

Energy management system application program interface (EMS-API) —

Part 501: Common Information Model Resource Description Framework (CIM RDF) schema

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British Standard

ICS 33.200

National foreword

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**Energy management system application program interface (EMS-API)
Part 501: Common Information Model Resource Description Framework
(CIM RDF) schema
(IEC 61970-501:2006)**

Système de gestion d'énergie
Interface de programmation d'application
(EMS-API)
Partie 501: Schéma de cadre général
pour la description des ressources
du modèle d'information commun
(CIM RDF)
(CEI 61970-501:2006)

Anwendungsprogramm-Schnittstelle
für Netzführungssysteme (EMS-API)
Teil 501: Allgemeines Informationsmodell
(CIM) –
Resource Description Framework
(CIM RDF) Schema
(IEC 61970-501:2006)

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CENELEC

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

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Foreword

The text of document 57/801/FDIS, future edition 1 of IEC 61970-501, prepared by IEC TC 57, Power systems management and associated information exchange, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61970-501 on 2006-04-01.

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at national level by publication of an identical
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- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2009-04-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61970-501:2006 was approved by CENELEC as a European Standard without any modification.

CONTENTS

INTRODUCTION.....	4
1 Scope.....	5
2 Normative references	5
3 Terms and definitions	6
4 Structure of an XML document	6
4.1 General.....	6
4.2 Elements	7
4.3 Attributes.....	7
5 Metadata and RDF Schema.....	7
5.1 General.....	7
5.2 Resource.....	7
5.3 Property	8
5.4 Namespaces	8
5.5 CIM RDF Schema extensions	8
6 CIM metadata.....	11
6.1 General.....	11
6.2 Schema.....	11
6.3 Mapping from UML	12
6.4 Example CIM RDF Schema elements	13
Annex A (informative) CIM RDF Schema generation Mechanism for schema generation ...	17
Annex ZA (normative) Normative references to international publications with their corresponding European publications	19

INTRODUCTION

This standard is part of the IEC 61970 series that define an Application Program Interface (API) for an Energy Management System (EMS). This standard is based upon the work of the EPRI Control Center API (CCAPI) research project (RP-3654-1).

This part specifies the mapping between the conceptual model specified as Unified Modeling Language (UML) defined in IEC 61970-3XX series: Common Information Model and the machine readable Extensible Markup Language (XML) representation of that schema using the Resource Description Framework (RDF) Schema specification language.

ENERGY MANAGEMENT SYSTEM APPLICATION PROGRAM INTERFACE (EMS-API) –

Part 501: Common Information Model Resource Description Framework (CIM RDF) schema

1 Scope

This International Standard specifies a Component Interface Specification (CIS) for energy management systems application program interfaces. This part of IEC 61970 specifies the format and rules for producing a machine readable form of the Common Information Model (CIM) as specified in the IEC 61970-301 standard. It describes a CIM vocabulary to support the data access facility and associated CIM semantics.

This part of IEC 61970 supports a mechanism for applications from independent suppliers to access CIM metadata in a common format and with standard services for the purpose of subsequent CIM data access. Secondary objectives are to provide CIM versioning capabilities and a mechanism that is easily extensible to support site-specific needs. The proposed solution:

- is both machine readable and human readable, although primarily intended for programmatic access;
- can be accessed using any tool that supports the Document Object Model (DOM) application program interface;
- is self-describing;
- takes advantage of current web standards.

This document is the Level 2 Component Interface Specification document that describes in narrative terms (with text and examples based on the CIM), the detailed definition of the CIM metadata interface to be standardized.

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 61970-1, *Energy management system application program interface (EMS-API) – Part 1: Guidelines and general requirements*

IEC 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 60050 series: *International Electrotechnical Vocabulary*