

TECHNICAL SPECIFICATION

Preparation and processing of source definitions for data element types –
Guidelines for product committees
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IEC TS 62768:2012

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**PREPARATION AND PROCESSING OF SOURCE
DEFINITIONS FOR DATA ELEMENT TYPES –
GUIDELINES FOR PRODUCT COMMITTEES**

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

IEC 62768, which is a technical specification, has been prepared by IEC technical committee 3: Information structures, documentation and graphical symbols.

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

Enquiry draft	Report on voting
3/1079A/DTS	3/1101/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.

The committee has decided that the contents of this publication will remain unchanged until the stability 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- withdrawn,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 publication may be issued at a later date.

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PREPARATION AND PROCESSING OF SOURCE DEFINITIONS FOR DATA ELEMENT TYPES – GUIDELINES FOR PRODUCT COMMITTEES

1 Scope

This Technical Specification specifies how product committees, including committees producing horizontal standards, intending to submit Data Element Types (DETs) for inclusion in the IEC Component Data Dictionary (IEC CDD), should specify the source descriptions in their own standard; and specify the information to be sent to SC3D for inclusion in IEC CDD.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61360-1:2009, *Standard data elements types with associated classification scheme for electric items – Part 1: Definitions – Principles and methods*

IEC 61360-2, *Standard data elements types with associated classification scheme for electric components – Part 2: EXPRESS Dictionary schema*

IEC 61360-DB, *IEC Component Data Dictionary (IEC CDD) IEC 61360-4)*

IEC 62656-1, *Standardized product ontology register and transfer by spreadsheets – Part 1: Logical structure for data parcels¹*

IEC/TS 62656-2, *Standardized product ontology register and transfer by spreadsheets – Part 2: Implementation guide for parcel interchange with IEC CDD²*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

NOTE Words shown in *italics* in a definition in Clause 3 are defined as terms elsewhere in the clause.

3.1 attribute

any one of the properties to describe an entity, possibly involving one or more other entities

[SOURCE: IEC 61360-1:2009, 2.12]

Note 1 to entry: In this context “entity” refers to a “data element type”, and “property” refers to a parameter suitable for the description of this.

¹ To be published.

² To be published.

3.2

(characteristic) property

defined parameter suitable for the description and differentiation of objects

Note 1 to entry: The term *(characteristic) property* (of an object) is **not** identical with the term *data element type* used in IEC 61360. A *data element type* is a unit of data for which the identification, description and value representation have been specified **in the context of a dictionary**, while the term *(characteristic) property* is used for an **occurrence** of such a *data element type in the context of a specification of an object. This distinction makes it possible to qualify a property in an object specification and still refer to the same *data element type* definition in the dictionary.*

[SOURCE: IEC/PAS 62569-1:2009, 3.1.6]

3.3

data element type

DET

unit of data for which the identification, description and value representation have been specified

[SOURCE: IEC 61360-1:2009, 2.3]

3.4

horizontal standard

standard on fundamental principles, concepts, terminology or technical characteristics, relevant to a number of technical committees and of crucial importance to ensure the coherence of the corpus of standardization documents

[SOURCE: IEC Guide 108:2006, 3.1]

3.5

product standard

standard that specifies requirements to be fulfilled by a product or group of products to establish its fitness for purpose

Note 1 to entry: A *product standard* may include, in addition to the fitness-for-purpose requirements, directly or by reference, aspects such as terminology, sampling, testing, packaging and labelling and, sometimes, processing requirements.

Note 2 to entry: A *product standard* can either be complete or not, according to whether it specifies all or only a part of the necessary requirements. In this respect, one may differentiate between standards such as dimensional, material and technical delivery standards.

[SOURCE: ISO/IEC Guide 2:2004, 2.4]

4 General

4.1 Background information

General guidelines regarding the specification of product properties are provided in ISO/IEC Guide 77, all parts.

Information on the description of Data Element Types (DETs) is provided in the horizontal standard IEC 61360-1.

