GML 4.0 workshop
OGC Aviation DWG / AIXM requirements

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OGC Aviation DWG
Use of GML for aviation data

• Guidelines for aviation specific aspects
  • E.g. srsName (WGS 84 is imposed in aviation)
  • E.g. Surface and lines - specials
    • Parallels
    • Arcs
  • E.g. Embedded curves/points
    • Geographical borders re-used in Surface definitions
• In relation with the use of AIXM for aeronautical data encoding
• GML Profile
OGC Aviation DWG
Use of GML for aviation data

• Initial version
  • November 2010 after ADWG meeting in Brussels
  • Task for the Aviation Domain WG
• Current version (0.5)
  • 80% mature
    • See document Comments
  • Target: finalise end October
  • Release during TC meeting in Brussels as “Discussion paper” (Dec 2011)
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- Example: Airspace boundaries based on national borders
- Among the proposed options: use an xlink:href towards a remote feature gml:curveMember xlink:href="urn:uuid:xxx"
  - xlink:href value is a remote reference to the gml:identifier of the GeoBorder

- Problem: the target aixm:GeoBorder is not a gml:curveMember legal child.
- Having a gml:id for GeodesicString etc… would be useful to build a correct reference to a legal gml:curveMember child.
- Requirement: need the gml:id property for all curve segment elements (AbstractCurveSegment ?)
In AIXM 5.1, a feature can have an estimated end of validity.

This is currently encoded by combining a time value + “unknown” qualifier.

Problem: this goes against GML 3.2.1, chapter 14.2.2.7
  - unknown = no specific value for temporal position is provided
  - A value for indeterminatePosition may qualify a specific value for temporal position (before 2002-12, after 1019624400)
  - It is not clear whether “unknown” can be used as a qualifier

Requirement: create a new qualifier “estimate”
Each AIXM Feature is identified through the use of the `gml:identifier` property.

Every GML object is required to have a `gml:id` value: Feature, Timeslice, `gml:Timeperiod`, gml:Point...

`gml:id` property can be used wisely for concrete local references in AIXM datasets.

However, the `gml:id` property is not required all the time and is quite commonly populated with a fake id.

**Requirement:** make the `gml:id` property optional
EUROCONTROL
SESAR requirements

• “Breaking” the GML schema into elementary blocks is in line with SESAR SWIM philosophy

• Eurocontrol will make sure that any known SESAR requirements for GML 4.0 is captured by the Aviation DWG

• The “OGC to ISO standardisation loop” is essential.
List of available documents

- OGC Aviation DWG
  - Draft GML guidelines for aviation data (draft 5)
    http://external.opengeospatial.org/twiki_public/AviationDWG/GMLGuidelinesForAIXM

- AIXM 5.1
  - AIXM Temporality
    http://www.aixm.aero/gallery/content/public/AIXM51/AIXM%20Temporal%20%201.0.pdf
  - AIXM Feature Identification and Reference (Use of gml:id)
    http://www.aixm.aero/gallery/content/public/AIXM51/AIXM_Feature_Identification_and_Reference-1.0.pdf