

buildingSMART Data Dictionary

Håndtering av objektinformasjon
Håvard Bell, PhD
Catenda

Status - Enabling bSDD

- IFC4
 - Psets
 - The rest
- Bulk upload tool from Austria
- **4 million EURO** invested by commercial companies, in bSDD
- Products available on the market
 - IFD SignOn, coBuilder Pro, ProductXchange, bimsync, KnowledgeSearch



Data Dictionary

"En bolig må ha minst ett bad..."

bad

The screenshot shows a 3D architectural model in bimsync. A red circle highlights a specific section of a wall, likely indicating a point of interest or a potential issue. The model includes various rooms and structural elements. On the left, the navigation pane shows the project structure under 'Site'.

Identification

ObjectType

InteriorOrExteriorSpace: INTERNAL

LongName: BAD (circled in red)

Description

ElevationWithFlooring: 0.0

CompositionType: ELEMENT

GlobalId: 3M3rdvPg7V8tDnWzIT

Part_SpaceCommon

GlobalId: 1DgPPInUaWz2Sm0tly

ConcealedCeiling: FALSE

ConcealedFlooring: FALSE

GrossPlannedArea: 0.0

HandicapAccessible: FALSE

NetPlannedArea: 0.0

PubliclyAccessible: FALSE

AZ_Plan_RenovationAndPhasing

GlobalId: 3B8KmJcLzpAAuN8tW2

Renovation Status: New

Object_Status

GlobalId: 3pppePjHfRvOgpmWWQDz

Model



ARK

FBS

FRE

FRV

Containment

Referansetylpp Lykkjaði TEK10.ARK

Site

Referansetylpp Lykkjaði TEK10.ARK

1. etasje

2. etasje

Kjøkken

Tak

Revision 1



Revision 1



Revision 1



Revision 1



Revision 1



Revision 1



Revision 1



Revision 1



Revision 1



Revision 1



Revision 1



Revision 1



Revision 1



Revision 1



Revision 1



Revision 1



Revision 1



Revision 1



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Revision 1



Revision 1



Revision 1



Revision 1



Revision 1



Revision 1



Revision 1



Revision 1



Revision 1



Revision 1



Revision 1



Revision 1



Revision 1



Revision 1



Revision 1



ARK

ARK Selection

Containment
A3-212
A3-213
A3-214
A3-215
A3-216
A3-217
A3-218
A3-219
A3-220
A3-221
A3-222
A3-223
A3-224
A3-225
A3-226
A3-227
A3-228
A3-229
A3-230
A3-304
A3-305
A3-986
A3-987
A3-988



Rooms

Rooms



Identification

A3-218 A3-218

InteriorOrExteriorSpace INTERNAL

ElevationWithFlooring 3.0

Description WC

LongName WC

GlobalId 2_usGpkO5EhhuJ3MgJ_Btc

CompositionType ELEMENT

Post_SpaceThermalDesign

GlobalId 3vu_12UHvDg1qpd3Dmepn

Description A3-218

VentilationAirFlowRate 0.0

ExhaustAirFlowRate 0.0

TotalHeatLoss 0.0

CoolingDesignAirflow 0.0

hovedbad

baderom

spabad

luksusbad
gjestebad

"Et våtrom skal ha sluk..."

er "hovedbad"
et våtrom?

Official IFC Property Set

Ifc4

Pset_BoilerTypeCommon

from buildingSMART Data Dictionary

Name	Value
	- Status - HeatTransferSurfaceArea - OuterTemperatureRange - EnergySource - WaterStorageCapacity - OperatingMode - NominalEnergyConsumption - WaterInletTemperatureRange - NominalHeatLoadRate - PressureSetting - InherentCapacityFactor - PartialLoadEfficiencyCurve - Reference
properties	
IFCName	Pset_BoilerTypeCommon
IFCVersion	2xR
ICDefinition	Boiler type common attributes. SoundLevel attribute deleted in IFC4. IfcAddendum Use IfcSoundProperties instead. PrimaryEnergySource and AuxiliaryEnergySource attributes deleted in IFC4. IfcAddendum Use IfcEnergyProperties, IfcFuelProperties, etc. Instead.
Applicability	undefined
ApplicableClasses	Boiler
ApplicableTypeValues	undefined
URI	http://ifc4d.org/4.0.0/IFC4/BSV

