

GML 4.0 workshop OGC Aviation DWG / AIXM requirements

Hubert LEPORI, EUROCONTROL DSR/CMN/IM
Co-chair of the OGC Aviation DWG
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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



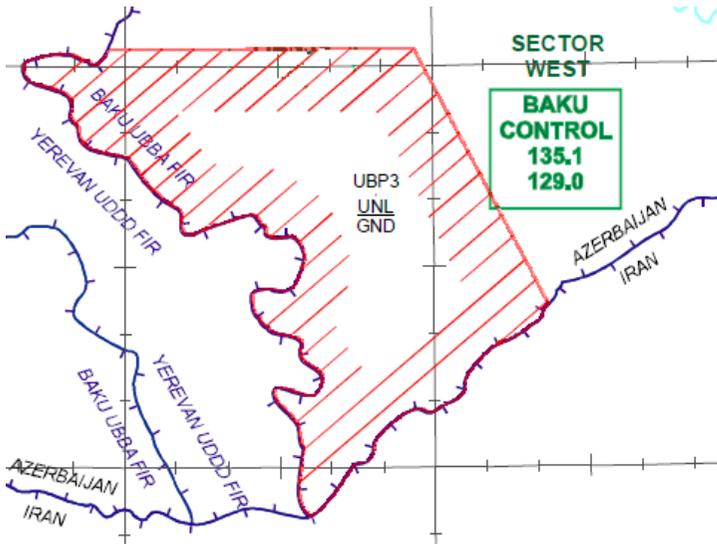
OGC Aviation DWG

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)

OGC Aviation DWG

Use of GML for aviation data



- 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 ?)**



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AIXM requirements

- 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”**



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AIXM requirements

- Each AIXM Feature is identified through the use of **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%20Temporality%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