

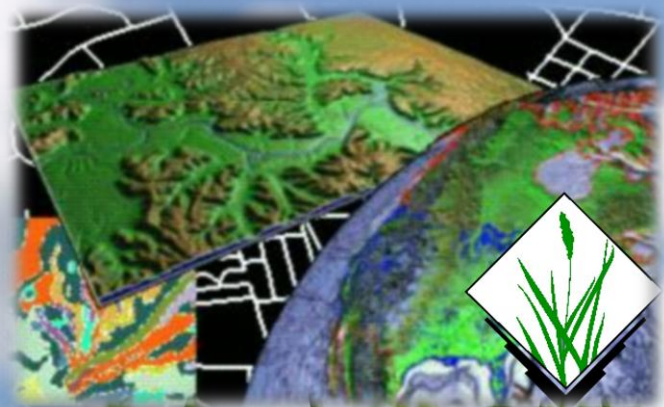
Intergraph Compliance with INSPIRE

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INSPIRE Context and Intergraph Engagement

SMARTERDECISIONS



Back to the 80's:

GRASS

(Geographic Resources
Analysis Support System).

In the early 90's:
OpenGIS Project,
staring the vision of
Interoperability.



OpenGIS®





The screenshot displays the OGC website interface. At the top left is the OGC logo with the tagline "Making location count." Below it is a navigation menu with links for Home, Standards, Programs, Participate, News & Events, About OGC, and Member Login. A search bar is also present. The main content area features a central diagram titled "Geospatial and location standards for:" which maps various domains to specific standards. The domains include Aviation, Built Environment & 3D, Business Intelligence, Defense & Intelligence, Emergency Response & Disaster Management, Geosciences & Environment, Government & Spatial Data Infrastructure, Mobile Internet & Location Services, and Sensor Webs. The standards shown are Analysis, Earth Observation, BIM, Proximity, Crowdsourcing, Navigation, Open Source, GIS, Global, CAD, Open, Spatial Policy, Where, Points of Interest, Sensor Web, Place, Location, Interoperability, Open Data, Shared Understanding, Geoweb, Geosemantics, Information Integration, Time, Planning, Indoor/Outdoor, Geosynchronization, Climate, GPS, Metadata, Data Quality, Situational Awareness, and Weather. Below the diagram is the "OGC WMS Viewer" interface, which includes a toolbar with icons for map actions and a list of layers on the left. The main map area shows a world map with numerous red location markers. The Intergraph logo is visible in the bottom left corner of the viewer interface.

In 1994 **OGC** was founded with eight charter members, including **Intergraph Corporation** as first commercial Principal Member.



BEGINNING First “INSPIRE” meeting (in 2001, as E-ESDI)

PARTICIPATION Intergraph experts in Thematic Working Groups

ADOPTION The INSPIRE Directive entry in force (2007-05-15)

DEVELOPMENT Intergraph staff in Drafting Teams and SDIC’s

ENGAGEMENT Intergraph as technology provider in EU Projects



Spatial Data Infrastructures and INSPIRE Compliance

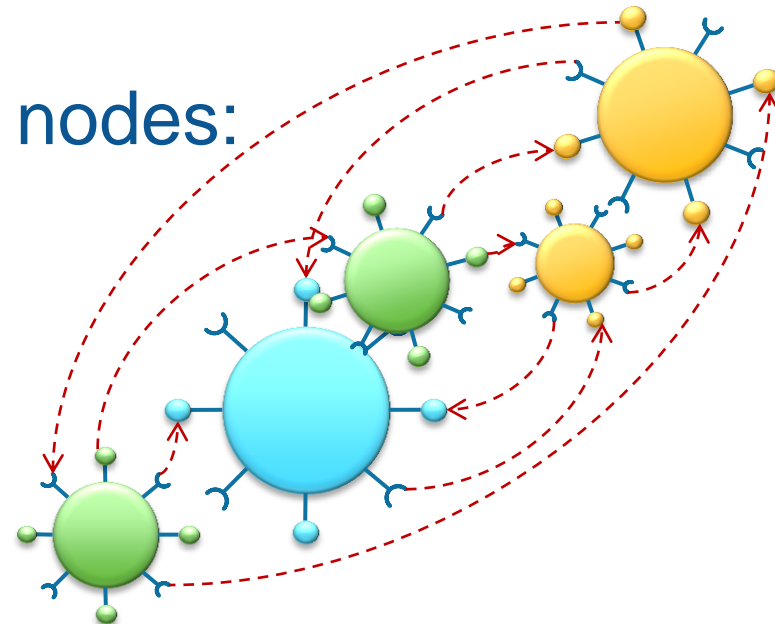
■ SDI Concept

- “There is no delight in owning anything unshared”

