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INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Standardized product ontology register and transfer by spreadsheets – Part 5: Interface for activity description

Enregistrement d'ontologie de produits normalisés et transfert par tableurs – Partie 5: Interface pour la description des activités

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STANDARDIZED PRODUCT ONTOLOGY REGISTER AND TRANSFER BY SPREADSHEETS –

Part 5: Interface for activity description

FOREWORD

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International Standard IEC 62656-5 has been prepared by subcommittee 3D: Product properties and classes and their identification, of IEC technical committee 3: Information structures and elements, identification and marking principles, documentation and graphical symbols.

The text of this International Standard is based on the following documents:

CDV	Report on voting
3D/257/CDV	3D/287/RVC

Full information on the voting for the approval of this International Standard 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 62656 series, published under the general title *Standardized product ontology register and transfer by spreadsheets*, can be found on the IEC website.

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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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STANDARDIZED PRODUCT ONTOLOGY REGISTER AND TRANSFER BY SPREADSHEETS –

Part 5: Interface for activity description

1 Scope

This part of IEC 62656 specifies a method for representing activities and relations among the activities by a tabular ontology representation, called “parcellized activity model” or PAM for short, which is a specialized use of a generic tabular ontology data model, known as the parcellized ontology model (POM) defined in Part 1 of the IEC 62656 series. The activities that can be described by this document include part or whole of an enterprise, an organization or a collection of services, a set of events or processes which interact with each other by exchanging physical or non-physical entities. This part of IEC 62656 also defines a method for uniquely identifying activities, or their homologues happenings in a certain sequence. In addition, this document identifies flows of information, objects or materials exchanged among activities, where each of the activities is represented by a class and each flow by a relation.

Consequently, this document enables characterization, classification, and identification of a set of activities as part of a normalized ontology. And this enables registering of a pattern of activities as a set of metadata and uploading it onto the IEC 61360 Common Data Dictionary (CDD), maintained as an online database of the electrotechnical concepts.

Additionally, this part of IEC 62656 provides a method to integrate ontologies of products and activities including services, in a single model. This means a product can be analyzed in its operational context for service. Such an integrated view will help people of different technical backgrounds to see and share knowledge about the extent of an enterprise that requires the products and services as indispensable resources. Such a data representation will also help analyse the key functionalities of an enterprise and its available resources, with clear definitions, limitations and interactions among them, when people are required to respond or react to a new external condition or situation in a short time frame, in particular, at an emergency or natural hazard.

Meanwhile, this part of IEC 62656 does not intend to provide a detailed algorithmic description of a flow of information, time-chart of processes, or sequential ordering of events that will be necessary in a software design or programming phase of an information system that handles activities or events. These detailed specifications of the algorithms and associated construction of the data structures are left to the realm of software engineering methodology and tools where there are so many schools and styles already, such as UML (Unified Modelling Language), BPMN, SysML, DFD, IDEF, and other CASE (Computer Aided Software Engineering) tools.

This International Standard neither intends to standardize nor introduce a new method of graphic description for activities or processes. Ideally, an ontology of activities modelled by this International Standard must be expressible by a number of existing graphical presentation tools and process description languages for activities.

Nevertheless, some graphical presentations in the style of such tools or languages are helpful for making the people understand the content of the PAM, and therefore, they are used in this International Standard. In most of the cases, IDEF-0 is preferred for the purpose, because it describes both activities and flows of things among the activities, but any other choices of tools or languages can be made, wherever they are appropriate and relevant.