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Change Request #:	72
Assigned OGC Document #:	10-055
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Document Name/Version:	*City Geography Markup Language (CityGML) Encoding Standard / 1.0.0
OGC Project Document:	*08-007r1

If this is a revision of a previous submission and you have a Change Request Number, then check here:

Enter the CR number here:

Enter the Revision Number that you are revising here:

Title: ⓘ	*Additional properties for core:_CityObject
Source: ⓘ	*Special Interest Group 3D (SIG 3D)
Work item code: ⓘ	
Category: ⓘ	* B (Addition of feature)

Reason for change: ⓘ	* The position of a CityObject regarding the surrounding terrain or water is important for varies application. If a terrain model is missing in the 3D city model, this position cannot be determined. If a terrain model is available though, this position can still not clearly be defined due to different geometric representations of the terrain in different level of details.
Summary of change: ⓘ	* It is proposed to add two new properties to CityObject: 1. core:relativeToTerrain (specifies the spatial relation of a CityObject relativ to terrain in a qualitative way). The possible

attribute values should be given as fixed enumeration of strings. By this means, the attribute can be easily processed and evaluated by applications. The following list of attribute values is proposed:

- entirelyAboveTerrain
- substantiallyAboveTerrain
- substantiallyAboveAndBelowTerrain
- substantiallyBelowTerrain
- entirelyBelowTerrain

2. core:relativeToWater (specifies the spatial relation of a CityObject relativ to the water surface in a qualitative way). The following list of attribute values is proposed:

- entirelyAboveWaterSurface
- substantiallyAboveWaterSurface
- substantiallyAboveAndBelowWaterSurface
- substantiallyBelowWaterSurface
- entirelyBelowWaterSurface
- temporarilyAboveAndBelowWaterSurface

The new properties should be modelled according to the SubsurfaceStructureADE developed by the SIG 3D. This addition can be realized without breaking backwards compatibility.

Consequences if not approved:

1. If a terrain model is missing in the 3D city model, the position of CityObjects regarding the surrounding terrain or water cannot be determined.

2. If a terrain is available, without such properties the position regarding terrain or water can only be determined by geometrical methods, which might depend on the level of detail.

Clauses affected:

*

10, 10.1

Additional Documents affected:


Supporting Documentation:

The SubsurfaceStructureADE proposed by the SIG 3D has been published on the CityGML Wiki and can be accessed through this link: http://www.citygmlwiki.org/index.php/CityGML_Subsurface_Structure_ADE. The available documentation comprises the XML Schema definition, a UML diagram of the data model as well as example datasets.

Comments:

Status:

Assigned

Disposition: 

Referred