• Official PSET format

Property Set Name	Post_BasinTypeCommon		
Applicable Entities			
Applicable Type Value			
Definition	Basin type common attributes. SameLevel attributes defined in IFC2x2 Part Additional_Use_ElCmndProperties section. PrimaryEnergySource and AuxiliaryEnergySource attributes defined in IFC2x2 Part Additional_Use_ElFurnProperties, ElFurnProperties etc. instead.		
Property Definitions:			
Name	Property Type	Data Type	Definition
-> IfcPostBasinTypeCommon	IfcPropertyDefinitionValue	IfcObjectDefinition	<p>Object of the definition, predominantly used for definition of modelled Products. This object can be anything from an "Actor" to a "Product" described as new without "Name". It can represent assets and resources, "Classification", objects required for work to be described, "Frequency" - whatever will even-only temporary like a temporary support structure.</p> <ul style="list-style-type: none"> -> IfcPostBasinTypeCommon -> IfcPostBasinTypeCommon -> IfcPostBasinTypeCommon -> IfcPostBasinTypeCommon -> IfcPostBasinTypeCommon -> IfcPostBasinTypeCommon
FinalTransferSurfaceArea	IfcPropertySingleValue	IfcLengthMeasure	Total final transfer area of the basin.
-> IfcPostBasinTypeCommon	-> IfcPostBasinTypeCommon	-> IfcPostBasinTypeCommon	<ul style="list-style-type: none"> -> IfcPostBasinTypeCommon -> IfcPostBasinTypeCommon
TotalTemperatureRange	IfcPropertySingleValue	IfcThermalConductivityMeasure	Allowable water temperature of either the water or the basin.
-> IfcPostBasinTypeCommon	-> IfcPostBasinTypeCommon	<ul style="list-style-type: none"> -> Lowenthal_Underwater -> Oppenfeld_Underwater 	<ul style="list-style-type: none"> -> IfcPostBasinTypeCommon -> IfcPostBasinTypeCommon
EnergySource	IfcPropertyDefinitionValue	IfcObjectDefinition	Identifier defining the energy source or fuel consumed in generation mode.
-> IfcPostBasinTypeCommon	-> IfcPostBasinTypeCommon	<ul style="list-style-type: none"> -> CTEC -> COAL_PULVERIZED -> ELECTRICITY -> GAS -> GEOTHERM -> GROWTH -> NUCLEAR_CSF -> WOOD_PELLET -> WOOD_PULVERIZED -> OTHER -> NATURALGAS -> CHP 	<ul style="list-style-type: none"> -> IfcPostBasinTypeCommon -> IfcPostBasinTypeCommon -> IfcPostBasinTypeCommon
HeatBudgetedCapacity	IfcPropertySingleValue	IfcQuantityHeat	Heat average capacity.
-> IfcPostBasinTypeCommon	-> IfcPostBasinTypeCommon	-> IfcPostBasinTypeCommon	<ul style="list-style-type: none"> -> IfcPostBasinTypeCommon -> IfcPostBasinTypeCommon
OperatingMode	IfcPropertyDefinitionValue	IfcObjectDefinition	Identify the operating mode of the basin.
-> IfcPostBasinTypeCommon	-> IfcPostBasinTypeCommon	<ul style="list-style-type: none"> -> FROZEN -> THAWED -> MELTING -> DEFROSTING -> FLOWWORK -> DRAINS 	<ul style="list-style-type: none"> -> IfcPostBasinTypeCommon -> IfcPostBasinTypeCommon
FinalBuildingConsumption	IfcPropertySingleValue	IfcPowerMeasure	Normal heat consumption rate required to produce the total heating load.
-> IfcPostBasinTypeCommon	-> IfcPostBasinTypeCommon	-> IfcPostBasinTypeCommon	<ul style="list-style-type: none"> -> IfcPostBasinTypeCommon -> IfcPostBasinTypeCommon
ElFurnType	IfcPropertyDefinitionValue	IfcThermalConductivityMeasure	Allowable water total temperature range.
-> IfcPostBasinTypeCommon	-> IfcPostBasinTypeCommon	<ul style="list-style-type: none"> -> Lowenthal_Underwater -> Oppenfeld_Underwater 	<ul style="list-style-type: none"> -> IfcPostBasinTypeCommon -> IfcPostBasinTypeCommon
ElFurnTempRange	IfcPropertySingleValue	IfcReal	Allowable post heat water range.
-> IfcPostBasinTypeCommon	-> IfcPostBasinTypeCommon	-> IfcPostBasinTypeCommon	<ul style="list-style-type: none"> -> IfcPostBasinTypeCommon -> IfcPostBasinTypeCommon

From a series of 9 screenshots from the SMART Data Dictionary tool, showing the details for the 'Boiler type common' entity.

Entity Overview:

- URI:** TPL/ASQ/024/0/0000000000000000
- Created:** 2012-07-19 18:08:30
- Editor Type:** common
- Parent Entity:** Boiler_type_common
- Description:** ボイラ型の送湯機を定義します。SoundLevel属性がIFC4版では削除されたため、WbSoundPropertiesで代わりに使用します。一方でエネルギー供給工場用送湯機ではIFC4版では削除されたWbEnergyProperties,WbFuelProperties等で代わりに使用。
- Attributes:**
 - Water type common attributes, SoundLevel attribute removed in IFC4.0
Boil Adendum. Use WbSoundProperties instead.
 - PrimaryEnergySource and AuxiliaryEnergySource attributes removed in IFC4.0
Boil Adendum. Use WbEnergyProperties, WbFuelProperties, etc. instead.

