Open Geospatial Consortium Inc.

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Corrigendum for OpenGIS Implementation Specification 05-095r1

Warning

Document type:	OpenGIS® IS
Document subtype:	Implementation Specification Corrigendum
Document stage:	Proposed
Document language:	English

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i.   Preface

This document is a corrigendum for OGC Document 05-095r1, titled "GML 3.1.1 common CRSs profile". This corrigendum is based on change request OGC 06-041.

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
Arliss Whiteside	BAE Systems E&IS

iv.   Revision history

Date	Release	Editor	Primary clauses modified	Description
2006-07-18	1.0.1	Arliss Whiteside	All	Initial release

v.   Changes to OGC Specifications

The other previously approved OGC™ 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 "GML 3.1.1 common CRSs profile" version 1.0, and does not modify that implementation specification. The current OpenGIS IS that this document provides revision notes for is 05-095r1. This document supersedes OGC 05-095r1.

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 specifies a corrigendum to the GML 3.1.1 common CRSs profile. This profile document was approved by the OGC membership on 2006-03-28. This corrigendum changes the origin to (0, 0), from (1, 1), of the coordinate system in the attached example "grid2dSquareCS.xml".

GML 3.1.1 common CRSs profile version 1.0 corrigendum

1   Scope

This GML 3.1.1 profile is defined for encoding the definitions of commonly used Coordinate Reference Systems (CRSs) plus related coordinate Conversions. This profile supports XML encoding of definitions of:

a) Geographic CRSs, 2D and 3D

b) Projected CRSs, 2D

c) Vertical CRSs, 1D

d) Compound CRSs, for combining a projected CRS or 2D geographic CRS with a 1D vertical CRS to produce a 3D CRS

e) Coordinate Conversions, for defining (map) projected CRSs

This corrigendum changes the origin to (0, 0), from (1, 1), of the coordinate system in the attached example "grid2dSquareCS.xml", to better match ISO 19123.

2   Corrigendum description

2.1   Change origin of Grid2dSquareCS

Change the origin to (0, 0), from (1, 1), of the coordinate system in the attached example "grid2dSquareCS.xml".

Replace current file named "grid2dSquareCRS.xml":

```
<?xml version="1.0" encoding="UTF-8"?>
<CartesianCS xmlns="http://www.opengis.net/gml"
:gml="http://www.opengis.net/gml" :xlink="http://www.w3.org/1999/xlink"
:xsi="http://www.w3.org/2001/XMLSchema-instance"
:schemaLocation="http://www.opengis.net/gml ../commonCRSsProfile.xsd"
:id="Grid2dSquareCS">
   <!-- Primary editor: Arliss Whiteside. Last updated 2005-10-04-->
   <csName>2D square-cell grid based coordinate system</csName>
   <csID>
      <name codeSpace="urn:ogc:def:cs:OGC:1.0:">Grid2dSquareCS</name>
   </csID>
   <remarks>2D grid-based coordinate system for use by an image or
other continuous grid coverage. It can be used for a grid of any size,
since no grid size is defined. This coordinate system specifies that
each row coordinate value will be listed before the column coordinate
```

value. The grid cells are assumed to be square, with the same grid
spacing or pixel spacing in each direction.

In a grid coverage file, the "row" axis shall be the first axis by
which grid points are sequenced, and the "column" axis shall be the
second axis, as could be specified by the "scanDirection :
Sequence(CharacterString)" attribute of the CV_SequenceRule class in
Clause 8 of ISO 19123. With linear sequencing, the grid points in the
first row shall be listed first, followed by other rows, with the grid
points in each row listed in column number order. This relationship
between the "row" and "column" names and the first grid points shall
apply whether this Grid2dSquareCS is associated with a grid file before
or after that file is recorded.

The "row" and "column" axis names are used here although the
"scanDirection : Sequence(CharacterString)" attribute may provide other
axis names. Use of other axis names would require defining different
CartesianCSs for other names, or adding other names as additional
axisID values. The following XML includes the axis names "line" and
"sample" as additional axisID values.

