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Change Request #:	68
Assigned OGC Document #:	10-051
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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:	*Thematic module for bridges
Source:	*Special Interest Group 3D (SIG 3D)
Work item code:	
Category:	* B (Addition of feature)

Reason for change:	<p>* The semantic model of CityGML 1.0 covers many urban and regional features relevant to 3D city and landscape models. However, it lacks a data model for bridges. The only possibility to model and exchange bridges in CityGML 1.0 is to use a GenericCityObject as proxy. Alternatively, a corresponding ADE could be defined. Both approaches face disadvantages. First, GenericCityObjects are simple in structure and are hence not suitable to replace a semantically rich model for bridges. Second, bridges are not specific to just a single application domain. Several ADEs could emerge proposing different semantic models. What is required is a common and standardized thematic module on bridges in CityGML.</p> <p>The Special Interest Group 3D (SIG 3D, initiator of CityGML) of the national Spatial Data Infrastructure of Germany (GDI.DE) has recently developed and published a semantic bridge model. It defines the most</p>
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relevant thematic feature classes for the representation of bridges, comprises generalization and aggregation hierarchies between these features, and provides geometric representations of bridges in four levels of detail, following the LOD concept in CityGML. The bridge model is based on the CityGML 1.0 Core module and is realized as CityGML ADE. Thus, it is fully compliant with the CityGML standard and coherently fits into the overall concept of CityGML.

Summary of change: ?

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Add a new thematic module dedicated to bridges to the CityGML data model. The thematic module should be based on the BridgeADE developed by the SIG 3D. This extension can be realized without breaking backwards compatibility.

Consequences if not approved: ?

Bridges as relevant features of urban and regional models cannot be modeled and exchanged in a standardized way. This leads to a significant lack in semantic interoperability since either GenericCityObjects as proxies or several non-standardized ADEs will have to be used for modeling bridges.

Clauses affected: ?

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7, 10

Additional Documents affected: ?

Supporting Documentation: ?

The BridgeADE 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_Bridge_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