Properties with values:

- Boiler type common - nominal part load ratio, nominal part load ratio (Common, PT1-4)
- Boiler type common - status, status (Common, PT1-4)
- Boiler type common - operating mode, Operating mode (Common, PT1-4)
- Boiler type common - outlet temperature range, outlet temperature range (Common, PT1-4)
- Boiler type common - energy source, energy source (Common, PT1-4)
- Boiler type common - water inlet temperature range, water inlet temperature range (Common, PT1-4)

Members:

- Boiler type common - status, status (Common, PT1-4)

From a list of concepts use the search box and apply filters to
refine the selection. To restrict the results use an exclude (X) after
the term.

ThermalTransmittance

- wall common . Thermal Transmittance
- glass common . Thermal Transmittance
- plate common . Thermal Transmittance
- door common . Thermal Transmittance
- building element proxy common . Thermal Transmittance
- covering common . Thermal Transmittance
- glazing common . Thermal Transmittance
- member common . Thermal Transmittance
- shading device common . Thermal Transmittance
- volume common . Thermal Transmittance
- curtain wall common . Thermal Transmittance
- roof common . Thermal Transmittance
- window common . Thermal Transmittance
- wall common . Thermal Transmittance

property



- 3.0.igqgph4u2000005qnt3v
- 1
- 2013-07-26 04:31:06
- wall common . Thermal Transmittance
- glass common . Thermal Transmittance
- plate common . Thermal Transmittance
- door common . Thermal Transmittance
- U-Wert
- TransmittanceThermique
- 0.00 [W]
- 0.00 [W]
- Wärmedurchgangskoeffizient (U-Wert) der Mauer (für eine Schicht).

● (View More)

Has measures

- Thermal transmittance measure

● (View More)

Is a type of

- property single value

● (View More)

Is part of collection

- wall common

● (View More)

The screenshot shows a web-based application interface for managing data dictionaries. The title bar indicates the URL is <https://staging.buildingsmart.org/DataDictionary/OwnProject/23799/2020-08-08>. The main content area displays a search result for the term "subject".

Search results:

- subject

Definition:

An artifact which is a vertical or nearly vertical material layer enclosing space.

Properties:

- Wall
- Wand
- partition
- Wand
- wall
- partition

Details:

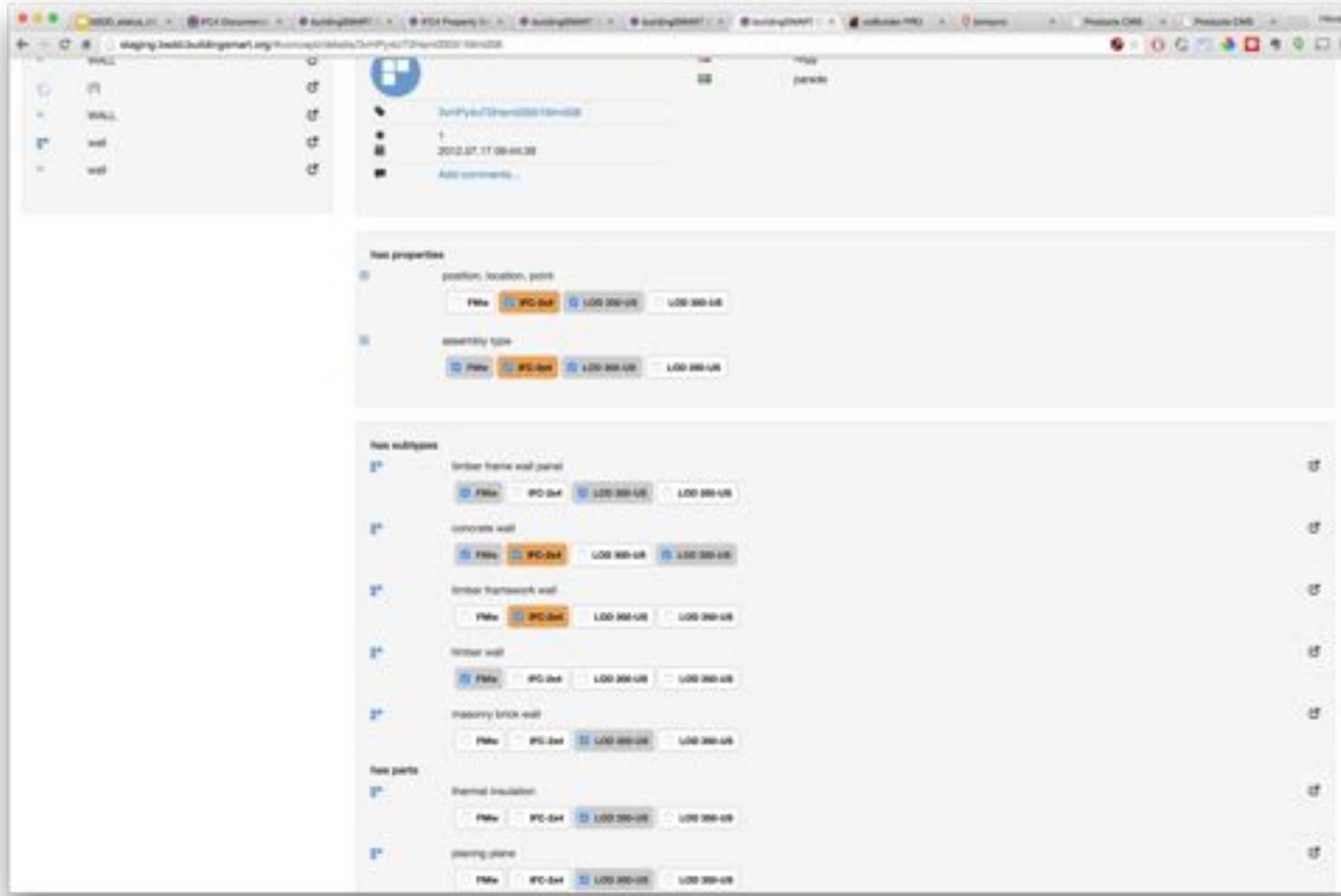
Subject ID: 2022-07-17 09:44:28
Add comments...

