buildingSMART Data Dictionary

Pilot Project

Birgitta Foster
bSI IUG Secretary, Project Lead

Roger Grant
Product Room, Chair
Just give us

Something Useful Now
buildingSMART Data Dictionary

ISO 12006-3 based ontology for the building and construction industry

Welcome to Peregrine API. This is a service enabling access to buildingSMART Data Dictionary through a commercial service, the Peregrine API. We fully support the buildingSMART Data Dictionary, and by using the Peregrine API you are also indirectly supporting the efforts of the buildingSMART Data Dictionary. Please contact Catenda for access to the Peregrine API.
buildingSMART International ITM/IUG meeting

October 2012
Tokyo, Japan

Product Room

resolution: “...formation of a small pilot project to add, review, and assess the current tools for entering product attributes into the bSDD.”
Pilot Participates: 18 counties
Weekly Project Conference call
8am MST
10am EST
3pm GMT
4pm CET
5pm EET

Total of 44 one hour
Go To Meeting

Tokyo
Waltham
Munich
Stockholm
Issues

Technical
Primitive tool set
  – Not user friendly
  – Did not address user needs
  – bSDD platform outdated

Implementation
Inadequate Guidelines
  – Not fully developed
  – Lack of specifics on “how to”

Tasks

Evaluate existing tool set and provide user feedback for improvement

Provide input for development user reference guide using sample content
PHASE 1 & 2

suspended ceiling system

- suspended ceiling system (en-GB)
- suspended ceiling system (en)
- demountable suspended ceiling system (en-GB)
- demontierbart, nedsenket himlingssystem (nb-NO)
- Abgehängtes Deckensystem (de-DE)

A ceiling that is hung from the structure with wire hangers.

- suspended ceiling grid
  [Contexts: bSDD Pilot]
suspended ceiling grid

suspended ceiling grid (en-GB), suspended ceiling grid (en), demountable suspended ceiling grid (en-GB), lay-in grid (en-GB), ceiling substructure (en-GB), suspended ceiling grid (en-CA), lay-in grid (en-CA), ceiling substructure (en-CA), demonterbart barresystem for nedensket himling (nb-NO), opphengssystem (nb-NO), Abgehängtes Deckensystem-Raster (de-DE)

[bæresystem]

Structural system of main beams, cross tees, and associated hardware which hangs from the deck above and supports lay-in, concealed or surface attached ceiling panels.
acoustical ceiling panel

Acoustical ceiling panel (en-US), acoustical ceiling panel (en), infill unit (en-GB), tile (en-GB), module (en-GB), plank (en-GB), acoustical ceiling panel (en-CA), akustisk himlingsplate (nb-NO), akustisches Deckenelement (de-DE)

Any lay-in acoustical board that is designed for use with an exposed mounting system.
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Air Terminal Box

- Variable Air Volume (VAV) Box

Properties based on use

Specifiers – Object characteristics
Designers – Object design parameters
Purchase – Object procurement details
Operations – Object operating parameters
Table 437 — IfcAirTerminalBox Property Sets for Objects

(12) PSets
### IfdPSet (Pset_AirTerminalBoxTypeCommon)

**Concept** of type IfdPSet

**Name**

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Properties</td>
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<td>• Status</td>
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<td>• AirflowRateRange</td>
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<td>• HasFan</td>
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<tr>
<td>• ReturnAirFractionRange</td>
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<tr>
<td>• AirPressureRange</td>
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</table>

**IfcName**

Pset_AirTerminalBoxTypeCommon

**IfcDefinition**

Air terminal box type common attributes.