[Seneca, 4 BC – AD 65]

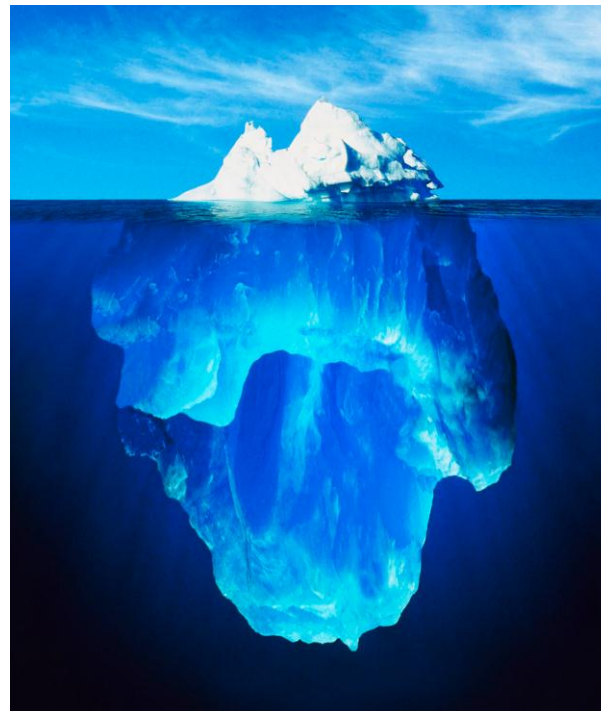
- SDI are all about “exchange” and “sharing” and the out coming common benefits;

- A network of interoperable nodes:

