



The ISO/TC 211 Land Administration Domain Model (LADM)

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International Organization for Standardization (ISO)

- A publisher of **International Standards**
- A **network** of the national standards institutes of **161 countries**
- ISO's standards range from agriculture and construction, to ICT, and to standards for services
- Time to develop an ISO standard is **2.7 years**
- Standards are developed by **Technical Committees (TC's)**.

International Organization for Standardization (ISO)

...	...
TC 202	Microbeam analysis
TC 203	Technical energy systems
TC 204	Intelligent transport systems
TC 205	Building environment design
TC 206	Fine ceramics
TC 207	Environmental management
TC 208	Thermal turbines for industrial
TC 209	Cleanrooms and associated controlled environments
TC 210	Quality management and for medical devices
TC 211	Geographic information/Geomatics
TC 212	Clinical laboratory testing and in vitro diagnostic test systems
TC 213	Dimensional and geometrical product specifications and verification
TC 214	Elevating work platforms
TC 215	Health informatics
...	...

ISO/TC 211

Active members (32 countries)

Australia	Hungary	Russian Federation
Austria	Italy	Saudi Arabia
Belgium	Japan	Serbia
Canada	Republic of Korea	South Africa
China	Malaysia	Spain
Czech Republic	Morocco	Sweden
Denmark	Netherlands	Switzerland
Ecuador	New Zealand	Thailand
Finland	Norway	United Kingdom
France	Peru	United States of America
Germany	Portugal	

ISO/TC 211

List of standards (partial)

- ...
- ...
- **ISO/TR 19121:2000 – Imagery and gridded data**
- **ISO/TR 19122:2004 – Qualification and certification of personnel**
- **ISO 19123:2005 – Schema for coverage geometry and functions**
- **ISO 19125-1:2004 – Simple feature access – Part 1: Common architecture**
- **ISO 19125-2:2004 – Simple feature access – Part 2: SQL Option**
- **ISO/TS 19127:2005 – Geodetic codes and parameters**
- **ISO 19128:2005 – Web Map Server Interface**
- **ISO/TS 19129:2009 – Imagery, gridded and coverage data framework**
- **ISO 19131:2007 – Data product specification**
- **ISO 19132:2007 – Location-based services – Reference model**
- **ISO 19133:2005 – Location-based services – Tracking and navigation**
- **ISO 19134:2007 – Location-based services – Multimodal routing and navigation**
- **ISO 19135:2005 – Procedures for item registration**
- **ISO 19136:2007 – Geography Markup Language (GML)**
- **ISO 19137:2007 – Core profile of the spatial schema**
- **ISO/TS 19138:2006 – Data quality measures (under revision)**
- **ISO/TS 19139:2007 – Metadata – Implementation specification**
- ...
- ...

Introduction LADM

History

- ‘Founding fathers’
 - Christiaan Lemmen (Dutch Kadaster)
 - Peter van Oosterom (Delft University)
- 2002-2008
 - Many articles and conference papers
- 2008
 - FIG submits LADM as a proposal to ISO/TC 211
- 2008-2010
 - Reviews, working drafts, committee drafts, etc.
- Status now
 - Draft International Standard (DIS)
 - 2011: International Standard?

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Objectives and Basic Components