**IfcVersion**

2x4

**Applicability**

Entity common property set

**ApplicableClasses**

- [IfcAirTerminalBoxType]

**ApplicableTypeValues**

- [IfcAirTerminalBoxType]

**Guid**

1kmP_0qRuHu000025QFESV
Suggested Guideline

Reverse thinking

• Better query for search within existing IFC psets (may reduce time for comparing duplicates)

• if not in IFC ,
  – use the CM tool to detect if another context has a similar concept:
    • if so, align with term
    • if not, add to dictionary
  – only add the “new” or additional contextual information not entered yet
    • Translations
    • Classifications
buildingSMART Data Dictionary

Search concept

property

Outlet arrangement
- Outlet arrangement
- Outlet arrangement

Where more than one outlet exists identify the manner by which the outlets are located relative to each other

New relationship
- measures
  - measures
  - is property of
  - is associated to
  - associations
  - is classified as
  - composes
  - is part of collection
  - is documented in
  - subtypes

Add Relationship  Merge
Add two (2) new relationships

1. Identify terms required by an Information Exchange Standard (some appear in more than one)
   - COBie
   - HVACie
   - SPIe
2. TIMING as part of an Information Exchange deliverable
   COBie
   - Seems UK has the "7 drops"
   - DE have four
   - US possible at last 3

True value of bSDD will be the relationships it can create.
Norwegian Standard NS-EN 179

Now dated 2013.02.27 16:05:27

3vtZMYoTQsm00051Mm008

documents

- abuse resistance
- circulation area
- direction of exit, direction of escape; direction of travel
- re-engagement force
- rebated
- astragal, rebated edge
- attestation of conformity
- audit testing
- automatic relatching device
- bearing
- bearing point
- bolt head

Norwegian Standard NS-EN 179
Norwegian Standard NS-EN 179 (en), Norwegischer Standard NS-EN 179 (de-DE), Padrão Norueguês NS-EN 179 (pt-BR), Norme Norvégienne NS-EN 179 (fr-FR)
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<td><strong>Usable Height</strong></td>
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<td><strong>Gross area</strong></td>
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<tr>
<td><strong>Net area</strong></td>
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</table>

**Construction Operations Building information exchange (COBie) standard, NBIMS-US v2**

- Entreprenørvirksomheten Bygg informasjonsutveksling Standard (nb-NO)
- Opérations de construction de bâtiments échange d'informations (fr-FR),
- Opérations de construction de bâtiments échange d'informations (de-DE)
- 建设信息交流建设运营 (ch-CH)

**Information exchanges COBie**

Documents

- IfcBeam
- IfcBuildingElementPart
- IfcBuildingElementProxy
- IfcChamferEdgeFeature
- IfcColumn
- IfcCovering
- IfcCurtainWall
- IfcDiscreteAccessory
- IfcDistributionChamberElement
- IfcDistributionControlElement
- IfcDistributionElement
- IfcDistributionFlowElement
- IfcDoor
- IfcElectricalElement
- IfcElectricDistributionPoint
- IfcElementAssembly
- IfcEnergyConversionDevice
- IfcEquipmentElement
- IfcFastener
- IfcFlowController
- IfcFlowFitting
- IfcFlowMovingDevice
- IfcFlowSegment
- IfcFlowStorageDevice
- IfcFlowTerminal
- IfcFlowTreatmentDevice
- IfcFooting
- IfcFurnishingElement
- IfcMechanicalFastener
- IfcMember
- IfcOpeningElement
- IfcPile
- IfcPlate
- IfcProjectionElement
- IfcRailing
- IfcRamp
- IfcRampFlight
- IfcReinforcingBar
- IfcRoof
- IfcRoundedEdgeFeature
- IfcSlab
- IfcStair
- IfcStairFlight
- IfcTendonAnchor
- IfcTransportElement
- Construction Operations Building information exchange (COBie) standard, NBIMS-US v2
- XYZie information exchange (XYZ ie) standard, NBIMS-US v??
bSDD Pilot Project

1. Capturing new guidelines
2. CM tool testing
   – Bulk loads
3. Create more Use cases
   Align Top 50 common building terms
4. Engage manufacturers
   Proof of Concept opportunities

Due by Stockholm March 2014
bSDD New Platform

OPEN API

Viewing content
Develop User interface
User resource (web services)
– Available January 2014

National Libraries terminology (UK, NL)

Project based
sandbox environment
Thank You

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