Specialization of the Land Administration Domain Model (LADM)  
A Legal approach  
16-5-2013

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FIG Working Week, Environment for Sustainability  
6 – 10 May 2013, Abuja, Nigeria.

Land Administration Domain Model  
ISO 19152 (LADM)

- Model includes:
  - Spatial part (geometry, topology)
  - Extensible frame for legal/admin parts

- Stared within the FIG in 2002

- FIG proposed LADM to ISO/TC211, January 2008 (parallel voting in ISO TC211 and CEN TC287)

- Published by ISO, December 2012

- Includes integrated 2D and 3D support
LADM: Administrative (legal) package

- RRR (Right Restriction Responsibility) has associations with Party (Person) and Basic Administrative Unit (and indirectly to SpatialUnit)
- RRRs are in principle based on legal documents or decisions
- A RRR can be temporal

The LADM provide a rather coarse classification

- Right
  “action, activity or class of actions that a system participant may perform on or using an associated resource”

- Restriction
  “formal or informal obligation to refrain from doing something”

- Responsibility
  “formal or informal obligation to do something”
Legal Cadastral Domain Model (LCDM)

- A more detailed classification of rights, restrictions and responsibilities than LADM
- Based on how they influence ownership ← central concept

- PhD-thesis Jesper Paasch (KTH, September 2012)
  Standardization of Real Property Rights and Public Regulations
  – The Legal Cadastral Domain Model

Some rights and restrictions
(from Sweden, Ireland, Germany, the Netherlands and Portugal)

- Possibility of reverter
- Easement
- B.P. right
- Freehold covenant

- Beschränkte persönliche Dienstbarkeiten
- Erbbaurecht

- Grunddienstbarkeit
- Gemensamhetsanläggningar
- Profit à pendre

- Wayleave
- Niessbrauch
- Building lease

- Servitut
- Bearbetningskonsession
- Rentenschuld

- Right of entry or re-entry
- Vruchtgebruik
- Building lease
- Detaljplan

- Emphyteusis
- Mortgage
- Opstal
- Grundschuld

- Reallast
- Usufruct
- Erfpacht
- Lien
- Right of pre-emption
Warning: temporarily non-LADM notation/naming (PhD-thesis Paasch)

Real property right

Beneficial right

Person
execute
Ownership right

Benefit

Public regulations

Land

Limiting right

Restrict

LADM legal extension

Real property right classes

Beneficial right

Person
execute
Ownership right

in

Land

Limiting right

Restrict

Common
Property to property right
Person to property right
Latent right
Monetary liability

+ benefit

- restrict
Private interests in LCDM are divided into five groups, examples

1. Common
   → e.g. be a property jointly owned by other properties
2. Property to property right
   → e.g. an easement
3. Person to property right
   → e.g. a personal use right
4. Latent right (is a right not executed yet)
   → e.g. a pre-emption right
5. Monetary liability (is a financial claim)
   → e.g. a mortgage.

Full definitions are provided in PhD-thesis Paasch

Public regulations influencing property right ownership (after, Ekbäck 2000)
Public regulation classes

- **General**: regulation at class (type) level
- **Specific**: regulation by decision at instance (set) level

**+ benefit**
- Person execute Ownership right 
- Public advantage 
- Land

**- restrict**
- Public general restriction 
- Public specific restriction 
- Public general obligation 
- Public specific obligation

LADM Legal Profile

- Based on the Legal Cadastral Model Classification
- LCDM naming aligned with LADM terminology
- Monetary liability mapped to LA_Mortgage (more broad interpretation)

- Modeled in UML class diagrams
  Note the use of *abstract* and concrete classes
LA_Right extended profile for privately and publicly imposed rights

LA_Restriction extended profile for privately and publicly imposed restrictions
LA_Responsibility extended profile privately and publicly imposed responsibilities

LADM’s current code lists for Administrative Package (annex J.2)
Code lists need further structuring and formalization

- Should there for every of the 6 leaf and 2 non-leaf subclasses of LA_Right be separate code lists?
- Same questions for LA_Restriction and LA_Responsibility?
- Can code lists inherit from corresponding parent code lists?
- How to add country specific code list values (related to the standard code list values)?
- How to deal with country profiles in which standard code list are not applicable?

- For code lists related to the abstract leaf classes: these code list values encode public (general) regulations!

Summing up

- The extended model is suitable for classification of real property rights and public regulations (at least in Western legal systems), based on the case study results
- The model should be further tested in other legal systems
- Applying the “correct” terminology is important and an ongoing
- Code lists with values for types of rights, restrictions and responsibilities need further structuring and formalization
- LCDM does extend the LADM standard and has been integrated
Deadline abstracts
31 May 2013

International FIG workshop on the Land Administration Domain Model (LADM2013)

24 – 25 September 2013
(in conjunction with ISG2013)
Kuala Lumpur, Malaysia

http://isoladm.org

Land Administration Domain Model

Welcome to the LADM Wiki

The collaborative environment for posting and discussing ISO/TC 211 Geographic Information - Land Administration Domain Model related material is


LADM from Research to Implementation – Land Administration Domain Modeling at a threshold

Available Information

- LADM Documents
- Workshops
- Country Profiles
- LADM Publications
- Implementation Material

If you want to add material (and do not have an account for this Wiki), send email to "P.J.J.van.Doosten@tudelft.nl"
Annex F (informative) Legal profiles

- Restrictions (Figure F.2)
- Looks familiar?

Legal Families in Europe
Newman and Thornley (1996)
Finally published
1 December 2012.

INTERNATIONAL
STANDARD
ISO
19152

Geographic information — Land
Administration Domain Model (LADM)

ISO 19152

LADM Voting Results by
ISO/TC 211 Members

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ISO 19152:2012
Geographic information -- Land Administration Domain Model (LADM)

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