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The
2007
Lawrence D. Eicher Leadership Award



Short introduction to the semantic projects in ISO/TC 184/SC 4 Industrial Data (for W3C /WoT Open day discussion)

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2021-06-28



SC4 structure



SECRETARIAT: [ANSI](#)

Committee Manager:

[Ms Dana Tripp](#)

Chairperson (until end 2023):

Mr Kenneth Swope

ISO Technical Programme Manager [TPM]:

[Mrs Laura Mathew](#)

ISO Editorial Programme Manager [EPM]:

[Ms Claudia Luej](#)

SC4 WG structure is available from the below:

<https://www.iso.org/committee/54158.html>

SC4 Formal scope

Standardization of the content, meaning, structure, representation and quality management of the information required to define an engineered product and its characteristics at any required level of detail at any part of its life-cycle from conception through disposal, together with the interfaces required to deliver and collect the information necessary to support any business or technical process or service related to that engineered product during its life-cycle.

SC4 in a nutshell

Physical, semantic, and functional design and specification of industrial products and their data exchange, including their life-cycle and quality related data.

In brief, covering everything related to industrial product data exchange, from CAD, Life Cycle Management, to Ontology



Semantics related standard series in SC4



ISO 13584 Parts library (PLIB) [via JWG24& IEC SC 3D]

of which Part 42 shares schema with IEC 61360-2 (The common schema for CDD; Common Data Dictionary)

ISO 15926 Oil & Gas standards(Oil & Gas) [via WG3 & WG22]

ontology standard originating in petrochemical plant engineering, but being extended to a wider scope of process plant engineering, including life cycle management

ISO 22745 Open Technical Dictionary(OTD), [via WG12 & WG23]

Originally for procurement in defense industry, but being extended to cover generic objects by uniquely identifying the combination of name, ID, and its definition and their properties, with RAs for registration (e.g., eOTD)

Some other semantics related standards closely related to the 3 series

ISO 10303 Standards for exchange of product data (STEP)

Widely used 2D & 3D CAD standard for exchange of product shapes

ISO 29002 Exchange of characteristic data

Joint work between ISO/IEC CDD group and OTD

ISO 8000 Data Quality

Driven by OTD group joined by STEP & PLIB groups

Semantics related special activities

PPC (AG1); Policy & Planning Committee for coordination of all the activities within SC4

AG3: Core terminology for industrial data

- Definition of common vocabulary for a select set of terms (aprox. 100) used in engineering as the common foundation of industrial ontologies.
- Contributed by key members of the three ontological standard groups (Oil & Gas, PLIB/CDD, OTD) in SC4