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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 43529.3-2023

**Standardized product ontology register and transfer by
spreadsheets - Part 3: Interface for common information model**

利用电子表格标准化产品本体的注册和传递 第3部分：公共信息模型接口

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents" Drafting:

This document is Part 3 of GB/T 43529 "Registration and Delivery of Standardized Product Ontologies Using Electronic Forms": GB/T 43529 has been the following sections have been published:

---Part 3: Public Information Model Interface;

---Part 5: Activity description interface:

This document is equivalent to IEC 62656-3:2015 "Registration and delivery of standardized product ontologies using spreadsheets - Part 3: Public Information Model Interface":

Please note that some content in this document may be subject to patents: The publisher of this document assumes no responsibility for identifying patents:

Introduction

GB/T 43529 "Registration and Delivery of Standardized Product Ontologies Using Electronic Forms" is based on the public standards of GB/T 17564 and GB/T 17645:

The common data dictionary model registration and application information defines methods for registering and transferring various product and service ontologies: IEC Common Data Dictionary the abbreviation of IEC CDD is a database maintained online: The IEC Common Data Dictionary is a cross-domain data dictionary covering all Products

and services in the field of electronic technology are maintained and updated based on the database managed by the IEC Central Office:

The Common Information Model, originally defined in IEC 61968 and IEC 61970, often shortened to "CIM", provides a standard approach to represent the main objects that power enterprise operators need to model: The model contains the public classes, properties, and relationships between these objects:

This model is an information model of an energy management system (EMS) and is recognized as a standard ontology model for smart grids: CIM compliant information the model adopts the UML (Unified Modeling Language) format of IEC 61970-301 and the RDF (Resource Description Framework) format of IEC 61970-501:

GB/T 43529 "Registration and Delivery of Standardized Product Ontologies Using Electronic Forms" is intended to consist of the following parts:

---Part 1: Logical structure of data blocks: The purpose is to define the logical structure of data blocks used to define, transfer and register products ontology:

---Part 2: Application Guide for use with the Common Data Dictionary (CDD): The purpose is to provide guidance on the application of data blocks and Used to define data dictionaries that can be imported and exported from CDD:

---Part 3: Interface to the public information model: The purpose is to define the mapping specification of data blocks to the Common Information Model (CIM) to it is convenient to import CIM ontology into the public data dictionary:

---Part 5: Activity description interface: The purpose is to define activity model blocks (PAM), which are used to represent activities and relationships within activities:

---Part 8: Network service interface for data blocks: The purpose is to provide data exchange between server and client or between servers:

Data block network service interface specification:

Use spreadsheets to standardize product ontology registration and Delivery Part 3: Common Information Model Interface

1 Scope

This document specifies the original definitions in IEC 62656 (all parts), IEC 61968 (all parts), and IEC 61970 (all parts) the interface between CIM metamodels: CIM including IEC 62325 (all parts) and the interfaces specified in this document are applicable Model defined in IEC 62325-301:2018: This document defines the mapping between IEC 62656 (all parts) and the CIM metamodel:

mapping specification to facilitate the import of CIM ontology into the IEC public data

dictionary and ensure ontology interoperability between the two standards and even broader standards:

sex: The basis of mapping from CIM to the data model in IEC 62656-1 refers to CIM in UML format:

According to the interface specifications provided in this document, the smart grid ontology defined in CIM (including information in the fields of materials, environment, machinery and logistics) information) become accessible and interoperable in ontology blocks derived from other standards: This specification can also cover the life cycle of the product:

This document also defines the conversion of the contents of the IEC Common Data Dictionary into IEC 61968 (all parts) and IEC 61970 (all parts):

Method of defining the format in points): This document does not involve the standardization of elements defined in the IEC Common Data Dictionary as part of the CIM ontology:

points, because all definitions in the IEC Public Data Dictionary are already part of the widely recognized IEC 61360-4: It enables storage the information in the IEC public data dictionary serves as a basic resource for further standardization or customization in the power and electrical field or other user fields:

ization, especially suitable for a series of extended uses of CIM standards:

The data model defined in this document is a logical structure based on data blocks specified in IEC 62656-1, which can also be called "blocks", as the abbreviation of product body registration or delivery medium: Such a block usually appears as a spreadsheet page: A data model consisting of a set of blocks is called "Ontology Model Nugget", which is abbreviated as "POM" in the remainder of this document:

This document specifies:

- Mapping rules and principles for importing CIMUML objects into POM;
- Syntax and semantic requirements for CIM object block expression;
- CIM object blocks have segmented version control mechanism in POM:

This document does not specify:

- Definition of the interface between CIMUML and CIMRDF;
- Specification of CIMUML syntax and semantic requirements;
- Specification of the syntax and semantic requirements of CIMRDF: