TR IEC/TS 61970-2:2025

IEC/TS 61970-2:2004, IDT

(ICS 33.200)

TECHNICAL REFERENCE

Energy management system application program interface (EMS-API)

– Part 2: Glossary

Singapore Standards Council

TR IEC/TS 61970-2:2025
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Energy management system application program interface (EMS-API)

– Part 2: Glossary

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National Foreword

This Technical Reference (TR) was prepared by the Working Group on Smart Grids set up by the Technical Committee on Power System and Utilisation under the purview of the Electrical and Electronic Standards Committee.

This TR is an identical adoption of IEC/TS 61970-2:2004, “Energy management system application program interface (EMS-API) – Part 2: Glossary” published by the International Electrotechnical Commission.

In Singapore, the standard transmission network voltage levels are 400 kV, 230 kV and 66 kV. For distribution, the standard network voltages are 22 kV, 6.6 kV, 400 V and 230 V.

This TR is a provisional standard made available for application over a period of three years. The aim is to use the experience gained to update the TR so that it can be adopted as a Singapore Standard. Users of the TR are invited to provide feedback on its technical content, clarity and ease of use. Feedback can be submitted using the form provided in the TR. At the end of the three years, the TR will be reviewed, taking into account any feedback or other considerations, to further its development into a Singapore Standard if found suitable.

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TECHNICAL SPECIFICATION

IEC TS 61970-2

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2004-07

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

Part 2: Glossary

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Publication numbering

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Consolidated editions

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International Electrotechnical Commission, 3, rue de Varembé, PO Box 131, CH-1211 Geneva 20, Switzerland
Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: inmail@iec.ch Web: www.iec.ch

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

Part 2: Glossary

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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- the subject is still under technical development or where, for any other reason, there is the future but no immediate possibility of an agreement on an International Standard.

Technical specifications are subject to review within three years of publication to decide whether they can be transformed into International Standards.

IEC 61970-2, which is a technical specification, has been prepared by IEC Technical Committee 57: Power systems management and associated information exchange.

The specific standards documents for which this glossary applies are listed in IEC 61970-1[1].

The text of this technical specification is based on the following documents:

Enquiry draft	Report on voting
57/666/CDV	57/725/RVC

Full information on the voting for the approval of this technical specification 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.

IEC 61970 consists of the following parts, under the general title *Energy Management System Application Program Interface (EMS-API):*

Part 1: Guidelines and general requirements[1]

Part 2: Glossary

Part 301: Common Information Model (CIM) Base

Part 302: Common information model (CIM) financial, energy scheduling and reservations[1]

Part 401: Component Interface Specification (CIS) framework

Part 402: Component Interface Specification (CIS) – Common services[1]

Part 403: Component Interface Specification (CIS) – Generic data access [1]

Part 404: Component Interface Specification (CIS) – High speed data access[2]

Part 405: Component Interface Specification (CIS) – Generic eventing and subscription[2]

Part 407: Component Interface Specification (CIS) – Time series data access[2]

Part 453: Exchange of graphics schematics definitions (common graphics exchange)[2]

Part 501: Common Information Model (CIM) XML codification for programmable reference and model data exchange[2]

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

- transformed into an International standard,
- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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

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1 Under consideration.

2 Under consideration.

INTRODUCTION

This Technical specification is part of the IEC 61970 series, which defines 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). The principle objectives of the EPRI CCAPI project are to:

– reduce the cost and time needed to add new applications to an EMS;

– protect the investment in existing applications that are working effectively in an EMS.

The principal task of the CCAPI project is to develop a set of guidelines, or specifications, to enable the creation of “plug-in” applications[3] in the control center environment.

This part of the IEC 61970 series provides a glossary of terms and abbreviations that are specific to the IEC 61970 series or may require interpretation as to how they were used in it.

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[3] A plug-in application is defined to be a piece of software that may be installed on a system with minimal effort and no modification of source code; i. e., the way software packages are installed on a desktop computer. The CCAPI Project goal is to at least approach that ideal by reducing the often significant efforts currently required to install third-party applications in an EMS.

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

Part 2: Glossary

1 Scope

This Technical specification provides a glossary for the volume of work produced as part of the IEC 61970 series of documents. Terms and abbreviations that are either specific to the series, or that require explanation because of the way that they are used in it, are supplied.

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*