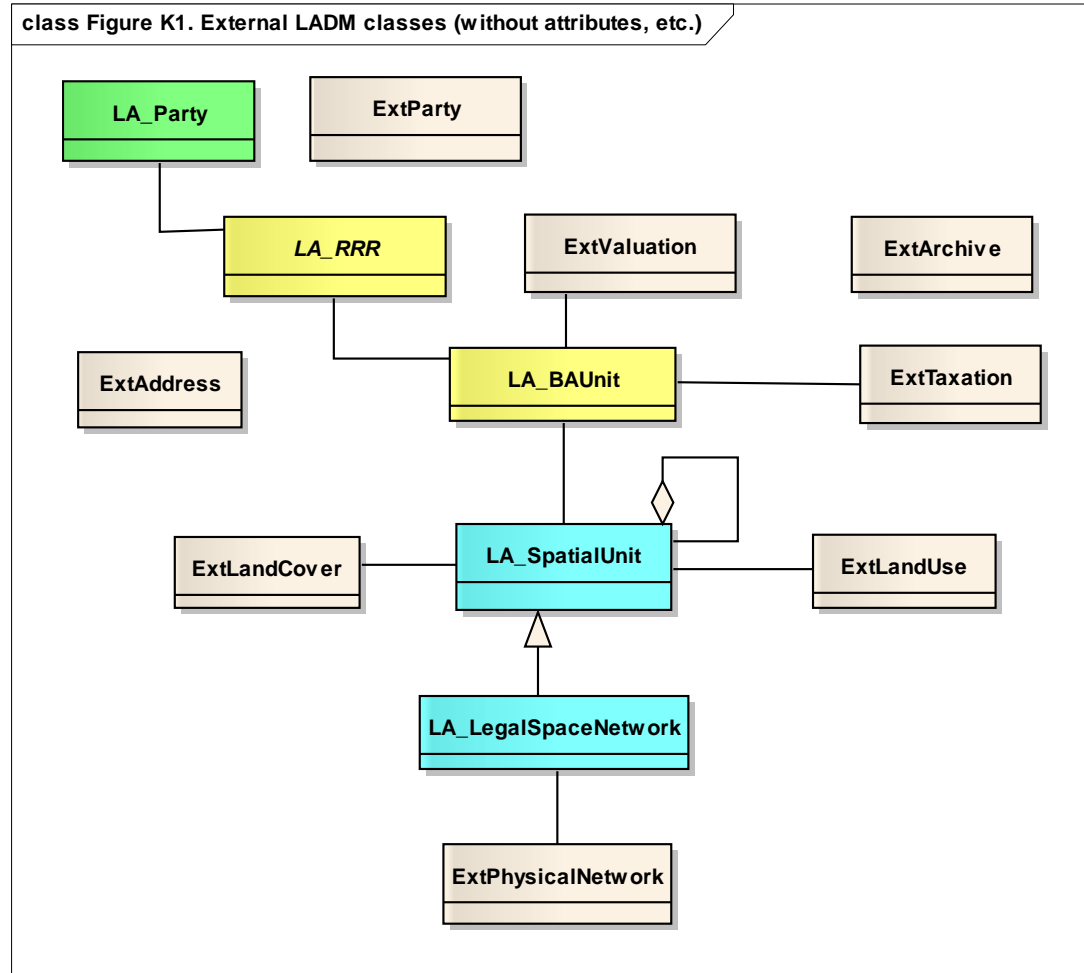
- **Two *objectives***
 1. (UML-)model for building Land Administration systems.
 2. Basis for communication (a Land Administration terminology).
- **Five *basic components***
 1. Persons and organizations (*'Parties'*).
 2. Rights, restrictions and responsibilities (*'RRR'*).
 3. Parcels, buildings and construction works (*'Spatial Units'*)
 4. Surveying.
 5. Geometry and Mapping.

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External Links

External links

- Addresses
- Persons
- Valuation
- Taxation
- Land cover
- Land use
- Documents
- Utility networks

