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Change Request #:	**71**
Assigned OGC Document #:	**10-054**
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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:
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Title:	*Enhancement of generic attributes
Source:	*Special Interest Group 3D (SIG 3D)
Work item code:	
Category:	* B (Addition of feature)

Reason for change:	*

Generic attributes allow for augmenting exisiting CityGML features by application-specific extra attributes in a simple and straightforward way, without the need for explicitly defining an ADE (which are not necessarily supported by CityGML-enabled software). In CityGML 1.0, generic attributes are implemented as simple Name-Value-Pairs with a predefined set of supported data types (gen:intAttribute, gen:doubleAttribute, gen:stringAttribute, gen:dateAttribute, gen:uriAttribute). This definition could be enhanced in two possible ways:

1. In order to correctly interpret and process a generic attribute, not only its value but also the unit of measurement (if applicable) is required. At the moment, it is not possible to give the unit of measurement for generic attributes. This could be simply fixed by adding an attribute "uom" of type "xs:anyURI" (in accordance with

	GML3.1.1) on the element declaration of the generic attributes. 2. Generic attributes can only be attached to a CityGML feature as unsorted list of single attributes. It is not possible to group a set of generic attributes under a common theme or name. However, this would allow for exchanging "property sets" instead of isolated attributes. This could be simply realized by a named container for generic attributes (e.g., complex type containing an unbounded sequence of _gen:genericAttribute elements). The CityGML standard should neither define concrete property sets nor their content. In contrast, this should be left to user/implementer agreements. It is well-understood by the authors, that CityGML 1.0 explicitly supports the definition of application-specific property sets by means of Application Domain Extensions. "Generic property sets" would allow to group generic attributes without the need for defining such an ADE - however, at the cost of having a formal definition for the property set in an extra XML schema which helps to maintain semantic and syntactic interoperability. The authors would like to initiate a discussion about generic property sets.
Summary of change:	* Enhance the definition of generic attributes by the possibility to represent the unit of measurement for single generic attributes. This enhancement can be realized without breaking backwards compatibility. Initiate a discussion about generic property sets.
Consequences if not approved:	
Clauses affected:	* 7, 10
Additional Documents affected:	
Supporting Documentation:	
Comments:	
Status:	Assigned
Disposition:	Reffered