

ENERGIC OD

European Network for
Redistributing Geospatial
Information to user
Communities – Open Data

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The Partners

- Chambre de Commerce et d'Industrie du Gers (FR)
- AED-SICAD AKTIENGESELLSCHAFT (DE)
- Association Française pour l'Information Géographique (FR)
- Bureau de Recherches Géologiques et Minières (FR)
- CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
- Centre Régional de l'Information Géographique de la Région Provence Alpes Côte d'Azur (FR)
- Centre National de la Recherche Scientifique - Institut de recherches en sciences et techniques de la ville (FR)
- DEPTH France (FR)
- GEOkomm (DE)
- INSTYTUT GEODEZJI I KARTOGRAFII (PL)
- LUFTBILD UMWELT PLANUNG (DE)
- POLITECNICO DI MILANO (IT)
- SRP Gesellschaft für Stadt- und Regionalplanung (DE)
- REGIONE DEL VENETO (IT)
- ECOCERT SA (FR)
- UNIVERSIDAD DE ZARAGOZA (ES)
- ALKANTE (FR)
- Not Only Web (IT)

Why this project?

- The world of the geo-information is extremely heterogeneous
- The different user and system requirements are too various to be supported by a single unique system or technology
- Wide number of different systems have been developed in order to support the delivery and use of geospatial data sets in different domains (INSPIRE, GMES/Copernicus, GBIF)

Target users

- Application developers
- Private companies developing GI-based applications
- Public authorities
- SDI developers
- Citizens

The traditional approach to interoperability

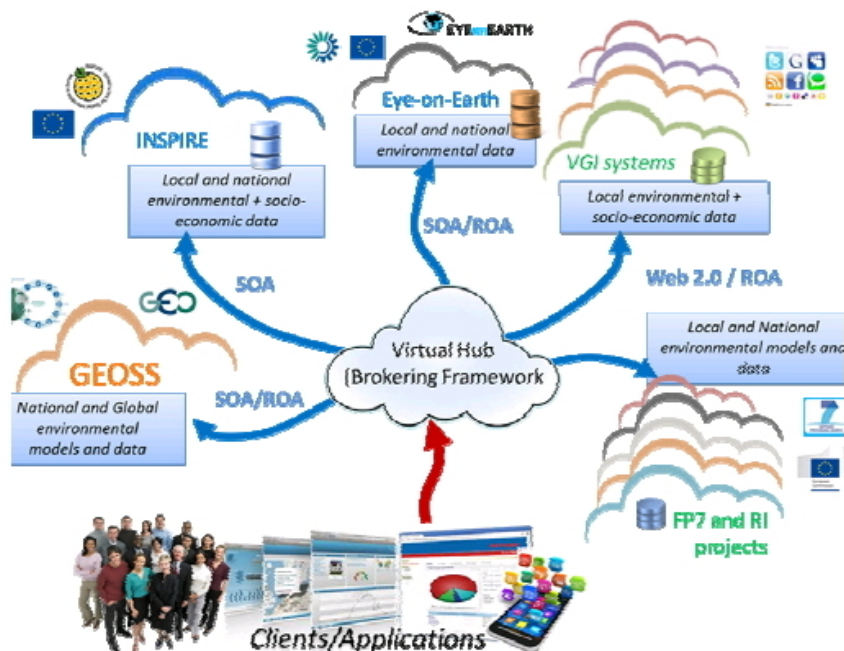
- Consists in the definition of a set of common interfaces, metadata and data models, - the federation model – to be adopted by all the participants
- This Federated approach requires:
 - That the governances of the subsystems agree on the federated model
 - The deployment of new components (mediators) in all the infrastructures to enable the participation in the federation

The geo-information situation

- In general there is not any organization that can be in charge of both imposing common specifications at global level, and enforcing their adoption. It is the typical unregulated situation of the Internet, where beside a set of simple and basic specifications (i.e. Internet and Web protocols) nothing can be globally agreed

Proposed service or solution

- Standardization
- Mediation through brokering



Interesting properties

- Adds a broker between the clients and servers
- Clients no longer need to know which server they are using
- Can have many brokers, many servers

Virtual hubs

- A VH shall be able to connect a set of data sources identified as relevant for its scope, making them interoperable through standardization (for new infrastructures) and resource brokering (for existing infrastructures)
- A VH shall provide a set of functionalities allowing a uniform access to and use of geospatial information, including
 - Discovery
 - Evaluation
 - Access



Benefits compared to existing solutions

EXISTING SOLUTIONS

- Presence of an overarching organization
- Big effort to define a standard
- The resulting standard will be presumably complex
- It requires actions by the infrastructures managers (financial barriers, lack of expertise)

ENERGIC OD APPROACH

- No action required to either data users or data providers to address interoperability
- A wide range of infrastructures will be accessible through the Virtual Hubs

General Objectives

- Main objective of ENERGIC OD project is the development of Virtual Hubs, aiming to facilitate access to and use of heterogeneous data published by existing Spatial Data Infrastructures (SDIs), including INSPIRE compliant systems, GMES/Copernicus services.



Specific Objectives

- To provide functionalities for both human users and machines
- Adaptation and re-engineering of technologies;
- To deploy an initial set of Virtual Hubs
- To demonstrate the validity of the idea, design, implementation and deployment of Virtual Hubs
- To develop interfaces between SDIs and Open Data initiatives
- To foster viability, long-term use and further deployment of the Virtual Hubs



Innovative applications

Name	Field of application	Name	Field of application
<i>Geotraceability for food products</i>	Agriculture, health, tourism	<i>Eye2eye</i>	Spatial Data Infrastructure
<i>Coastline Evolution Monitoring</i>	Coastline monitoring	<i>Place to Place</i>	Public transport
<i>OnoMaP!</i>	Transport, traffic, health	<i>ProxiSanté</i>	Health, aging society
<i>Natural hazards assessment for agriculture</i>	Agriculture, hazards assessments	<i>Biodiversity Bird Indicator</i>	Biodiversity
<i>GeoPanAtl@s</i>	Agriculture, land and urban transformation, landscape-view fronts	<i>geoDEMOS</i>	Land use, environmental Monitoring facilities, Population distribution and demography
<i>Sensor Open Data Portal, Internet of Things</i>	Environment		

The Added Value

- The ability of the brokers to perform all interoperability actions needed to interconnect heterogeneous systems
- It is possible to develop desktop or mobile client applications by using the preferred technology (java, javascript/HTML5, Android sdk, etc.)
- The application can connect to a VH using any of the supported protocols

Conclusions

- **ENERGIC-OD will adopt an innovative brokering approach based on the deployment of specific components (the brokers) which are in charge of all the interoperability issues.**

Thanks for the attention

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