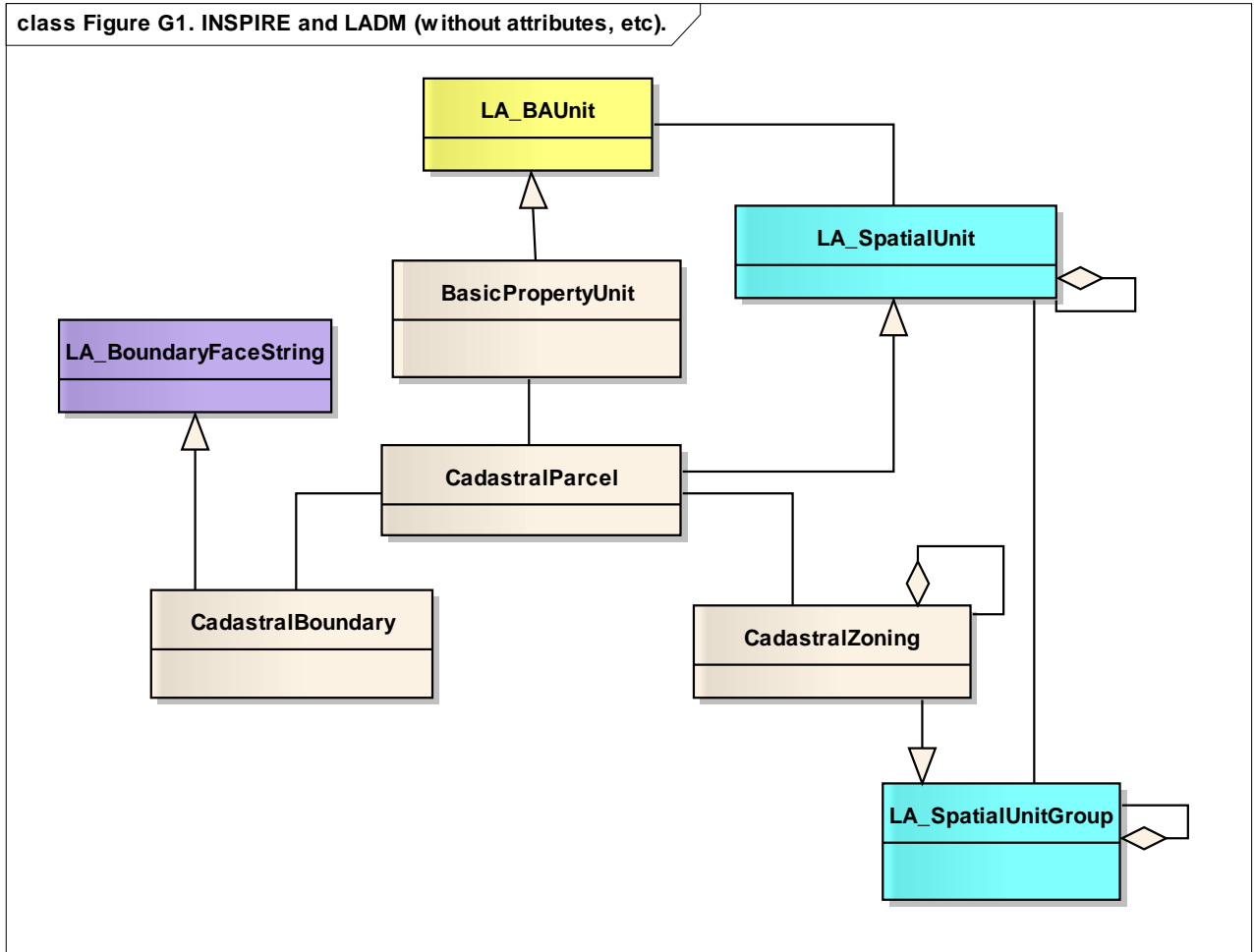


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INSPIRE Cadastral parcels

Example (1)