A dictionary information model using EXPRESS modeling language is provided in the horizontal standard IEC 61360-2.

Information on the application of DETs for specification of characteristic properties of products is provided in IEC 62569, all parts.

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4.3 Source standard

Every DET is supposed to emanate from a *source standard* that is reliable with regard to the technological knowledge. For products the source standard is the relevant product standard. For DETs of generic nature TC3 with SCs can often provide the source standards. In other cases other horizontal standards may be used.

A source standard should contain unambiguous specifications of the DETs.

In this publication such source descriptions are assumed to be handled in a specific annex “Data Element Type definitions” to a product standard.

The preparation of the source standard (with its annex) is the responsibility of the relevant technical committee.

4.4 Avoiding contradictory standards

A DET is described by a set of attributes.

A complete DET description can, in the IEC CDD, require up to more than 20 attributes. Many of them are of “information technological nature” and of little interest to the originating experts.

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Therefore, the source descriptions need to comprise only those attributes that are of interest to these experts. Only those attributes should also be documented in the product standard. This is a way to keep the source relevant to the product committee experts, but also to minimize the risk for contradictions between the product standard and the IEC CDD.

In case of contradictions between the annex of the product standard and the IEC CDD, the latter shall, after completed standardization procedure, be the valid IEC standard.

If changes in the IEC CDD need to be made, such changes need to be introduced on the initiative of the committee responsible for source standard or other interested parties, following the normal database procedure.

5 Template for the Annex “Data Element Type definitions”

5.1 General

Annex A of this publication contains a template for an annex to become part of a product standard.

The annex says:

The publication in hand is the source standard for the data element types defined in A.2. For the purpose of this standard only a subset of the full descriptions are provided, at least containing: identification number, preferred name and definition.

It is recommended to deal also with the attributes *data type* and *values* during the development in the product committee. However, in order to avoid discrepancies between the

annex in the product standard and the content of the IEC CDD, it is recommended *not to publish* more than the mentioned minimal information in the annex of the product standard, and leave the remaining attributes for publication in the IEC CDD.

5.2 Forms of presentation

The template allows the use of two methods of presentation of the proposed DETs:

tabular form, see A.2;

list form, see A.3.

Only one form should be chosen. The tabular form is recommended if a large number of DET-definitions are to be dealt with; the list form may be preferable in simple cases.

6 Change request for the IEC CDD, to be sent to SC3D

6.1 General

All source descriptions should be included and further specified in a *change request* submitted to SC3D for standardization.

NOTE The term *change request* refers to the *change of the content of the IEC CDD* and is used at the initial introduction of DETs in the database as well as for later possible changes.

If changes to the descriptions in A.2 to A.3, or if any other modification to the referenced DET definitions should be required, such issues shall also be subject for such a Change request.

The processing shall follow *Annex SL of ISO/IEC Directives, IEC Supplement: Procedures specific to IEC (2012)*.

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NOTE In addition SC3D has prepared document 3D/168/INF IEC 61360 *Quality guide*, which is obtainable from the SC3D Secretariat.

6.2 Preliminaries

A first draft of the change request (containing at least the *preferred names* of the attributes intended to be included in the annex of the actual publication) shall be sent to the Secretariat of SC3D preferably already when the product standard publication is on the CD stage, in order to allow *registration* of the DETs as “proposed”.

The relevant *identification numbers* for the DETs will be obtained in return.

The identification numbers for the DETs can then be included in the annex of the actual publication so that links to the IEC CDD can be established.

NOTE The standardization procedure for the DETs *can then be run in parallel* to standardization of the actual publication. Via the link the actual state of the standardization can be studied at any time during the following standardization process for the publication. As the standardization of the DETs, following the database procedure, is intended to run faster than the normal standardization procedure for the publication, the DETs are likely to be formally standardized when the actual product publication reaches the FDIS or at least the IS state.

6.3 Form of presentation

The change request shall be prepared as a set of spread sheets following the guidelines provided by SC3D. Please refer to IEC 62656-1 and IEC/TS 62656-2.