Item properties:

- position, location, point:
Floor → P0-04 → L00-001-US → L00-001-US
- assembly type:
Floor → P0-04 → L00-001-US → L00-001-US

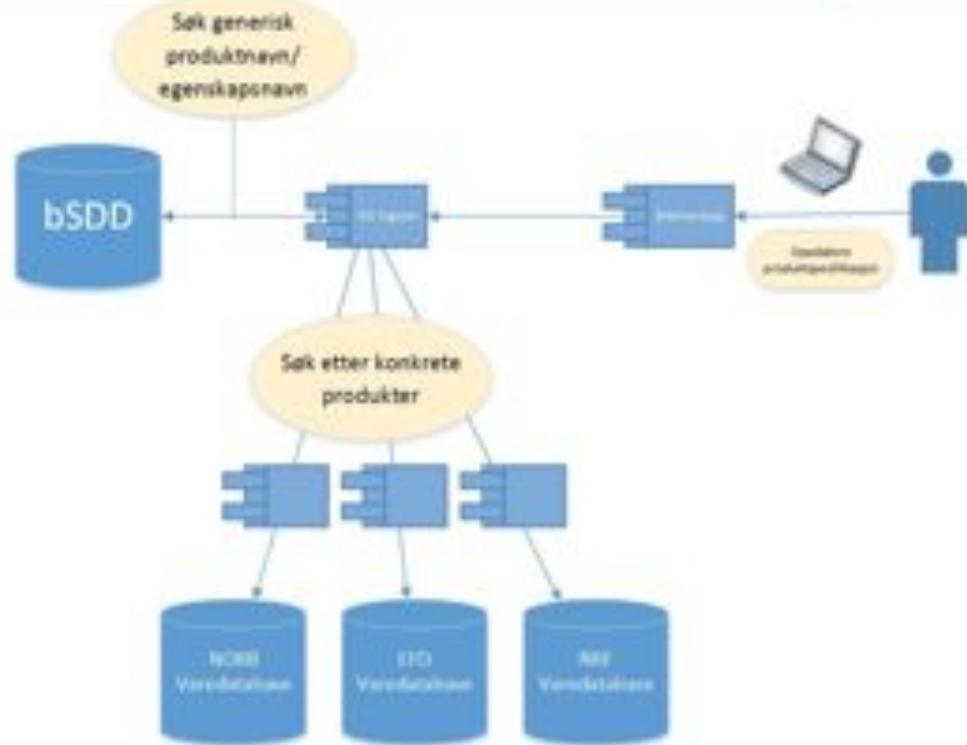
Item subtypes:

- Similar frame wall-panel
- concrete wall
- Similar framework wall
- Brick wall



IFD SignOn

IFD SignOn - Purchasing



Product
Search
Get

Stikkord	Standarder	Tilhørende varer	Godkjenning	Media	Egenskaper
○ Legg til/endre verdier ved å dobbeltklikke i cellen, eller markér og tast F2					
Egenskap	Verdi	Enhet			Ikke relevant
Brannklassse			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Åvedde		centimeter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
CE-merk	Ja				<input type="checkbox"/>
EPO	Nei				<input type="checkbox"/>
Glassstype	Dekorglass				<input type="checkbox"/>
Godkjent for handikappet	Ja				<input type="checkbox"/>
Hengsling	Høyre				<input type="checkbox"/>
Inntrudtsutsikthet			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Innhold av miljøfarligt slikestoff A20	Nei				<input type="checkbox"/>
lengde		centimeter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Ligger produktet i Eco-product			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
PEFC-sertifisert	Nei				<input type="checkbox"/>
Produktbeskrivelse	Ja				<input type="checkbox"/>
Produktsertifikat	Ja				<input type="checkbox"/>

Statistikkerken	87%
Opprettet dato	27.06.2004
Senest endret dato	11.11.2011
Mulig dato	
Forskrift nr.	

