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Latest Developments and activities in the Spanish NSDI

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Abstract

The Spanish NSDI Geoportal was opened on June 2004 and has evolving continuously with the support of a healthy collaborative community composed by public and private sector, academia and citizens. INSPIRE Directive has been transposed in Spain by means of Law 14/2010, LISIGE, the Law of Spanish Geographic Information Services and Data, which establishes a national coordination structure based on the High Geographic Council as umbrella organization embracing the Spanish Geographic Information Infrastructure Managing Board and a set of Technical Working Groups (TWGS). The TWG on Monitoring and Reporting has been coordinating this task since 2010. In this communication a brief summary of the state of the play of the project is provided, including achievements, conclusions, lessons learnt and good practices, giving special attention to and the process of monitoring and reporting.

Keywords: SDI, web services, INSPIRE, monitoring, reporting.

1 Introduction

INSPIRE Directive prescribes that Member states should provide descriptions of spatial datasets and services within the scope of the National SDIs and shall establish and operate a catalogue service for the spatial data sets and services for which metadata has been created.

To ensure the interoperability of data and services in the European SDI, a set of Implementing Rules (IR) have been adopted for all the relevant aspects implied: metadata, network services, spatial data services, monitoring and reporting and data and services sharing.

Taking into account the principles of INSPIRE Directive about services and looking for compliance with Implementing Rules, IGN Spain initiated in 2011 a reengineering process of its more basic services: a viewing service (IGN-Base) and a discovery service (IGN-CSW).

The adaptation process is still running in a continuous adaptation approach. New analysis, design, implementation and tests are performed to put in practice the legal and technical framework defined by INSPIRE Directive and its Regulations.

2 Inspire web services at IDEE

To implement INSPIRE Philosophy and principles in the national node of Spanish NSDI, a considerable efforts has been made during 2012 to establish a core set of INSPIRE compliant and useful harmonized services integrated by:

- IGN visualization services, a set of WMS and WMTS INSPIRE services conformant Technical Guidance for the implementation of INSPIRE View Services. Those services have been made with a free software (Geoserver 2.2.4 with Inspire extension) with some tuning and additions.

- IGN-CSW, a INSPIRE discovery service (CSW) that allows the searching and retrieval of descriptive information (metadata) about data and services, and meeting the Technical Guidance for the implementation of INSPIRE Discovery Services requirements. This service has been also implemented with a free software application (Geonetwork 2.6.4.).

- IGN download services, including predefined dataset download services (ATOM) using new developments and direct access download services (WFS 2.0) using a free software (Geoserver 2.2.4 with app-schema extension). Those services fulfills Technical Guidance for the implementation of INSPIRE Download Services requirements.

All those services have been described with metadata and they are available at the INSPIRE Geoportal through IDEE CSW service and any user can access and consult them. In addition, IDEE CSW provides access to more than 80,000 metadata registers of services and spatial data of IDEE community. A procedure of coordination among the network of 13 discovery services has been implemented based on harvesting and metadata XML files interchange.

3 Inspire web services at IDEE

By the other hand, a big effort to analyze, design and develop software tools to validate and assess conformance and quality of the resources implemented in the considerable set of SDI nodes existing in Spanish NSDI is being done.

Under a collaboration agreement with University of Zaragoza, IGN Spain has begun to develop the following utilities:

- An on-line Inspire Services Validator (ISV) for INSPIRE Network Services to validate its conformance with the applicable regulations and standards. In a first phase visualization services and discovery services have been considered.

- An on-line Inspire Metadata Validator (IMV) for testing INSPIRE conformance of metadata.
- A new optimized version of the Open Source metadata editor CatMDEdit taking into account all the INSPIRE relevant requirements for the generation of data and services metadata.

Finally, in relation to the assistance given by the national node for the implementation of Inspire in Spain, a new INSPIRE special section has been created in the IDEE Geoportal, where users can view and access documents and recent developments that can help them to the correct implementation of INSPIRE Directive in its organization.

4 Monitoring and reporting

On the other hand Article No. 21 of INSPIRE Directive states that Member States should carry out monitoring of the implementation and use of their infrastructures for spatial information. This annual review should be sent to the Commission and published by 15 May each year. The first INSPIRE monitoring process was conducted in 2010.

The transposition of INSPIRE Directive to the Spanish legal framework was completed in 2010 with the approval of Law 14/2010 of the 5th of July, the Law on Infrastructure and Geographic Information Services in Spain (LISIGE). Among other things, this law creates organizational structures in the Spanish administration meant to implement and comply with the requirements defined in INSPIRE Directive and its Implementing Rules.

LISIGE assigns to the High Geographic Council (CSG) the role of coordinating the implementation of the INSPIRE Directive in Spain. This results in the creation of the Spanish Geographic Information Infrastructure Managing Board (CODIIGE). CODIIGE, which was established in 2011, has among its functions to gather information on interoperable geographic data and services, and also to establish the criteria to select the information to be sent from Spain to the EC in the annual monitoring report required by the Directive.

To support CODIIGE activity, in November 2011, 17 Technical Working Groups (TWGs) were created, composed by senior representatives of the agencies responsible for the production of geographic information in Spain. One of them is the GTT monitoring and reporting (GTT S & I), which has among its specific duties the following: coordinate and conduct the annual collection of data sets of data, metadata and services from the bodies of the Central Government, Autonomous Communities and Autonomous Cities that are required to carry out monitoring, and to coordinate and conduct the triennial gathering of information from the institutions involved in the follow up to compose the report required by INSPIRE Directive.

The first monitoring and reporting process took place in 2010, coordinated by the National Geographic Institute (IGN) as Technical Secretariat of CSG. From 2011 the monitoring process was coordinated by the TWG S & I and has taken

advantage of the participation of the other experts from CODIIGE TWGs.

Public agencies, technicians and national experts have taken part in all the processes of monitoring, being asked for information. After four monitoring seasons and two tracking reports, it is observed that the number of participants tends to stabilize and the quality of the responses has been improving step by step. This is mainly due to the fact that the different coordination structures, at state and regional levels, has been assuming and improving its roles and performance with respect to INSPIRE obligations.

The gained experience has made possible the adaptation and adoption of the necessary measures to address the emerging issues and problems. Hopefully it will allow to propose future actions leading to the publication of data sets and services in fully accordance with INSPIRE data specifications and technical requirements.