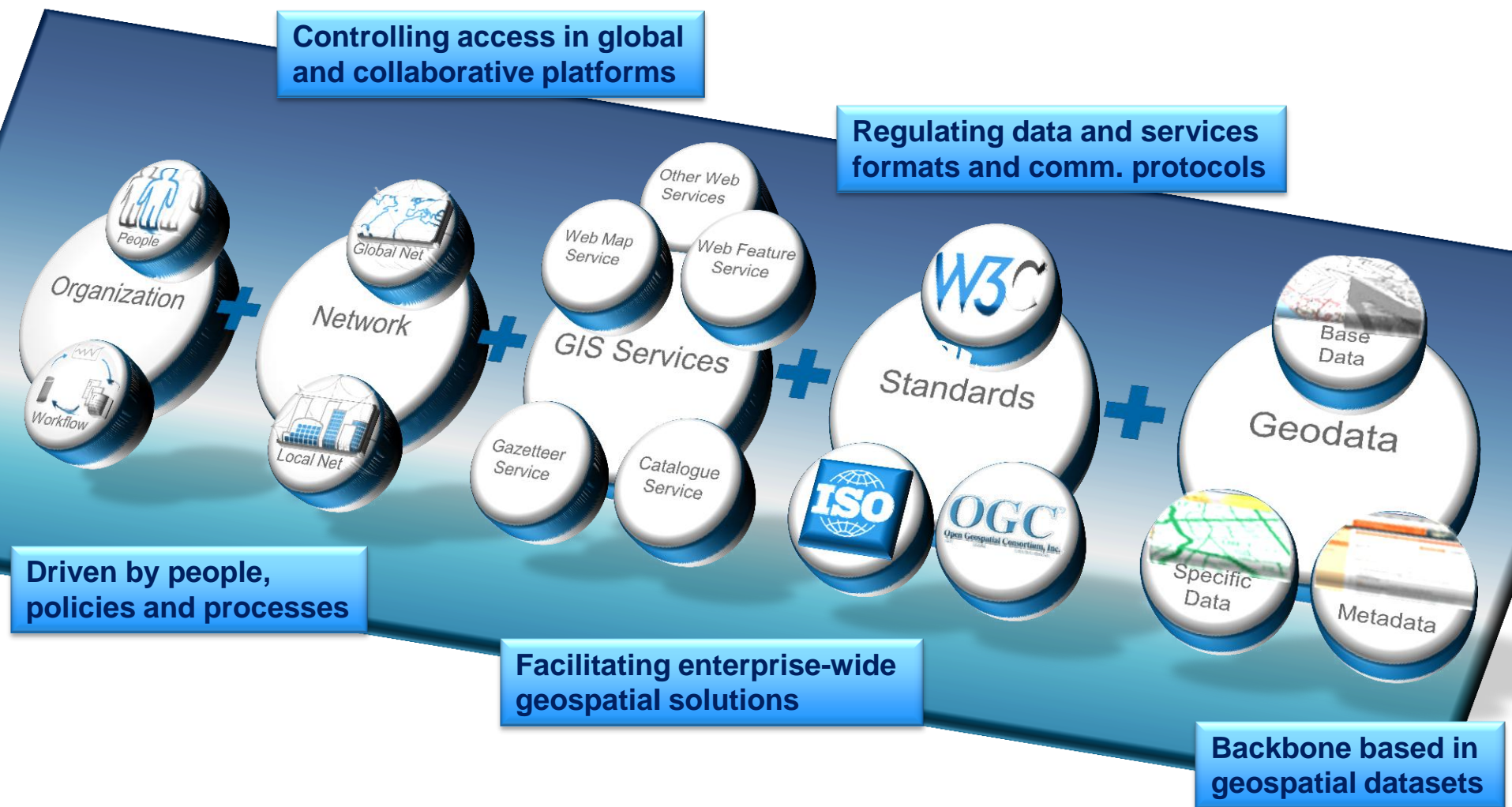


■ SDI Implementation

- Interoperability requires SOA - Service Oriented Architectures, nevertheless, SDI are not just geospatial web services and geoportals.



■ SDI Implementation



■ SDI Implementation

- ISO and OGC general compliance:
 - Metadata: Standards, profiles and format;
 - Data: Exchange standards and comm. protocols.

- INSPIRE compliance further affects SDI comps:
 - People and organizations: Usage logic and patterns;
 - Infrastructures: Quality of service expectations;
 - Services: Implementing rules and technical guidance;
 - Standards: Requirements and specifications;
 - Geospatial data: Data models and harmonization.

- Intergraph compliant products

- SDI clients:

