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Energy management system application program interface (EMS-API) – Part 556: CIM based graphic exchange format (CIM/G)

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

Part 556: CIM based graphic exchange format (CIM/G)

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- the required support cannot be obtained for the publication of an International Standard, despite repeated efforts, or
- 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 TS 61970-556, which is a technical specification, has been prepared by IEC technical committee 57: Power systems management and associated information exchange.

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

Enquiry draft	Report on voting
57/1731/DTS	57/1770/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 document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 61970 series, published under the general title *Energy management system application program interface (EMS-API)*, can be found on the IEC website.

In this technical specification, the following print types are used:

– *attributes for user defined graphic elements: in italic type.*

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

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- withdrawn,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

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

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

This technical specification is part of the IEC 61970 series that define an Application Program Interface (API) for an Energy Management System (EMS).

IEC 61970-301 specifies a Common Information Model (CIM): a logical view of the physical aspects of an electric utility operation. The CIM is described using the Unified Modelling Language (UML), a language used to specify, visualize, and document systems in an object oriented manner.

This part of IEC 61970, which is a technical specification, specifies how to exchange CIM based graphic objects using XML, which details how to display an object. This document defines a format to facilitate efficient graphic data transfer, which will meet the real-time requirements for on-line remote diagram browsing and exchanging.

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

Part 556: CIM based graphic exchange format (CIM/G)

1 Scope

This part of IEC 61970, which is a technical specification, specifies a CIM-based graphic exchange format (CIM/G). It includes graphic file structure and graphic element definitions.

This document supports a mechanism for off-line exchange of graphic displays and on-line remote browsing of diagrams among distinct SCADA/EMS systems that may be provided by multiple vendors and located in different places.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 61970-301, *Energy management system application program interface (EMS-API) – Part 301: Common information model (CIM) base*

IEC 61970-453, *Energy management system application program interface (EMS-API) – Part 453: Diagram layout profile*

IEC TS 61970-555, *Energy management system application program interface (EMS-API) – Part 555: CIM based efficient model exchange format*