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Editor: Chris Holmes

## **Corrigendum 1 (one) for OpenGIS Implementation Specification GML 2.1.2**

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**i. Preface**

This document is a corrigendum for OGC Document 02-069, GML 2.1.2

**ii. Document terms and definitions**

This document uses the specification terms defined in Subclause 5.3 of [OGC 05-008]. In particular, the word “shall” (not “must”) is the verb form used to indicate a requirement to be strictly followed to conform to this specification.

**iii. Document contributor contact points**

All questions regarding this document should be directed to the editor or the contributors:

Name	Organization
Chris Holmes	The Open Planning Project
Simon Cox	Commonwealth Scientific and Industrial Research Organization

**iv. Revision history**

Date	Release	Editor	Primary clauses modified	Description
12-07-06	0.1	Chris Holmes		First version

**v. Changes to OGC Specifications**

The previously approved OGCTM Specifications do not need changes to accommodate the technical contents of this document.

## **Foreword**

This document provides the details for a corrigendum for the existing OpenGIS Implementation Specification for the Geography Markup Language version 2.1.2 and does not modify that implementation specification. The current OpenGIS Implementation Specification that this document provides revision notes for is 02-069.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. The OGC shall not be held responsible for identifying any or all such patent rights.

## **Introduction**

This document defines a revision notes for Geography Markup Language 2.1.2. This document was approved by the OGC membership on 17 September 2002. As a result of the RWG process, there were a number of edits and enhancements made to this specification. This document provides the details of those edits, deficiency corrections, and enhancements. It also documents those items that have been deprecated. Finally, this document provides implementations details related to issues of backwards compatibility

This document consists of a small number of fixes to the XML Schema of Geography Markup 2.1.2 in order to allow it to fully validate against all popular XML tools. In particular the Xerces project by the Apache foundation, which is used as a library in many tools, commercial and open source, reports schema validation errors that are caused by the current GML 2.1.2 Schemas. The fixes preserve the semantics of the existing schemas by simply moving cardinality constraints from the element to the sequence. Such fixes have been applied to GML 3.1.1, but have not been available on earlier versions.



## Corrigendum 1 for GML 2.1.2

### 1 Scope

The Geography Markup Language (GML) is an XML encoding for the transport and storage of geographic information, including both the spatial and non-spatial properties of geographic features.

This Corrigendum applies only to a few elements of the actual XML Schemas contained in Appendix A of the GML 2.1.2 specification. <http://schemas.opengis.net> should also be updated accordingly. No changes to the main body text are required. All semantics of the XML Schemas are retained, and no client code should be affected.

### 2 Corrigendum Description

Replace Appendix A xlink import schema location page 49:

```
<import namespace="http://www.w3.org/1999/xlink"
schemaLocation="xlinks.xsd"/>
```

with

```
<import namespace="http://www.w3.org/1999/xlink"
schemaLocation="../../xlink/1.0.0/xlinks.xsd"/>
```

This change corrects the schema location of the xlinks XML Schema to be in line with the rest of the OGC schemas stored in <http://schemas.opengis.net>. With this fix the xlinks.xsd file that lives in <http://schemas.opengis.net/gml/2.1.2/> can be removed.

Move `maxOccurs="unbounded"` from the element to the sequence of the `GeometryCollectionType` in Appendix A, page 54, replace:

```
<sequence>
  <element ref="gml:geometryMember" maxOccurs="unbounded"/>
</sequence>
```

with

```
<sequence maxOccurs="unbounded">
  <element ref="gml:geometryMember"/>
```

```
</sequence>
```

This change retains the same semantics of allowing any number of geometryMembers in a GeometryCollection, but does not raise errors with the geometry.xsd schema on fully validating XML parsers.

Move maxOccurs="unbounded" from the element to the sequence of the MultiPointType in Appendix A, page 55, replace:

```
<sequence>
  <element ref="gml:pointMember" maxOccurs="unbounded"/>
</sequence>
```

with

```
<sequence maxOccurs="unbounded">
  <element ref="gml:pointMember"/>
</sequence>
```

This change retains the same semantics of allowing any number of pointMembers in a MultiPoint, but does not raise errors with the geometry.xsd schema on fully validating XML parsers.

Move maxOccurs="unbounded" from the element to the sequence of the MultiLineStringType in Appendix A, page 55, replace:

```
<sequence>
  <element ref="gml:lineStringMember" maxOccurs="unbounded"/>
</sequence>
```

with

```
<sequence maxOccurs="unbounded">
  <element ref="gml:lineStringMember"/>
</sequence>
```

This change retains the same semantics of allowing any number of lineStringMembers in a MultiLineString, but does not raise errors with the geometry.xsd schema on fully validating XML parsers.

Move maxOccurs="unbounded" from the element to the sequence of the MultiPolygonType in Appendix A, page 55, replace:



```
<sequence>  
  <element ref="gml:polygonMember" maxOccurs="unbounded"/>  
</sequence>
```

with

```
<sequence maxOccurs="unbounded">  
  <element ref="gml:polygonMember"/>  
</sequence>
```

This change retains the same semantics of allowing any number of polygonMembers in a MultiPolygon, but does not raise errors with the geometry.xsd schema on fully validating XML parsers.

The changes described must also be made on the normative schemas located at <http://schemas.opengis.net>. If requested the author can provide a patch file that will make these changes.

### 3 Acknowledgements

Saul Farber is acknowledged for his work on creating patch files to ease the process of creating this document, and Bart van den Eijnden is acknowledged for bringing this issue to the attention of the wider community.