



## Usage Guide for the STEP PDM Schema V1.2

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## Usage Guide for the STEP PDM Schema

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## Abstract

The STEP PDM (Product Data Management) Schema is a reference information model for the exchange of a central, common subset of the data being managed within a PDM system. It represents the intersection of requirements and data structures from a range of STEP Application Protocols, all generally within the domains of design and development of discrete electro/mechanical parts and assemblies.

The STEP PDM Schema is *not* a specification for the functionality required for the complete scope of all PDM system functionality – i.e., it is *not* the union, but the intersection, of functionality present in the set of STEP Application Protocols. There exists functionality important for complete PDM functionality that is not represented in the PDM Schema, but is in other units of functionality present in STEP APs.

By definition, a PDM system is something that manages data about products. At the central core of PDM information is product identification. A product in STEP represents the concept of a general managed item within a PDM system. In the STEP PDM Schema, the general product concept may be interpreted as either a Part (see section 1) or a Document (see section 5). In this way, parts and documents are managed in a consistent and parallel fashion. Section 12 describes a mechanism to associate product data with an additional identifier (alias).

Also central to the functionality of many PDM systems is identification of external files (both digital and physical), their relationship to managed documents (see section 8), and how they can be associated with core product identification (see section 10). The external file reference mechanism in the STEP PDM Schema is described in section 7 of this document.

Classification of products is important in a PDM system for information classification and retrieval. It also supports basic type distinction between products that are parts and those that are documents. In the PDM Schema, product classification is used consistently for parts (see section 2) and documents (see section 6).

Product properties are integrally related to the definition of an identified product, and so are naturally also included in the central core PDM information. Sections 3 and 9 discuss properties associated with an identified product, interpreted, respectively, as either a part or a document.

Various general authorization and organizational data that are related to core product identification play an important role in PDM systems. Section 13 of this document describes the various organizational and management constructs that support product authorization in the STEP PDM Schema.

Product structures are the principle relationships that define assemblies and product configurations. Section 4 details part structures in the STEP PDM Schema; section 11 describes document structures. Configuration identification and effectivity information related to these structures is detailed in section 14.

Section 15 describes structures to manage the documentation of requests and corresponding orders for engineering action in support of the change management process. Also included are representations for contract and project identification.

Finally, Section 16 summarizes recommendations related to measures and units.

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