The Land Administration Domain Model (LADM) as the Reference Model for the Cyprus Land Information System,

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Marrakech, Morocco, 19 May 2011

PRESENTATION CONTENT

• The Cyprus Land Information System (CLIS)
• The Data Model of CLIS
• The need to upgrade CLIS
• Land Administration Domain Model
• The Cyprus country profile based on LADM
• Instance Levels Diagrams
• Conclusions and Future Work
Cyprus has a reliable cadastral system supporting the administration of land and other immovable property related activities. The authority responsible for the operation of the cadastre is the Department of Lands and Surveys (DLS). Throughout the years, DLS expanded its activities and services offered to the public, emerging into a dynamic organization supporting a multipurpose cadastre.

DLS activities include:

- maintenance of the state survey infrastructure,
- definition, identification, demarcation, measuring and mapping of parcel boundaries,
- property registration, conveyance, valuation,
- management of state land,
- compulsory acquisition/requisition.

Furthermore DLS acts as the National Mapping Agent of Cyprus.
Cyprus Land Information System

In 1999 the Cyprus Land Information System was established to support the functions of the Department of Lands and Surveys.

CLIS has two major application components

- **Spatial Component**
  - Survey Database
  - Digital Cadastral Database
  - Topographical Database

- **Aspatial Component**
  - Legal Database
  - Fiscal Database
The need to upgrade CLIS

The current CLIS is at the end of its life cycle and it is broadly accepted that it should be improved and upgraded, and a new data model should be introduced to facilitate the manipulation and provision of data to internal and external users/customers in a more effective way. The need to enhance the CLIS coincides with the introduction of the LADM.
The Land Administration Domain Model (LADM) is under development within the Technical Committee 211 (TC211) of the International Organization for Standardization (ISO, ISO/TC211, 2010) and identified as ISO 19152.
“Migration” of CLIS entities to LADM classes

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<table>
<thead>
<tr>
<th>CLIS</th>
<th>LADM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ownership</td>
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</tr>
<tr>
<td>Property</td>
<td>Property</td>
</tr>
<tr>
<td>Contractual Agreements</td>
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<tr>
<td>Parcel</td>
<td>Parcel</td>
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<tr>
<td>Legal Body</td>
<td>Legal Body</td>
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</tbody>
</table>

**CLIS**

- Ownership
- Property
- Contractual Agreements
- Parcel
- Legal Body

**LADM**

- Ownership
- Property
- Contractual Agreements
- Parcel
- Legal Body

**Proposed Party Class**

```
<table>
<thead>
<tr>
<th>CLIS</th>
<th>LADM</th>
</tr>
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<tbody>
<tr>
<td>Party::LA_PartyType</td>
<td>Party::LA_PartyType</td>
</tr>
<tr>
<td>+ naturalPerson</td>
<td>+ naturalPerson</td>
</tr>
<tr>
<td>+ nonNaturalPerson</td>
<td>+ nonNaturalPerson</td>
</tr>
<tr>
<td>+ baUnit</td>
<td>+ baUnit</td>
</tr>
<tr>
<td>+ republicOfCyprus</td>
<td>+ republicOfCyprus</td>
</tr>
</tbody>
</table>

**Party::LA_Party**

- name
- surname
- IDno
- birthDate
- deathDate

**Party::LA_PartyRoleType**

- RRR provider
- RRR recipient
- moneyProvider
- moneyDebtor
- lessee
- lessor
- licensedSurveyor
- engineer

**VersionedObject**

- beginLifespanVersion
- endLifespanVersion
- quality
- source

**External::ExtNaturalPerson**

- partyID
- extAddressID
- name
- surname
- middleName
- birthDate
- deathDate

**External::ExtNonNaturalPerson**

- partyID
- extAddressID
- name
- registrationDate
- terminationDate
- RegNo

**Administrative:LA_RRR**

- «featureType»
- rrr

**Administrative:LA_BAUNIT**

- «featureType»
- baunit

**LA_Party**

- extPID
- name
- pID
- role
- type

**VersionedObject**

- beginLifespanVersion
- endLifespanVersion
- quality
- source

**External::ExtAddress**

- geographicalArea
- street
- houseNo
- flatNo

**Complaint:**

- name
- surname
- middleName
- birthDate
- deathDate
```

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The south irrigation underground water pipe, has a length of 110 km. The “channeling access” right is registered for the benefit of the State.
Lease of a parcel owned by the State to a farmer

Conclusion

The Land Administration Domain Model is compatible with the Cyprus Land Information System. The adoption of LADM is a great opportunity for the Cyprus cadastre to introduce an ISO standard model, and to gain all the benefits derived from such a movement. Such benefits include the improvement of the effectiveness and the efficiency of the current system and the expansions of the services provided by CLIS to the broader LAS and to the Cyprus community.
Conclusion

The new functionality includes: better structuring of the rights, responsibilities and restrictions (and related source documents), better fitting in the information infrastructure both national (e.g. registration, valuation, taxation) international (e.g. INSPIRE cadastral parcels), and future capabilities for representing 3D spatial units (e.g. legal spaces related to apartment or utility infrastructure).