LADM as a Basis for the Hellenic Archaeological Cadastre

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International FIG workshop on the Land Administration Domain Model, 24-25 September 2013, Kuala Lumpur, Malaysia
Cultural monuments and archaeological areas are numerous all over Greece but not registered in detail as Property Objects.

24,000 Archaeological Sites, Protection Areas and Monuments

6,000 items of Real Public Estate managed by the Ministry of Culture
Ongoing project for the **digital registration of the cultural heritage of Greece**, together with the recordation of property rights exercised in such areas and the **clarification of the ownership status**.

Goal of the project: the creation of a **management tool**

Ministry of Culture, Strategic Planning:

✓ Convert the cultural reserve into digital form with public access
✓ Enable information sharing, training and knowledge transfer
✓ Interoperability between all systems that provide cultural content and services and the protection of intellectual property rights
Problems of Immovable Antiquities

Cultural heritage information (and protection) is spread across many organizations. Not a unified organizational structure!
Bad management of restriction in land use
Owners with antiquities, may lose their rights. Land expropriation is time-consuming process, delays to the completion of big projects.

Land expropriation for the excavation of the ancient theater Acharnon
The Lack of National Cadastre!!!

- Ownership information about properties with archaeological interest is not completed
- The public property is not yet recorded in its whole in a national scale means that there is no knowledge for its extent, leading to infringement from individuals:
  Arbitary buildings do not promote cultural heritage..

Arbitrary Buildings next to the Archaeological Site of Knossos (source: http://odysseus.culture.gr)
Database Structure and Operation

All registrations are organized in 2 levels: the descriptive and the geospatial

Source: Hellenic Archaeological Cadastre
Implementation Phases of the HAC

1. Archaeological (direct) labor working team, responsible for procedures of preparation of the collected data, together with quality control of the system and its content.

2. Intermediate management system: collection of archive material, cataloguing monuments, sites and real property and quantification of data are the core of this stage (by external contractor).

3. Implementation of an Integrated Information System also by an external contractor.
Χάρτης

Περιοχή Ναού Επικουρείου Απόλλωνα

Lon : 21.91086
Lat : 37.448468
X : 315653.53
Y : 4146385.46

Μετά από κάθε καταχώρηση, ελέγξτε τη νέα εγγραφή για να επιβεβαιώσουμε την πληρότητά της!
Modeling the Archaeological Space...

The **CIDOC Conceptual Reference Model (CRM)** provides an extensible ontology for concepts and information in cultural heritage and museum documentation. Since 2006 it is the international **standard** (ISO 21127:2006) for the controlled exchange of cultural heritage information.

Archives, libraries, museums, and other cultural institutions are encouraged to use the CIDOC CRM to enhance accessibility to museum-related information and knowledge (British Museum).
**FRBRoo**: a new initiative (2006) for Bibliographic Records (FRBR), provides a formal ontology intended to capture and represent the underlying semantics of bibliographic information, to facilitate the integration, mediation, and interchange of bibliographic and museum information.

**Performance Standard 8** recognizes the importance of cultural heritage for current and future generations. Aims:

- To protect cultural heritage from the adverse impacts of project activities and support its preservation.
- To promote the equitable sharing of benefits from the use of cultural heritage.
Why LADM?

✓ Because the LADM provides a core model, which is a good basis for the harmonization of an implementing project (HAC) with the international practices.

✓ Because it can be used for the common representation of the two cadastral initiatives in Greece and the matching of their entities with a shared vocabulary.
Expressing HAC and HC with terms of LADM

Entities of HAC and HC interacting with LADM Classes
The Core Model Proposed

The Legal Profile Classes

The Basic Spatial Profile Classes
The types of **rights**, **restrictions** and **basic administrative units** follow the HC Standards and the types of **responsibilities** follow the Archaeological Legislation. All the other types of classes adopt the features of the LADM classes.

Expressing the two cadasters' core model with terms of LADM:
- enhances the flexibility between them
- creates connectivity and interoperable possibilities for best management (e.g. with public services systems for taxation, clarification of the ownership status)

The implementation of the HAC with international standards reflects the **cadastral dimension of the archaeological space**, since properties with archaeological features are under special ownership status.
Rights, Restrictions and Responsibilities exercised at the same time from different Parties on a Mixed Property with Antiquities!!
Conclusions - Discussion (2)

a new model based on LADM?

or

an extension for LADM?
In all cases the management of the “archaeological” information is of high importance for the development in Greece.

A standard in modeling the cultural heritage can help all experts involved in the restoration, archiving and monitoring of the history of mankind and secure this for the future!

Thank you for your attention