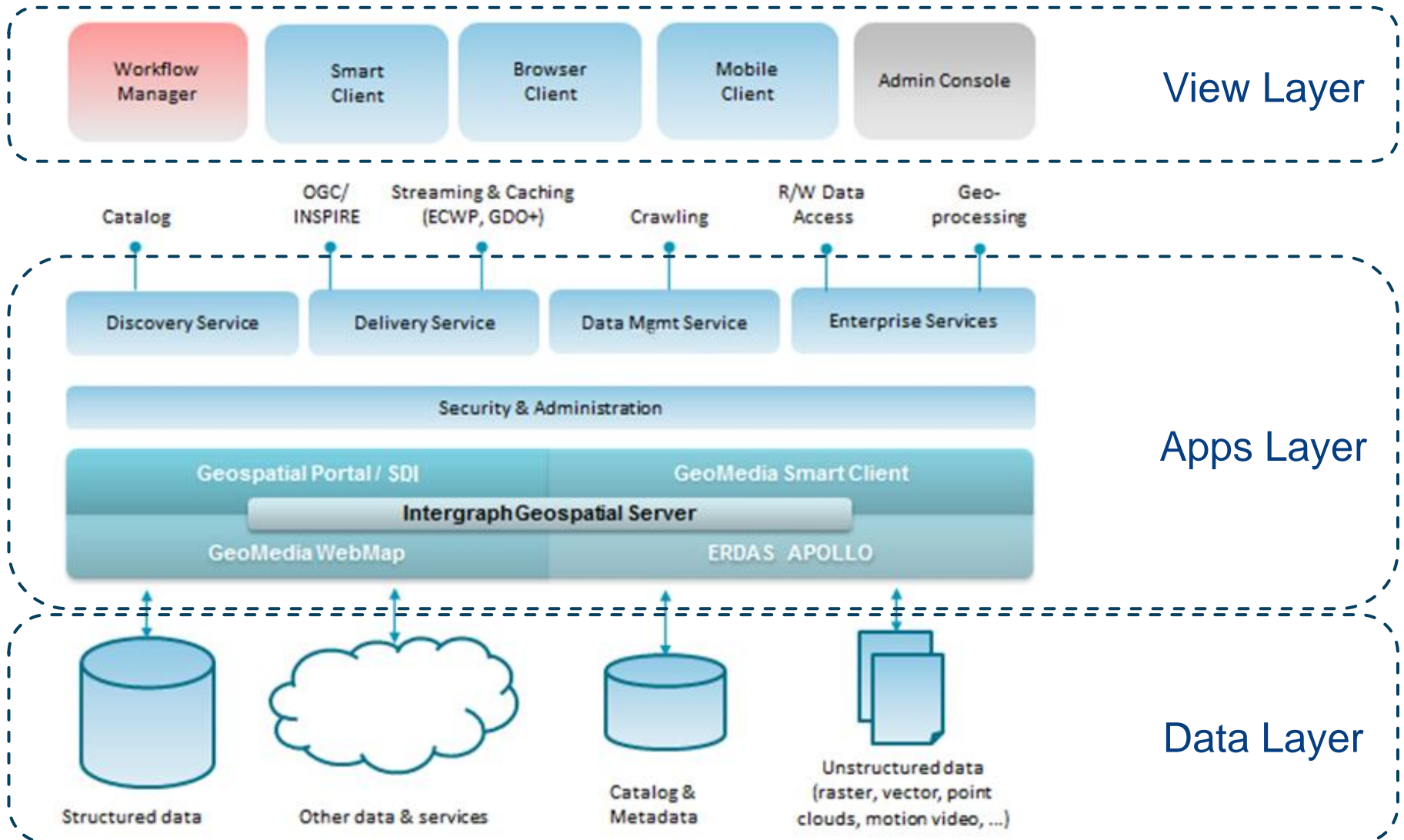
- GeoMedia and ERDAS Imagine (desktop)
- GeoMedia Smart Client (web; java client)
- Geospatial Portal (web)

- SDI servers:

- GeoMedia WebMap and/or ERDAS Apollo
- Geospatial SDI
 - Extra SDI services and extensions for INSPIRE
 - Metadata management and INSPIRE profile
 - Services security and quality monitoring



Overview of Intergraph Geospatial Server



■ Intergraph Geospatial Portal

- INSPIRE compliant interoperable web client:

