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Change Request #:	232
Assigned OGC Document #:	12-092
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Document Name/Version:	*Geography Markup Language (GML) Encoding Standard / 3.2.1
OGC Project Document:	*07-036

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

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Enter the Revision Number that you are revising here:

Title: ⓘ	* gml:id attribute on LinearRing
Source: ⓘ	*CityGML SWG
Work item code: ⓘ	
Category: ⓘ	* C (Functional modification of feature) ⌵

Reason for change: ⓘ	* CityGML 1.0 and 2.0 are based on GML 3.1.1. We want to base the next version of CityGML on GML 3.2. However, in GML 3.1.1 the linear ring can have gml:id (http://www.schemacentral.com/sc/niem21/e-gml_LinearRing.html) . In CityGML we use this gml:id to establish a link between texture coordinates (in the appearance) and the linear ring where this texture should be applied. In GML 3.2.1 the linear ring is not allowed to have a gml:id. So the texture cannot be applied to a linear ring. Earlier discussion on this topic on the GML SWG mailing list made clear that according to ISO19107 rings are boundaries and boundaries are GM_Objects. (In the model for GM_Object, the boundary operator returns a GM_Boundary, which is a subtype of GM_Complex, which is a
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	subtype of GM_Object. Ergo, any type which is used to represent the boundary of any geometry (always a subtype of GM_Object) must be instance of GM_Object by inheritance (through GM_Complex)). In GML 3.2 however, LinearRing is not a subtype of GM_Object and thus not a geometry and lacking the gml:id attribute. This is a bug in GML 3.2.
Summary of change: ⓘ	* 1) Make the rings a geometry 2) Make @gml:id optional 1) without 2) would break backwards compatibility of instances, so assumed to be not an option. If 2) would not be accepted as a "bugfix" then the only option would be to add new ring and shell elements that are geometries in a new namespace.
Consequences if not approved: ⓘ	CityGML cannot be based on GML 3.2 (or 3.3)
Clauses affected: ⓘ	* 7.1.3, 7.2.2.2, 7.2.4.5, 10.1.3.1, 10.5.8 D.2.3.2 (possibly more clauses in D) F.2.1.2.2
Additional Documents affected: ⓘ	
Supporting Documentation: ⓘ	
Comments: ⓘ	
Status: ⓘ	Assigned
Assigned To: ⓘ	GML 3.3 SWG
Disposition: ⓘ	Referred and Posted