


Linkages Between Core Cadastral Model, LADM and STDM


Innovations in Land Administration Workshop

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CCDM Concepts

- At the basic level, the model represents:
 - I. Person (natural, non-natural, group)
 - II. Parcel
 - III. Right (Rights, restrictions and responsibilities)
- Additional representations:
 - a. Immovables – Buildings, OtherRegisterObject (geometry of easement, right of way, protected region)
 - b. SourceDocument – Survey document or legal document (deed or title)

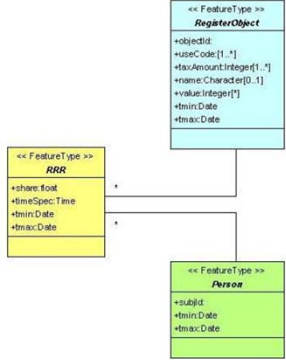


Core Cadastral Domain Model

- Applicable in land registration and multipurpose cadastre
- Goals:
 - I. Provide an extensible basis for efficient and effective cadastral system development based on a model driven architecture (MDA)
 - II. Enable involved parties, both within one country and between different countries, to communicate based on the shared ontology implied by the model




CCDM Representation



```

classDiagram
    class RegisterObject {
        <<FeatureType>>
        +objctid
        +useCode[1..*]
        +taxAmount:Integer[1..*]
        +name:Character[0..1]
        +value:Integer[*]
        +minDate
        +maxDate
    }
    class RRR {
        <<FeatureType>>
        +shape:float
        +timeSpec:Time
        +minDate
        +maxDate
    }
    class Person {
        <<FeatureType>>
        +subjId
        +minDate
        +maxDate
    }
    RegisterObject "1" -- "*" RRR
    RegisterObject "1" -- "*" Person
    
```

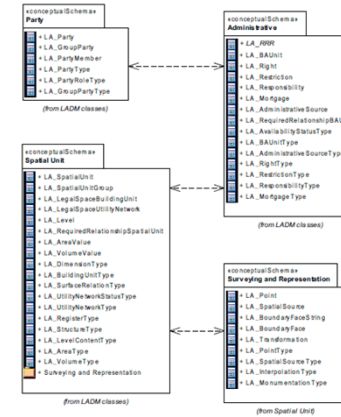


Land Administration Domain Model

- Definition - a reference Land Administration Domain Model (LADM) covering basic information-related components of land administration (including those over water and land, and elements above and below the surface of the earth)
- Conceptual model provides abstract representation of:
 - I. Parties (people and organizations)
 - II. Basic admin units, rights, responsibilities and restrictions (ownership rights)
 - III. Spatial units (parcels, legal space of building)
 - IV. Spatial sources (surveying) and representations



LADM Conceptual Model



LADM Rationale

- Provides common terminology for land administration at national and regional scales
- Provides basis for national and regional profiles
- Enables combining of land administration info from different sources



Social Tenure Domain Model (STDM)

Basic concepts of land administration affected in three ways:

- I. Party – person, company, municipality, cooperation, married couple, group, group of groups, ministry, etc
- II. Social Tenure Relationship – between parties and spatial units:
 - a. Non-formal and informal rights
 - b. Long leases, Islamic rights, state property
 - c. Conflict situations – disagreement, overlap, occupation



Social Tenure Domain Model (STDM) - cont'd

III. Spatial Unit – units other than accurate and established units



Entity Representations CCDM vs. LADM vs. STDM

CCDM	LADM	STDM
Natural person, group	Natural person, group, cooperatives	person, company, municipality, cooperation, married couple, group, group of groups, ministry
Parcel, building, right of way, protected region	Parcel, building, land surveys	Text description, single point, set of unstructured lines, 3D volume
Formal ownership, apartment right	Restriction, responsibility and right abstraction	Formal ownership, apartment right, fishing right, hunting right, cooperation, customary, restriction, miri, waqf



STDM Core Conceptual Diagram