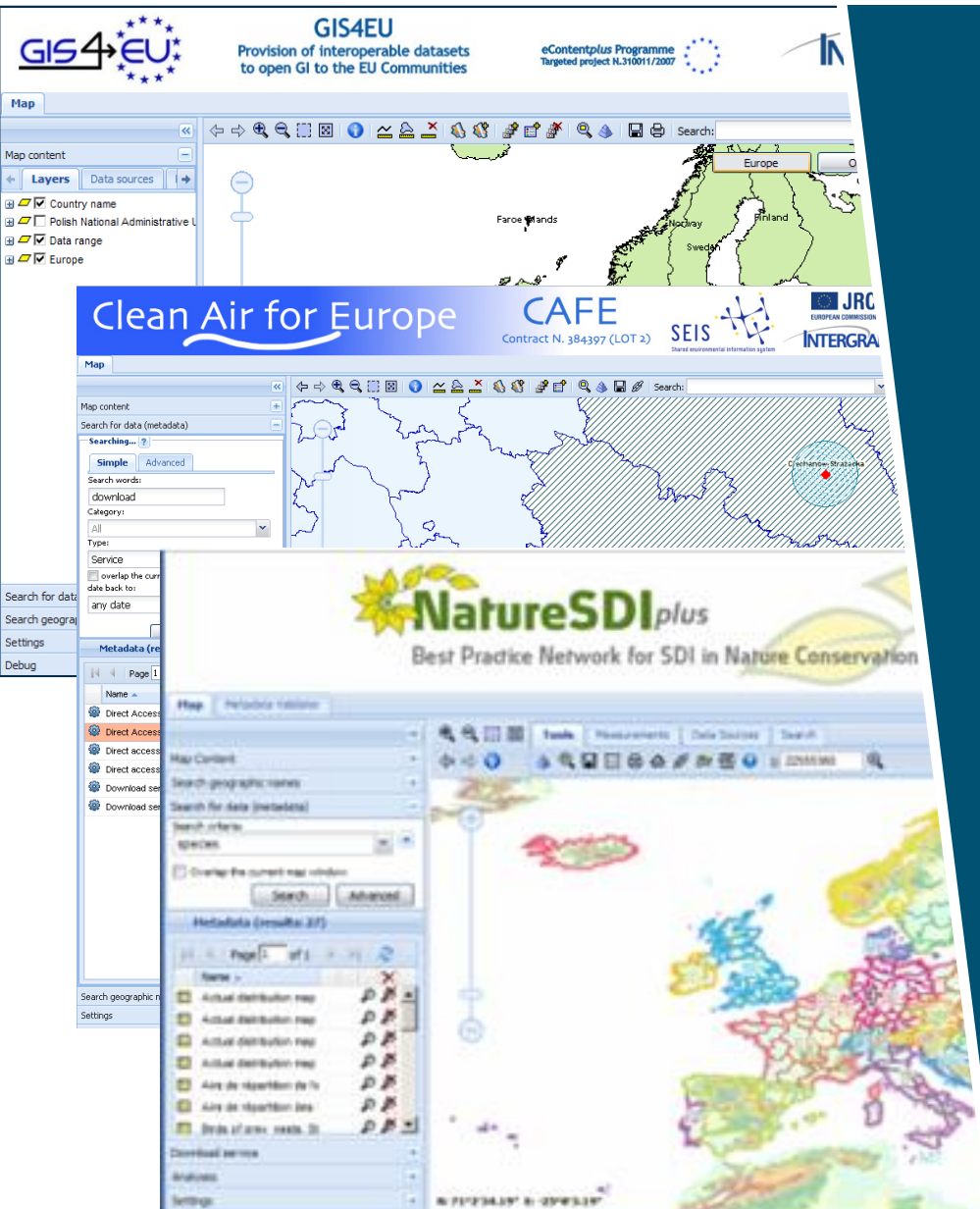
The screenshot displays the Intergraph Geospatial Portal interface. At the top, the text "Geospatial Portal" is visible on the left, and "Powered by INTERGRAPH" is on the right. Below the header is a navigation bar with tabs for Tools, Measurements, Data Sources, Selection, Search, Time, Edit, Authentication, and Quality Monitor. A search bar contains the number "1: 8392380" and a dropdown menu for "Current browser language". The main map area shows a 3D topographic view of Europe with various data layers overlaid, including a colorful geological map and a blue marble satellite image. A circular navigation control is on the left, and an "Overview" inset map is on the right. The bottom left corner shows a search bar and buttons for "Search geographic names", "Search for data (metadata)", and "Analyses". The URL "demo.geospatial.intergraph.com/portal/#" is visible at the bottom left.

- Collaboration, support and guidance:
 - Guía técnica de recomendación del Consejo Directivo de la Infraestructura de Datos Espaciales de España



Generación de servicios de localización según el Perfil INSPIRE de *ISO Metadata Application Profile for CSW 2.0 [CSW ISO AP]* con tecnología Geoespacial SDI 2013 de Intergraph.

Customer References



- Intergraph participations on European projects was the test beds for INSPIRE implementation of:
- Data models, schema remodeling and harmonization;
 - Metadata management and search for datasets and services;
 - INSPIRE extended OWS for discovery, view and analysis/download;
 - Experiencing geoportal needs, design and customization.

Sistema Nacional de Informação Territorial **SNIT**

Map | Acreditação | Área Reservada

Search for data (metadata)

Search criteria:

Overlap the current map window

Para Planos de Ordenamento do Território identifique:

O quê? Onde?