Search for genuine Products

[Varespesifikasjoner](#)[Generisk produkt](#)[Egenskaper](#)[Varer](#)

Verifier varespesifikasjon 'Teknisk Bygg (ALLE OBJEKTER allefag.xls)'

[Varespesifikasjoner](#) > [Verifier](#)

[Endre produktet](#)

Dør

Dør

Areal

Height

Length

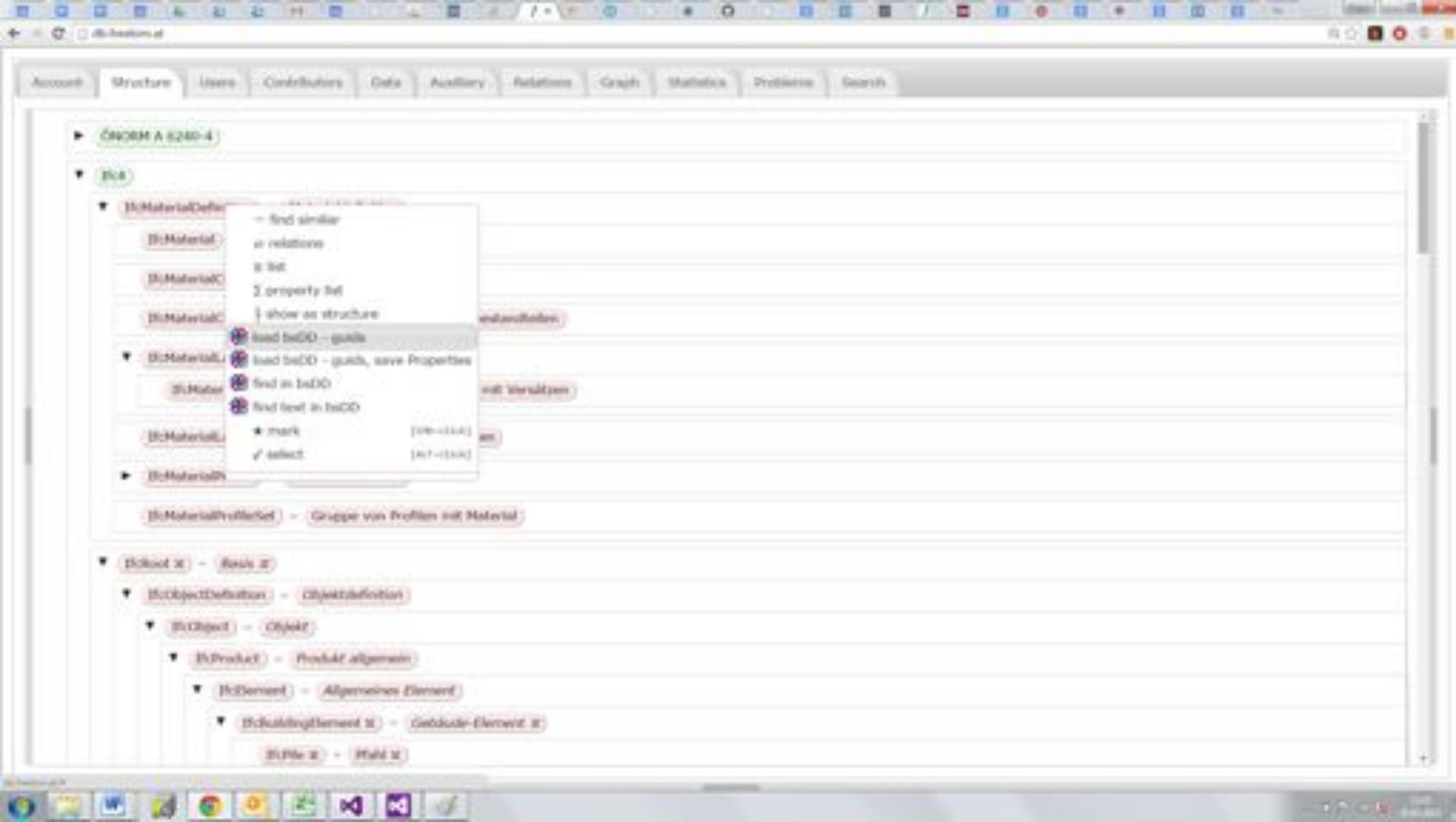
			Navn	Id	Varedatabase	Mer informasjon	FDV
			DØRSL COMPACT 03 9020 HVT	27546449	NOBB	Mer informasjon	
			DØRSL TRADITION 02B 9X19 ANT LAKK	27544766	NOBB	Mer informasjon	
			DØR 10Q21 PERHL ANTBES ESPR 2X4	28906733	NOBB	Mer informasjon	
			DØR 8X20 SV SPR,FURU LAKK, LAV BR	22771117	NOBB	Mer informasjon	
			DØR 8X18 T 3 EIK LAKK SCAN	25975913	NOBB	Mer informasjon	
			DØR 9Q20 PERHL MALT HV 2X3	29146909	NOBB	Mer informasjon	
			DØRSL EASY SP12 7X20 BBL FINERT	25507112	NOBB	Mer informasjon	
			DØRSL MILANO 402 8Q20 EIK LAKK	28691624	NOBB	Mer informasjon	