- INSPIRE cadastral parcels data set is consistent with LADM

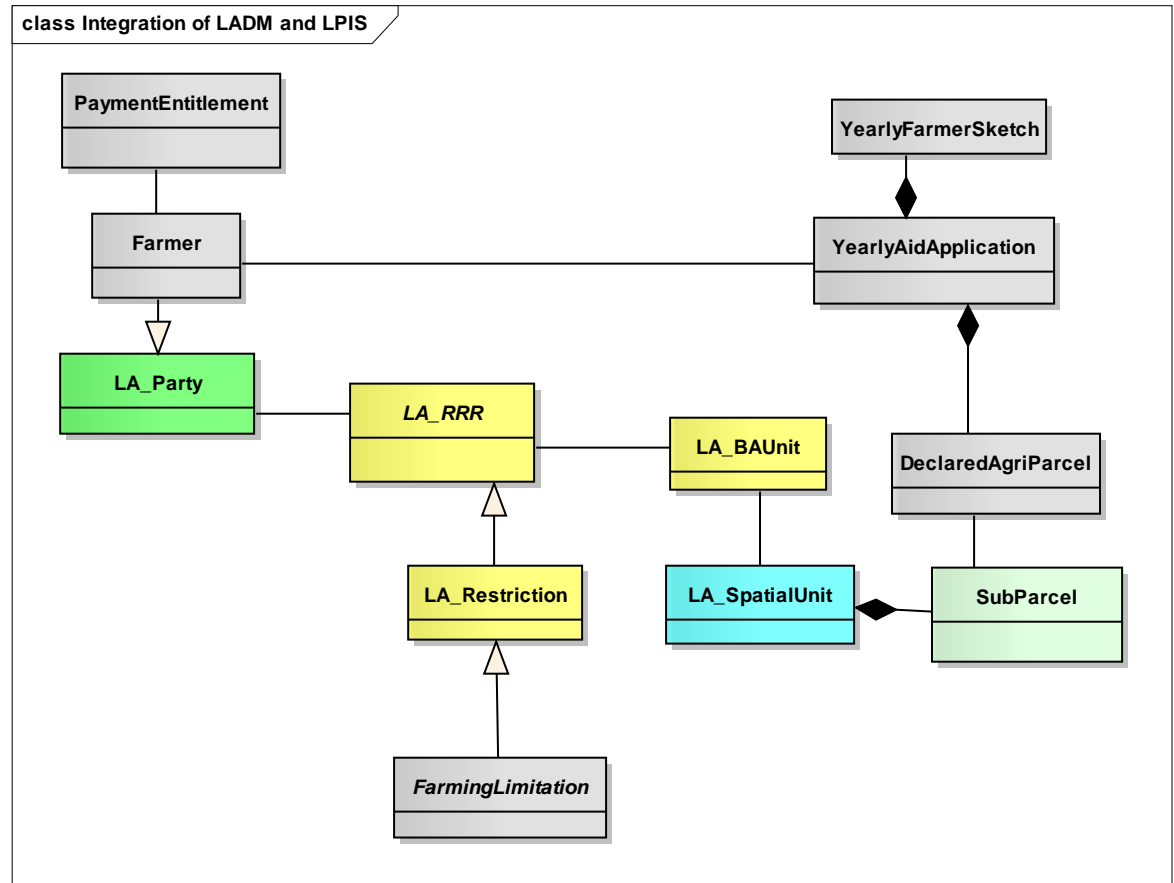


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Land Parcel Identification System (LPIS)

Example (2)

- Integration of LADM with the Land Parcel Identification System of the European Commission for subsidies to farmers



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Social Tenure Domain Model (STDM)

- Social Tenure Domain Model is a spin-off of LADM
- Software prototype
- Built with ‘Open Source’ software
- Initiative of UN-HABITAT to support pro-poor land administration
- Motivation: urgent need for registration of tenure relationships

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Conclusions

- In 2011, LADM (ISO 19152) will be an International Standard for cadastral information
- LADM strengthens the relationship between Cadastre and other public registers (INSPIRE, etc.)
- LADM enables the worldwide registration of cadastral information in a standardized way
- STDM enables the massive registration of tenure relationships and customary rights
- Initiatives to improve access to cadastral information

Documentation

- http://www.gdmc.nl/oosterom/ISO19152LADM_DIS.pdf

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Thank you for
your attention.