Âmbito Territorial Na Região

Tipo de Plano No Município

incluindo os limites

Search

Metadata (results: 5143)

Page 2 of 52

Name

- Plano de Ordenamento do Território de Rebordosa e Parcial de Lordelo, Vilela e Astromil
- Reserva Ecológica Nacional do Plano Director Municipal de Penacova
- WMS da Carta do Regime de Uso do Solo de Portugal - ABRANTES

Map Content

Settings

The Portuguese Territorial SDI is an example of a customized Geospatial Portal that follows INSPIRE “publish-find-bind” pattern. Here is the discovery panel.

Web browser

Plano de Pormenor 2 - Zona do Recinto da EXPO 98

Abstract:
Plano de Pormenor 2 – Zona do Recinto da EXPO 98. Formato Matricial. Constituído por 1 planta (Implantação). O plano desenvolve e concretiza as propostas de ocupação da respectiva área do território municipal.

ISO 19115 - Metadata

- Metadata information
- Identification information
- Resource extent (Extent information)
- Data quality information
- Reference system information
- Information about distribution



After discovery, SNIT makes available for “binding” the official land use plans (raster) in WMS, and compiled land use vectors in WFS (for analysis). Here is the visualization panel.

The screenshot displays the SNIT web application interface. The main map shows a detailed view of Amadora, Portugal, with various land use layers overlaid. The interface includes a search bar, map content panels, and a legend.

Map Content:

- Layers:
 - PDM - LISBOA
 - PLANTA_DE_ORDENAMENTO__1_CLASSIFICACAO_
 - PLANTA_DE_ORDENAMENTO__4_INVENTARIO_MUN
 - PLANTA_DE_ORDENAMENTO__3_UNIDADES_OPERA
 - PLANTA_DE_ORDENAMENTO__2II_COMPONENTES_
 - PLANTA_DE_ORDENAMENTO__2I_COMPONENTES_4
 - PLANTA_DE_CONDICIONANTES__6_OUTRAS_SERV
 - PLANTA_DE_CONDICIONANTES__5_PATRIMONIO_O
 - PLANTA_DE_CONDICIONANTES__5_PATRIMONIO_O
 - Limite do IGT
 - CRUS
 - Green Areas in Lisbon
 - Carta Administrativa Oficial de Portugal
 - 25k_continente_ETRS89
 - Ortos 2010
 - Google Maps

Legend:

- Ferrovias
- Brisa
- EP
- Grande
- Lusopoc

Overview Map: Shows a regional view of Lisbon and surrounding areas, including Amadora, Cascais, Almada, and Setúbal.

Map Data: ©2013 Google - Terms of Use

Coordinates: N: 38°42'18.44" E: -9°5'53.53"

Scale: 0 3 6 km

Any Geospatial Portal implementation have the possibility to make available to the user a set of tools to test and monitor the quality of the services running on the portal. The tests can be predefined by the administrators or ad-hoc configured by the user, using INSPIRE quality parameters. The results can be located on the map, visually informing on the QoS. A results window can also be used for detailed, analytical and graphical analysis of the QoS tests results.

The screenshot displays a web-based geospatial portal interface. At the top, there is a navigation menu with tabs for 'Tools', 'Measurements', 'Data Sources', 'Selection', 'Search', 'Time', 'Edit', 'Authentication', and 'Quality'. Below the menu is a toolbar with icons for map navigation and data management. The main area features a 3D topographic map of a region, with several colored markers (green and red) placed on the terrain. A circular navigation control is visible on the left side of the map. In the foreground, a 'Quality Monitor' window is open, showing a table of test results for 'Opolskie Voivodeship - area coverage'. The table includes columns for Name, Fire time, Elapsed (ms), Status, and Success. A detailed tooltip for 'Opolskie Voivodeship' is also visible, showing 'Performance Success', 'Availability Success', and 'Capacity Success'.

