GENERAL ATTRIBUTES AND PROPERTIES IN BIM MODELS

OSC-SB-Å-SD-00001

F14

1107304 OCEAN SPACE CENTRE

Prosjekt	Ocean Space Centre
Kontrakt	K201
Byggherre	Statsbygg
Utgiver	Statsbygg
Utskriftsdato	24.01.2022
Sist endret	14.01.2022
Henvendelser kan rettes til	Statsbygg Postboks 232 Sentrum, 0103 Oslo Telefon: 22 95 40 00 Epost: postmottak@statsbygg.no Internett: http://www.statsbygg.no

General attributes and properties in BIM models

1	14.01.2022	Harmonisation with NS 8360-1 and NS 8360-2. Added properties for georeferencing and Psets for OSC. Changed definitions of hierarchical properties to fit NTNU standards.			DG	EG	EG
0	29.10.2021	First issue of document			DG	OJH	KP
Version	Date	Text			Prep by	Checked by	Approved by
Project number: 1107304 / 1107305	**Issued by:** SB	**Project name:** Ocean Space Centre	**Code:** Å	**Document type:** Governing document	**Document code:** OSC-SB-Å-SD-00001		**Version:** 0

Table of Contents

1 Introduction

This document is an annex to the document “OSC - Action plan for digitisation”. The purpose of this document is to define general attributes and parameters common in the project. The description of attributes and properties.

This document is to be updated with agreed changes throughout the project.

2 Attributes and parameters

All objects in the IFC file shall have attributes and parameters as described in this section. If there are inconsistencies with requirements in the provided database requirements, described as mvdXML or human readable, the database requirements take precedence.

2.1 Abstract IFC entities

There are several abstract IFC entities that have important functions in the IFC schema, i.e., hierarchical objects such as IfcProject, IfcSite, etc. The following attributes and properties must be included with the specified IFC entities:

Table 1 – Attributes and properties for abstract IFC entities

IFC entity	Attribute/property	Description
IfcProject	.Name	Statsbygg official Project Number + Project Name
	.LongName	Project name (official)
	.Georeference	EPSG compound code is a unique code indicating the combination of geodetic datum, projection and height datum.
IfcSite	.Name	NTNU area code [no: områdekode]. Example: A06
	.LongName	NTNU area name [no: områdenavn]. Example: Tyholt
	.LandTitleNumber	The site shall contain the official ID of the Cadastre [no:Matrikkel]
IfcBuilding	.Name	NTNU building number
	.LongName	NTNU building name
	Pset_BuildingCommon .BuildingID	Building number assigned by the municipality.
IfcBuildingStorey	.Name	Storey number according to project naming scheme.
	.LongName	Storey name and number according to project naming scheme
	Pset_BuildingStoreyCommon.EntranceLevel	Indication whether this building storey is an entrance level to the building (TRUE), or (FALSE) if otherwise.
	Pset_BuildingStoreyCommon.AboveGround	Indication whether this building storey is fully above ground (TRUE), or below ground (FALSE), or partially above and below ground (UNKNOWN) - as in sloped terrain.

IfcProjectedCRS	.Name	EPSG code. Syntax: *EPSG:####* (Ex. 'EPSG:5950' for NTM-10, NN2000).
IfcMapConversion	.Eastings	Eastings coordinate for model origin (NTM)
	.Northings	Northings coordinate for model origin (NTM)
	.OrthogonalHeight	Height of the model origin (NN2000)
	.XAxisAbscissa	Description of model rotation. Value must be 1 (no rotation)
	.XAxisOrdinate	Description of model rotation. Value must be 0 (no rotation)

If the correct attribute/property value is not available "N/A" is to be used.

2.2 IFC entities representing built objects

2.2.1 Attributes

The following attributes shall be used for all objects with IFC entities representing built objects in the project, unless otherwise stated in machine interpretable requirements.

Table 2 – Attributes for built objects

Attribute	Description of value
IfcRoot.Name	Building component code (no: NS3457-8:2021 Komponentkode) + type code (three digit serial number). Example syntax AVA.001
IfcRoot.Description	User defined description of element type, its material and when applicable composite. Description shall communicate all properties relevant for cost and construction that are not communicated by other object properties.

2.2.2 Properties

There are several general properties that are required in the project. In the following different property sets and properties are listed. These are required for all models in the project.

Property set: NONS_Process

Table 3 – General properties in property set NONS_Process

Property	Description
.ConstrucionContract	Contract number for construction
.ControlVolume	Describes the control volume in which the object belongs.
.DesignContract	Contract number for design
.DuplicateOwnedBy	Communicates that another discipline is responsible for information of the element. The duplicate object is represented in this model for coordination or model technical purpose. The property specifies the code for the responsible discipline e.g., RIB, ARK, RIV, RIE etc. If not a duplicate fill out value with a dash "-".
.IsProcured	Communicates that the object is procured. Although the object may not be fully designed, geometry and properties shall be representative for the procured object.
.ProcessStatus	The objects MMI status. Format MMI###

Property set: NONS_Reference

Table 4 – General TFM properties in property set NOSSB_Reference

Property	Description	Example value
.RefString	Complete aggregated TFM code, level 0.	++6001=662.003.01-FSC009%FSC.011.01
.RefPriSysLoc	Placement ID.	6001
.RefPriSysClass	System Code	662
.RefPriSysNo1	System type code	003
.RefPriSysNo2	Sub-system code (if in use)	01
.RefCompClass	Component code	FSC
.RefCompOccNo	Component occurrence code	009
.RefCompTypeNo1	Component type code	011
.RefCompTypeNo2	Sub-component type code (if in use)	01

Property set: OSC_Info

Table 5 – General properties in property set OSC_Process

Property	Description
.DateDelivery	Describes the first date of approved delivery for construction (MMI400) for the object. Date on the format yyyymmdd
.DateRevision	Date for current revision for the object (NB! Only for revisions after MMI400) Date on the format yyyymmdd.
.PNS	The project breakdown structure in which the object belongs.
.WorkPackage	The work package in which the object belongs. Work packages must be agreed upon in the project.