web Consortium (W3C).

Note 2 to entry: This note applies to the French language only.

3.6

profile

uniquely named subset of CIM classes, associations and attributes needed to accomplish a specific type of interface

Note 1 to entry: A profile, as used in this document, is defined in IEC 62325-450:2013 and IEC 62361-101¹.

3.7

resource description format

RDF

family of World Wide Web Consortium (W3C) specifications originally designed as a metadata data model

Note 1 to entry: This term has come to be used as a general method for conceptual description or modelling of information that is implemented in web resources, using a variety of syntax formats.

Note 2 to entry: This note applies to the French language only.

3.8

semantic annotation for WSDL and XML Schema

SAWSDL

set of extension attributes for the Web Services Description Language (WSDL) and XML Schema definition language

Note 1 to entry: This note applies to the French language only.

¹ Under consideration.