Name	Fire time	Elapsed (ms)	Status	Success
Performance	2013-06-20 19:35:33	651	✓	Success
Availability	2013-06-20 19:35:37	557	✓	Success
Capacity	2013-06-20 19:35:34	4488	✓	Success

Name	Result
Performance	Success
Availability	Success
Capacity	Success

■ Thematic implementations

The image displays three overlapping screenshots of the GeoWeb Portal software, illustrating thematic implementations:

- Top Screenshot:** Shows the 'geomeliportal.pl' interface. It includes a search bar, a 'Geographic Name' field with 'ZMIUW' and 'OLSZTYN' selected, and a 'Search Filter' section. The map area shows a satellite view of Olsztyn.
- Middle Screenshot:** Shows the 'ascendi SIG' interface for 'Biebrzański Park Narodowy'. It features a detailed legend with categories like 'Gestão Ambiental', 'Ruído Ambiente', and 'Água Superficial'. The map shows a satellite view of the park area.
- Bottom Screenshot:** Shows the 'Porto de Lisboa' interface. It displays a map of the city of Lisbon with various data layers. The legend includes categories like 'Jurisdição e Domínio', 'Divisão Administrativa', and 'Ocupação'. The map shows a satellite view of the city and the Tagus River.

■ National and regional implementations

geoportal.gov.pl

HESSEN
Hessisches Ministerium für Wirtschaft, Verkehr und Landesentwicklung
- Landesplanungsportal Hessen -

Home | Impressum | Kontakt

signA
Sistema de Información Geográfica Nacional de España

Wrota Podlasia

Sistema Nacional de Informação Territorial SNIT

Geospatial Portal SIGcBA - Diputación de Badajoz

Powered by INTERGRAPH

Map Content

Layers

- MAPA BASE SIGcBA - Dip Badajoz
- ALUMBRADO
 - TRAMO_CIRCUITO
 - Puntos de Luz con Circuito
 - Centros de mando
 - Módulos de medida
 - Módulos semafóricos
 - Puntos de luz
- Mapa base de España del Instituto Geog
 - Todas las capas
 - Fondo
 - Países
 - Direcciones
 - Manzanas urbanas (Cartocuidad)
 - Instalaciones agrícolas (BTN25)
 - Explotaciones mineras
 - Instalaciones industriales
 - Zonas verdes (BTN25)
 - Instalaciones recreativas -superfici
 - Instalaciones recreativas -puntual-

Search geographic names

Search for data (metadata)

Link

- 13/1/... Consultar PDF
- 17/2/... Consultar PDF
- 11/2/... Consultar PDF
- 13/2/... Consultar PDF
- 18/2/... Consultar PDF

Local and city solutions



The image displays a collage of various GIS web portals and maps, demonstrating local and city solutions. The portals shown include:

- GeoBilbao beta**: A web portal for Bilbao, Spain, showing a map interface with layers and data sources.
- Owi (OPOLSKIE W INTERNECIE)**: A web portal for Opole, Poland, featuring a map and various data layers.
- AROUCA SIGA (SISTEMA DE INFORMAÇÃO GEOGRÁFICA DE AROUCA)**: A web portal for Arouca, Portugal, showing a map and various data layers.
- Geoportalbcn**: A web portal for Barcelona, Spain, showing a map and various data layers.
- CartoCiudad - Servicio de visualización de mapas de CartoCiudad**: A web portal for CartoCiudad, Spain, showing a map and various data layers.

The portals typically feature a map interface with layers, data sources, and search capabilities. The CartoCiudad portal includes a metadata table:

Name	URL
CSW (2)	
Intergraph OGC Catalog Service for the Web	http://sddemo1.intergraph.es/INSPIRE_CSW/CSWSER...
Servei INSPIRE de Catàleg IDEC	http://catalegidec.icc.cat/idec_catalog/csw/service
LUWS (1)	
Location Utility Web Service	http://ideg.xunta.es/ws_geocode/locate.aspx
MapPublisher (1)	
GWMP_BCN_ORACLE11G	http://localhost/geoportalwmpssp1/mapservice.svc
WMS (16)	
http://www.ortoxpres.cat/server/sgdwms.dll/wms	
Calles Navteg LW	http://sddemo1.intergraph.es/wmsbcnlw/wmservice.at
CartoCiudad	http://www.cartociudad.es/wms/CARTOCIUDAD/CART...
GenerateMap Web Service	http://ptop.gencat.cat/webmap/MUCE/request.aspx

Questions?