



Use of GML by the German Mapping and Cadastral Agencies

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Georesources and Administrative Divisions in Germany



Arbeitsgemeinschaft der Vermessungsverwaltungen
der Länder der Bundesrepublik Deutschland

1 Nation (Federation)

with parliament (legislature),
administration (executive
authority), judicial power

16 States

each with parliament
(legislature), administration
(executive authority), judicial
power

~14.000 Municipalities

with many rights of self-
government



**10.000 to 20.000
Georesources
(services)**

The map shows the 16 German states (Länder) in various colors: Schleswig-Holstein (blue), Mecklenburg-Vorpommern (purple), Brandenburg (pink), Sachsen (light pink), Thüringen (orange), Bayern (light orange), Baden-Württemberg (yellow), Rheinland-Pfalz (light green), Hessen (green), Niedersachsen (light blue), Bremen (yellow-green), Hamburg (green), and Berlin (white). Major cities like Kiel, Schwerin, Potsdam, Berlin, Leipzig, Dresden, Nürnberg, München, Stuttgart, Mainz, Saarbrücken, Bonn, Dortmund, Essen, Hannover, and Magdeburg are marked with small circles.

Use of GML – Context The Framework for AAA



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GI-standards



GI-specifications

AAA implementation
started in 2005



SDI Germany



*The AAA specification is the basis
for other thematic information
systems as part of the SDI Germany*



- A GML application schema (NAS) is used to represent the cadastral, topographic and geodetic data of the AAA application schema since 2002
 - Current version uses GML 3.2 (ISO 19136)
- Extended by other GML application schemas
- Profile:
 - Features
 - Frequent use of data types and feature associations
 - Constructed from AAA application schema (conforms to ISO 19109) using standardised encoding rule
 - Spatial geometry
 - Curve interpolation: linear, arcs, cubic splines
 - Surface interpolation: planar
 - so far 2D, next version will include 3D solids
 - Coordinate reference systems
 - Code list dictionaries
 - Lineage and quality metadata (from ISO/TS 19139)



- The NAS is at this time mainly used to support internal processes of the agencies
 - Data editing and updating
 - Providing differential updates
 - Derivation of products (maps, certificates, reports, etc.)
- Lack of software tools initially was an issue, but by now the software products supporting the GeoInfoDok support the NAS
- Currently no need or interest to move to another major version of GML (benefits unclear, significant effort)



- Recent activities now focus on providing the data to users in SDIs
- As GML 3.2 is used by the NAS (and likely will continue to be used), preference would be to use the same version for publishing the data in SDIs
 - Alignment with INSPIRE is relevant here, too
- Lack of out-of-the-box support by applications used by users / customers is an issue
- Low interest in a new major version unless there is clear indication that this will improve significantly