Obligatoriske egenskaper:

Fant generisk produkt.



Free BIM



Account Structure Users Contributors Data Auxiliary Relations Graph Statistics Problems Search

Properties Sets Components Properties Measures Value Sets Values

edit Property 'Höhe Mauerstein'

19 loaded 1900 guids

Code: Höhe Mauerstein

Name: Höhe Mauerstein

Name [en]: Height masonry construction

Description: vertikale Abmessung des Mauersteins

Description [en]: vertical dimension of the masonry unit.

default

Discipline: AR - Architektur

Measures: Reelle Zahl [mm]

+ Höhe Abhangdecke Bandgegensseite height of suspended ceiling on handle side

+ Höhe Abhangdecke Bandsseite height of suspended ceiling on hinge side

- Höhe Türblatt außen door leaf height

PROPERTY

GUID: f4b281f1-f06e-4a9d-9a72-0a2a2a2a2a2a

Version: 1 Date: 2015.02.25 13:37:53

Status: DRAFT

Language	Description
	Höhe Türblatt außen
	Door leaf height

Language	Definition
	Angabe zum Türblattaußemaß in der Höhe
	Specification of the external dimension of the door leaf height

assigned to (parent) ... assigned elements (children) ...

Account Structure Users Contributors Data Auxiliary Relations Graph Statistics Problems Search

Property-Sets Components Properties Measures Value Sets Values

Filter: exactly marked Library: freeBIM

68

Code	Name	Status	Since
3	Aufbau (x1)	checked	2013-03-12 14:13:00
3	Aufbau (x1)	checked	2013-03-12 14:13:00
BG	Belag (x1)	checked	2014-08-12 19:27:37
BG	Belag (x1)	checked	2014-08-12 19:27:37
	Belegung (x2)	undefined	2014-02-21 14:28:13
	Belegung (x2)	undefined	2014-02-21 14:28:13
RBOB	Bodenbelag x	undefined	2013-11-14 12:49:31
RBOB	Bodenbelag x	undefined	2013-11-14 12:49:31
	Brandabschnitt (x2)	undefined	2014-02-31 14:10:54
	Brandabschnitt (x2)	undefined	2014-02-31 14:10:54
	Brandabschnitt ... ende	checked	2014-09-17 12:13:14
	Brandabschnitt ... ende	checked	2014-09-17 12:13:14
DF	Dachfläche (x1)	checked	2014-09-24 16:23:05
DF	Dachfläche (x1)	checked	2014-09-24 16:23:05
	Durchmesser (x1)	undefined	2014-09-22 16:21:55
	Durchmesser (x1)	undefined	2014-09-22 16:21:55
	Fensterbank innen (x1)	undefined	2013-03-26 15:56:33
	Fensterbank innen (x1)	undefined	2013-03-26 15:56:33
	Feuerwehraufzug (x1)	undefined	2014-09-11 13:26:59
	Feuerwehraufzug (x1)	undefined	2014-09-11 13:26:59
PW	Fluchtweg (x1)	checked	2014-08-11 12:45:41

edit Property 'Brandabschnittdefinierendes Bauteil'

tx00 guid: (loaded tx00 guid)

Code:

Name: **Brandabschnittdefinierendes Bauteil**

Name [m]: element used for fire protection

Description: Bauteil zur Trennung oder Abgrenzung von Brandabschnitten

Description [m]: element used as a resistant barrier preventing the spread of fire

Default: ND

Discipline: **B5 - Brandschutz**

Measures:

