IDEARQ: a Cultural Heritage SDI for Archaeological Research Data in the Iberian Peninsula

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Generic Cultural Heritage Data fit within INSPIRE

Publish archaeological data in an interoperable way

Cultural Heritage Application Schema

IDEARQ

GIS Lab | Instituto de Historia
Center for Social Sciences and Humanities
Spanish National Research Council
The Cultural Heritage Application Schema
1. Cultural Heritage inside INSPIRE

**Cultural Heritage** as part of the **Protected Sites Data Spec.**

INSPIRE defines a *protected site* as an “area designated or managed within a framework of international, Community and Member States' legislation to achieve specific conservation objectives”.

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2. The Cultural Heritage Application Schema
2. The Cultural Application Schema

Legal part: ProtectedHeritagePlace

New class: ProtectedHeritagePlace, built as an extension of ProtectedSites.

*Area dedicated to the protection of cultural resources and managed through legal and administrative means.*

It is a subclass of ProtectedSite entity: Establishes a subtype of protected site, specifically related to cultural features.

```
<<featureType>>
ProtectedHeritagePlace
+placeName : LocalisedCharacterString [1..*]
+administrativeScope : AdministrativeScopeValue [1]
+type : NatureOfProtection [1..*]
```
2. The Cultural Application Schema

**siteProtectionClassification**

- **<en叙eation>>**
  - ProtectionClassificationValue
    - natureConservation
    - archaeological
    - cultural
    - ecological
    - landscape
    - environment
    - geological

- **<<codeList>>**
  - NatureOfProtection
    - Archaeological
    - Architectural
    - Ethnographical

New categories can be added
2. The Cultural Application Schema

A Cultural Entity is any real-world feature result of human action protected by a legal figure.

CulturalEntity relates to ProtectedEntityType (preexisting class in the Data Specification on Protected Sites), that is, any kind of a real world feature susceptible of legal protection.

ProtectedEntityType is related to ProtectedSite.
2. The Cultural Application Schema

**CulturalEntity**
Real-world entity result of human action and, consequently, susceptible to be protected as cultural heritage.

Subclasses of **Cultural Entity**

Samples and analysis

Related documentation
IDEARQ
Archaeological Research Spatial Data Infrastructure

http://www.idearqueologia.org/
3. IDEARQ

OGC Services: WMS

Map Viewer

Radiocarbon Dates

Levantine Rock Art

Archaeo-metallurgical analysis
3. IDEARQ

Radiocarbon Dates

Laboratory: Beta125862
Date: 4000±70 B.P.
Sample: Madera / Carbón (Método no citado)

Laboratory: Beta125861
Date: 3980±40 B.P.
Sample: Madera / Carbón (Método no citado)

Laboratory: BM2345
Date: 3820±50 B.P.
Sample: Madera / Carbón (Convencional)
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Corpus of Levantine Rock Art (CPRL)

Cova Remigia (Ares del Maestrat, Castellón-Spain)

Archer. La Saltadora (Les Coves de Vinromá, Castellón-Spain).

3000 Pictures + 90 sites UNESCO World Heritage List
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Archaeometallurgy

Lead isotope analysis results

Lead Ingots with consular marks
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IDEARQ UML class diagram:

Extension of the Cultural Heritage Application Model.
Extendable to be able to include more data collections in the future.
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[Diagram showing a network of computers and servers connected to a cloud representing the WWW. The diagram includes a Map Server, GeoServer, PostgreSQL + PostGIS, and GIS Software (QGIS, GvSIG). PC and Map viewer are also depicted.]
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Web Map Service and dataset metadata (ISO 19115)

Three point geometry layers based on database views

Layers

IDEARQ_Capa_Base_Yacimientos_Arqueologicos: summarizes the information of all datasets offering generic information about the archaeological sites, their description, chronology, typology (human settlement, cemetery, industrial activity, etc.)

IDEARQ_C14: adds all the information related to every radiocarbon date, the resultant age along with the standard deviation, the kind of material dated (bone, charcoal, etc.).

IDEARQ_CPRL: holds a description of every picture within the CPRL, specifying the representation (cattle, human figure, etc.).
3. IDEARQ
3. IDEARQ

1. Connects directly to database
2. Created with Javascript and Openlayers 2
3. Due to amount of archaeological sites (nearly 2000). Cluster Strategy used
4. Scale – limited to 1:200,000
5. Base layers
   - OpenStreetMaps across MapQuest Tiles
   - Bluemarble and Landsat composition offered by GIS Lab
6. Geolocation tool “Nominatim Search” courtesy of Map Quest

http://www.idearqueologia.org/
3. IDEARQ
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Fernández Freire, Carlos, César Parcero-Oubiña, and Antonio Uriarte González, eds. A Data Model for Cultural Heritage within INSPIRE. CAPA: Cadernos de Arqueoloxía E Patrimonio. Laboratorio de Arqueoloxía e Formas Culturais (GIArPA), IIT, USC, 2013
http://www.idearqueologia.org/
Available by the end of September

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