Fit2INSPIRE

a sustainable path to interoperability

Date : 31/12/2014

Author : Jean-Loup Delaveau

springeo - CEO
07 85 53 04 23
http://www.springeo.fr/

Abstract

SPRINGEO is a recent French startup developing on-demand and thematic download web-services for providing interoperable geospatial data. Its service helps existing spatial data infrastructure (SDI) to achieve INSPIRE conformity at the data level, boosting their Opendata projects through data standardization.

SPRINGEO has developed a complete service called « fit2INSPIRE » using opensource tools in an innovative manner : we adapt tools to existing databases rather than relying on potential very complex data transformation workflows.

The « fit2INSPIRE » framework has been set up with the concern of the balance between data re-usability, implementation and maintenance costs optimization, and INSPIRE interoperability requirements.

With re-usability, we consider a unique endpoint at regional level which delivers harmonized data from an agregrated database is much more effective than a multiple files approach. Fit2INSPIRE provides actual direct access to conformant data using webservice technologies. This approach fits with the INSPIRE directive « spirit » in the sense that it delivers data streams that can be consumed by different applications and devices. Exchanged GML messages remain transparent for application users.

The Fit2INSPIRE framework is thematic oriented to reduce development costs. First, the development of any new INSPIRE webservices is shortened by a schema driven development process. Secondly, we have chosen a noSQL database for its flexibility in data schema management. noSQL databases store data in JSON documents which are fairly close to expected GML output. That simplifies data bindings and data serialization. Finally, our technology suits agregate multiples resources in cloud environment in order to decrease exploitation and maintenance costs. This is a significant point for regional SDI.

How does fit2INSPIRE work ? Our two steps standardize & serialize method enables providing INSPIRE data through a WFS 2.0 download service in a sustainable way (see our demo: http://www.springeo.fr/demo). The first step needs a specific adaptation to data sources whereas the second one is generic. ETL connectors using Talend transform data souces in thematic JSON documents.
Once they are stored in the target noSQL datastore, data automatically becomes INSPIRE conformant. The fit2INSPIRE service produces on-demand GML messages.