If not otherwise identified in an image file, the "row" axis shall be
the first axis whose number of pixels is identified, and the "column"
axis shall be the second axis, as could be specified by the
"extent[0..1] : CV_GridEnvelope" attribute of the CV_Grid class in
Clause 8 of ISO 19123. In either case, the first point in the grid
coverage file is assumed to be numbered (1, 1), meaning row 1, column
1.

The first row in a grid is sometimes called the "top" row, the first
column is sometimes called the "left" column, and the first grid point
is then called the "upperLeft" point. If desired, those names can be
used with this Grid2dSquareCS. However other names can also be used,
since this Grid2dSquareCS has been defined so that it does not depend
on such left/right, top/bottom, and up/down names. </remarks>
    <usesAxis xlink:href="urn:ogc:def:axis:OGC:1.0:Row"/>
    <usesAxis xlink:href="urn:ogc:def:axis:OGC:1.0:Column"/>
</CartesianCS>

With file named "Grid2dSquareCS": (changed text highlighted in red)

```
<?xml version="1.0" encoding="UTF-8"?>
<CartesianCS xmlns="http://www.opengis.net/gml"
:gml="http://www.opengis.net/gml" :xlink="http://www.w3.org/1999/xlink"
:xsi="http://www.w3.org/2001/XMLSchema-instance"
:schemaLocation="http://www.opengis.net/gml
../gmlCommonCRSsProfile.xsd" :id="Grid2dSquareCS">
    <!-- Primary editor: Arliss Whiteside. Last updated 2006-07-19-->
    <csName>2D square-cell grid based coordinate system</csName>
    <csID>
        <name codeSpace="urn:ogc:def:cs:OGC:1.0:">Grid2dSquareCS</name>
    </csID>
    <remarks>2D grid-based coordinate system for use by an image or
other continuous grid coverage. It can be used for a grid of any size,
since no grid size is defined. This coordinate system specifies that
each row coordinate value will be listed before the column coordinate
```

value. The grid cells are assumed to be square, with the same grid spacing or pixel spacing in each direction.

In a grid coverage file, the "row" axis shall be the first axis by which grid points are sequenced, and the "column" axis shall be the second axis, as could be specified by the "scanDirection : Sequence(CharacterString)" attribute of the CV_SequenceRule class in Clause 8 of ISO 19123. With linear sequencing, the grid points in the first row shall be listed first, followed by other rows, with the grid points in each row listed in column number order. This relationship between the "row" and "column" names and the first grid points shall apply whether this Grid2dSquareCS is associated with a grid file before or after that file is recorded.

The "row" and "column" axis names are used here although the "scanDirection : Sequence(CharacterString)" attribute may provide other axis names. Use of other axis names would require defining different CartesianCSs for other names, or adding other names as additional axisID values. The following XML includes the axis names "line" and "sample" as additional axisID values.

If not otherwise identified in an image file, the "row" axis shall be the first axis whose number of pixels is identified, and the "column" axis shall be the second axis, as could be specified by the "extent[0..1] : CV_GridEnvelope" attribute of the CV_Grid class in Clause 8 of ISO 19123. In either case, the first point in the grid coverage file is assumed to be numbered (0, 0), meaning row 0, column 0.

The first row in a grid is sometimes called the "top" row, the first column is sometimes called the "left" column, and the first grid point is then called the "upperLeft" point. If desired, those names can be used with this Grid2dSquareCS. However other names can also be used, since this Grid2dSquareCS has been defined so that it does not depend on such left/right, top/bottom, and up/down names. </remarks>
    <usesAxis xlink:href="urn:ogc:def:axis:OGC:1.0:Row"/>
    <usesAxis xlink:href="urn:ogc:def:axis:OGC:1.0:Column"/>
</CartesianCS>