Assigned to: **Gebäude-Element (Phase 2.2) x**
Tragwerks-Element

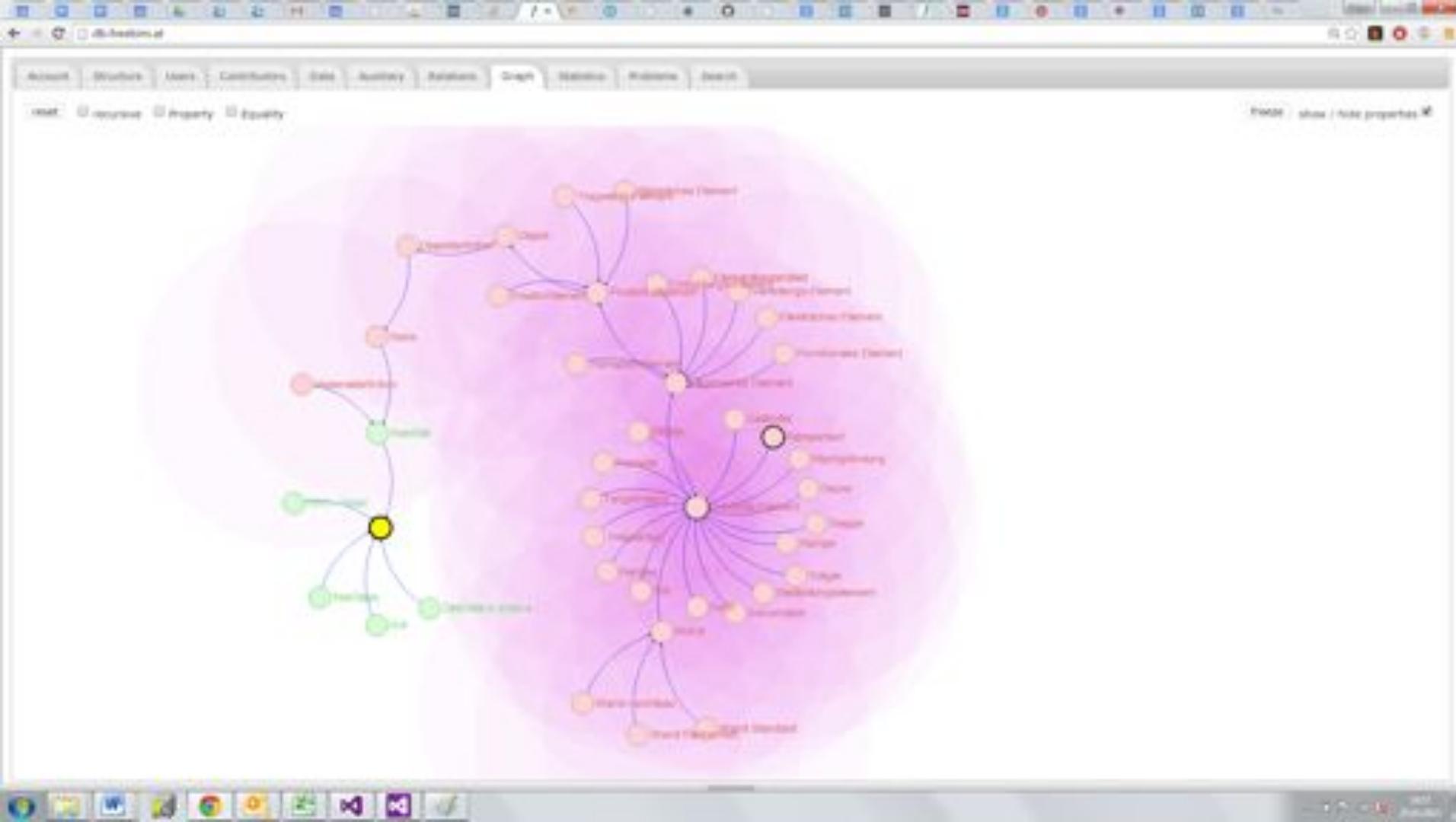
Cancel Delete Save

Account Structure Users Contributors Data Auxiliary Relations Graph Statistics Problems Search

