

### **SLOVENSKI STANDARD** SIST EN 61970-453:2008

01-november-2008

#### Aplikacijski programski vmesnik za sistem upravljanja z energijo (EMS-API) - 453. del: Izmenjava grafičnih podatkov na podlagi CIM (IEC 61970-453:2008)

Energy management system application program interface (EMS-API) -- Part 453: CIM based graphics exchange

Schnittstelle für Anwendungsprogramme für Netzführungssysteme (EMS-API) - Teil 453: Übermittlung von CIM-basierten Daten für die graphische Darstellung

Interface de programmation d'application pour systèmes de gestion d'énergie (EMS-API) - Partie 453 : Echanges graphiques basés sur CIM 2008

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Ta slovenski standard je istoveten z: EN 61970-453-2008 EN 61970-453:2008

#### ICS:

| 29.240.30 | Krmilna oprema za<br>elektroenergetske sisteme | Control equipment for electric power systems |
|-----------|--|--|
| 35.200    | Vmesniška in povezovalna<br>oprema             | Interface and interconnection equipment      |

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#### SIST EN 61970-453:2008

# EUROPEAN STANDARD NORME FUROPÉENNE EUROPÄISCHE NORM

# EN 61970-453

August 2008

ICS 33.200

English version

#### Energy management system application program interface (EMS-API) -Part 453: CIM based graphics exchange (IEC 61970-453:2008)

Interface de programmation d'application pour systèmes de gestion d'énergie (EMS-API) -Partie 453: Echanges graphiques basés sur CIM (CEI 61970-453:2008)

Schnittstelle für Anwendungsprogramme für Netzführungssysteme (EMS-API) -Teil 453: Übermittlung von CIM-basierten Daten für die graphische Darstellung (IEC 61970-453:2008)

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

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#### Foreword

The text of document 57/874/CDV, future edition 1 of IEC 61970-453, 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 61970-453 on 2008-07-01.

The following dates were fixed:

| - | latest date by which the EN has to be implemented<br>at national level by publication of an identical<br>national standard or by endorsement | (dop) | 2009-04-01 |
|---|--|-------|------------|
| - | latest date by which the national standards conflicting with the EN have to be withdrawn   | (dow) | 2011-07-01 |

Annex ZA has been added by CENELEC.

#### **Endorsement notice**

The text of the International Standard IEC 61970-453:2008 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 61970-1   | NOTE | Harmonized as EN 61970-1:2006 (not modified).     |
|---|------|---|
| IEC/TS 61970-2  | NOTE | Harmonized as CLC/TS 61970-2:2005 (not modified). |
| IEC 61970-400   | NOTE | Harmonized in EN 61970-400 series (not modified). |
| IEC 61970-500 https://sNOTEdsHarmonized/in/EN/61970-500/series (not-modified))2-9912<br>3792a99ac85f/sist-en-61970-453-2008 |      |   |

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

| Publication   | Year                | Title  | <u>EN/HD</u> | <u>Year</u>        |
|---------------|---------------------|--|--------------|--------------------|
| IEC 61970     | Series              | Energy management system application<br>program interface (EMS-API)  | EN 61970     | Series             |
| IEC 61970-301 | _ 1)                | Energy management system application<br>program interface (EMS-API) -<br>Part 301: Common Information Model (CIM)<br>Base  | EN 61970-301 | 2004 <sup>2)</sup> |
| IEC 61970-402 | _ 1)                | Energy management system application<br>program interface (EMS-API) -<br>Part 402: Common services   | EN 61970-402 | 2008 <sup>2)</sup> |
| IEC 61970-501 | - <sup>1)</sup> iTo | Energy management system application<br>program interface (EMS-API) -<br>Part 501: Common Information Model<br>Resource Description Framework (CIM RDF)<br>schema<br><u>SIST EN 61970-453:2008</u><br>ndards.iteh.ai/catalog/standards/sist/e2768954-1bae-4a0<br>3792a99ac85f/sist-en-61970-453-2008 |              | 2006 <sup>2)</sup> |

<sup>&</sup>lt;sup>1)</sup> Undated reference.

<sup>&</sup>lt;sup>2)</sup> Valid edition at date of issue.

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# IEC 61970-453

Edition 1.0 2008-06

# INTERNATIONAL STANDARD

Energy management system application program interface (EMS-API) – Part 453: CIM based graphics exchange .iteh.ai)

> <u>SIST EN 61970-453:2008</u> https://standards.iteh.ai/catalog/standards/sist/e2768954-1bae-4a02-9912-3792a99ac85f/sist-en-61970-453-2008

INTERNATIONAL ELECTROTECHNICAL COMMISSION

PRICE CODE

ISBN 2-8318-9843-9

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#### INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

#### Part 453: CIM based graphics exchange

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International Standard IEC 61970-453 has been prepared by IEC technical committee 57: Power systems management and associated information exchange.

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

| CDV        | Report on voting |
|------------|------------------|
| 57/874/CDV | 57/932/RVC       |

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.

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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
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A bilingual version of this publication may be issued at a later date.

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#### INTRODUCTION

This standard is one of the IEC 61970 series that define an application program interface (API) for an Energy Management System (EMS).

The Part 3 series of IEC 61970 specify a Common Information Model (CIM): a logical view of the physical aspects of EMS information. The Part 3 series includes Part 301: Common Information Model (CIM) Base.

This standard is one of the IEC 61970, Part 4 series that define utility control center component interface specifications (CIS). Part 4 specifies the functional requirements for interfaces that a component (or application) shall implement to exchange information with other components (or applications) and/or to access publicly available data in a standard way. The component interfaces describe the specific message contents and services that can be used by applications for this purpose. The implementation of these messages in a particular technology is described in Part 5 of this series of standards.

Energy Management Systems display CIM data mostly in tabular lists and graphic schematic displays. The graphics schematic definitions may be included in the CIM, as defined by the location package IEC 61968, Part 11, or they may be stored in various proprietary formats.

Part 453 specifies guidelines for the exchange of graphic schematic definitions. Part 553-4 defines the SVG format for exchanging graphic schematic definitions.

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