

# 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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## CONTENTS

FOREWORD.....	5
INTRODUCTION.....	7
1 Scope.....	8
2 Normative references.....	8
3 Terms and definitions .....	8
4 System context.....	10
4.1 Profiling process .....	10
4.2 CIM .....	11
4.3 Contextual model .....	11
4.4 Contextual model artefacts.....	11
4.4.1 Contextual model artefacts and CIM subset.....	11
4.4.2 Contextual model artefacts definition .....	11
4.5 Mapping contextual model to XML schema .....	14
4.5.1 General .....	14
4.5.2 Traceability.....	14
4.6 XML Schema Representation .....	14
4.7 Namespaces .....	15
5 Mapping specifications.....	15
5.1 General.....	15
5.1.1 Example .....	15
5.1.2 Mapped name .....	16
5.2 Profile mapping.....	16
5.2.1 General .....	16
5.2.2 Namespace and version.....	17
5.2.3 Schema top level element .....	17
5.2.4 Types .....	18
5.2.5 Semantic annotation .....	18
5.3 Structured classes .....	19
5.4 Compound classes .....	20
5.5 Basic types .....	21
5.6 Simple types .....	21
5.6.1 Mapping rules .....	21
5.6.2 Possible facets .....	22
5.7 Data types mapping .....	23
5.8 Enumeration classes mapping .....	25
5.9 CodeList classes mapping.....	26
5.10 Simple properties mapping.....	27
5.11 Compound properties mapping .....	28
5.12 Object properties.....	29
5.12.1 Mapping rules overview.....	29
5.12.2 Typed object properties mapping.....	29
5.12.3 By reference object properties mapping.....	29
5.12.4 Union object properties mapping .....	30
5.13 Exclusive property group mapping.....	32
5.14 Documentation and categorized documentation .....	33
5.14.1 General mapping .....	33

5.14.2	Documentation mapping	33
5.14.3	Categorized documentation mapping	33
5.14.4	Stereotype mapping	33
5.15	Names	34
5.16	Mapping order	34
5.16.1	General mapping order basis	34
5.16.2	Alphabetical based mapping order	35
5.16.3	Business context based mapping order	36
5.17	Changing name rules	36
Annex A (normative) Use of dedicated XML schemas for datatypes, enumerations and codelists		38
A.1	Context	38
A.2	Modular schema design and mapping	38
A.3	Artefact mapping	39
A.3.1	General rule	39
A.3.2	Datatype, enumeration or codelist mapping	39
A.3.3	Simple property mapping	40
Annex B (informative) Contextual model representations		41
Annex C (informative) Changing name rules examples		42
C.1	Changing name rule context	42
C.2	Changing name rules when using "union" super class	42
C.2.1	General	42
C.2.2	Changing name rule when CIM association end role name and CIM super class name are the same	42
C.2.3	Changing name rule when CIM association end role name is the CIM super class name prefixed by a qualifier followed by an underscore	43
C.2.4	Changing name rule when CIM association end role name and the CIM super class name are completely different	44
C.3	Changing name rules when using complex properties with the same name	45
C.3.1	General	45
C.3.2	Changing name rule when CIM association end role name and CIM super class name are the same	45
C.3.3	Changing name rule when CIM association end role name is the CIM super class name prefixed by a qualifier followed by an underscore	46
C.3.4	Changing name rule when CIM association end role name and the CIM super class name are completely different	48
Bibliography		50
Figure 1 – Example XML Schema CIM-based profile		16
Figure 2 – Example of alphabetical order		34
Figure 3 – Example of business order		34
Figure 4 – Example business context order of a schema		36
Figure C.1 – Example of end role name matching super class name		42
Figure C.2 – Contextual model end role name matching super class name		43
Figure C.3 – Example of end role name with a qualifier		43
Figure C.4 – Contextual model end role name with a qualifier		44
Figure C.5 – End role name and super class name different		44
Figure C.6 – Contextual model with end role name different from super class name		45

Figure C.7 – Example of end role name matching super class name .....46

Figure C.8 – Contextual model end role name matching super class name.....46

Figure C.9 – Example of end role name with a qualifier.....47

Figure C.10 – Contextual model end role name with a qualifier .....47

Figure C.11 – End role name and super class name different.....48

Figure C.12 – Contextual model with end role name different from super class name .....48

  

Table 1 – Contextual model artefacts .....12

Table 2 – Basic Types .....21

Table 3 – Facets.....3

Table B.1 – Contextual model representation .....41

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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**

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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

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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.

# 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*

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