Properties Components Properties Measures Value Sets Values

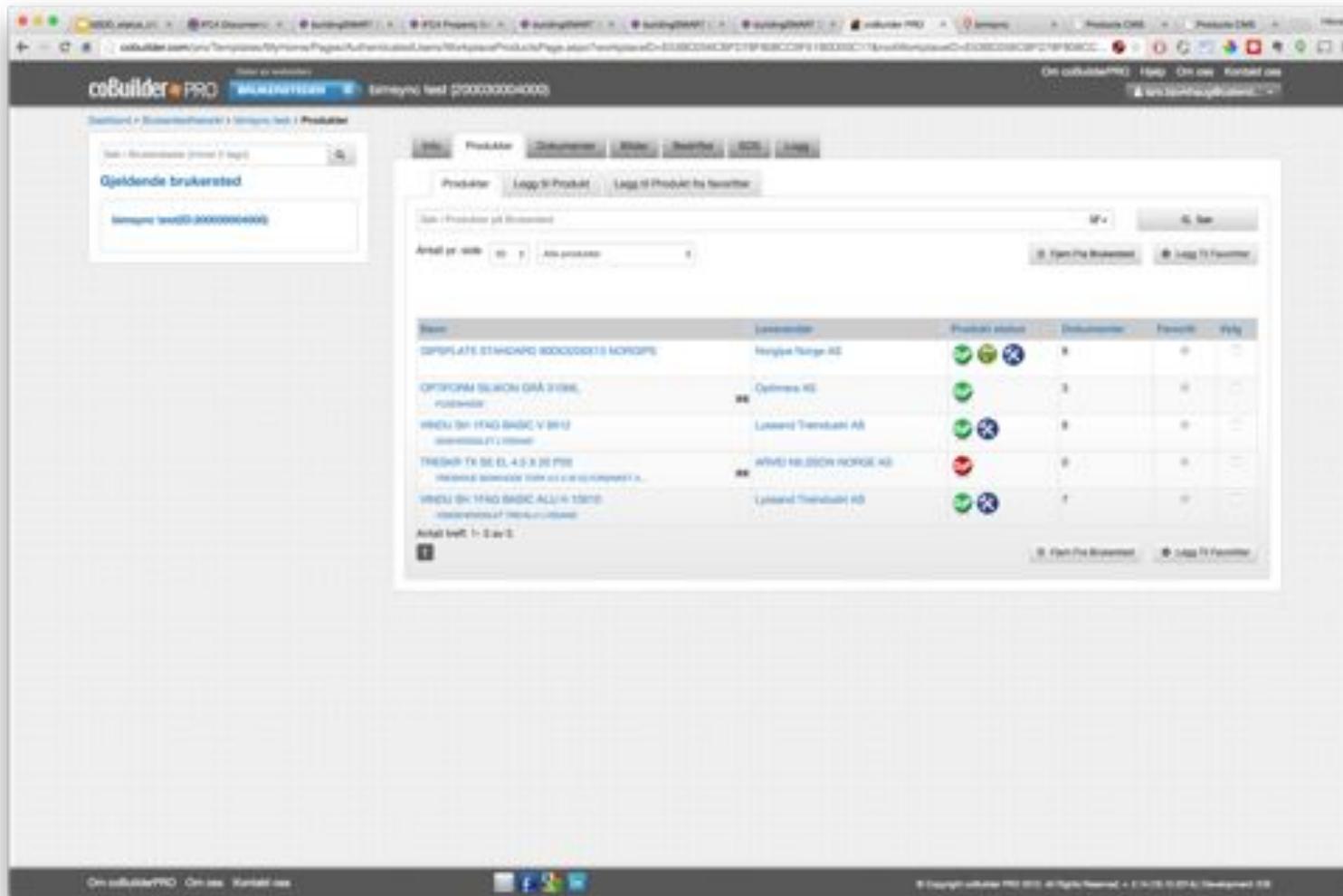
Objectdefinition = IfcObjectDefinition
 Obj = IfcObject
 Prod = Produkt.allgemein = IfcProduct
 O: Allgemeines Element = IfcElement
 ABS_011 Gebäude-Element = IfcBuildingElement
 IfcCovering Bekleidungselement = IfcCovering
 Dach = IfcRoof = Dach
 DA-GA Dachgauben
 Nr. Code Name Description Property type Status
 0 Giebelart (Phase 03/04) Form der Giebel Type undefined
 1 Giebel Breite (Phase 03/04) Type undefined
 2 Giebel Höhe (Phase 03/04) Type undefined

DE Decke = Decke = IfcSlab



coBuilder Pro

bimsync



Screenshot of the bimsync web interface showing a 3D model of a building and its properties.

The left sidebar shows a tree view of components:

- DISPLATE STANDARD-00000000113 NOGAPS
- OPTIFORM SILICON GRÅ STØNL
- TRIBOR TX BE EL ALEX 20 P00
- YHOU SHI HANG BASIC ALU11 10X10
- YHOU SHI HANG BASIC V-EK12

The main area displays a 3D model of a building with various parts highlighted in different colors (black, green, grey, yellow).

The right panel shows detailed information about the selected component:

Identification

MultiStandardCode 1.11-SH
ObjectID: 2ygrfjxjLAQ4kq7Mf00mQ
Tag: 60AMW0-A0E1-4A8B-A2F3-
F001A1C5FC08

Status

Opening
Created by: Ørnulf Næsheim
Last edit building
Modified by: Jon André Stenseth

Calculator Pro

BuildingSMART Data Dictionary

MEP Itemtagg Element SP

ObjectID: 1yQ8ruu0001w400H-UEUF
PredefinedType: NOTDEFINED
ElementType: MHI_Plasslegg_200mm_SP

Owner and History

Created 8 years ago
Created by: unknown person using ArchiCAD 12.0
Added by: unknown person using unknown application

Bottom right corner:

Logout Support

thank you
Håvard Brekke Bell
Catenda
havard.bell@catenda.no