GeoPortal 4 Everybody

Karel Charvát, Jáchym Čepický, Štěpán Kafka, Premysl Vohnout, Martin Vlk
Czech Centre for Science and Society
Help Service Remote Sensing

OGC Member
DT Member
What is GeoPortal

- GeoPortal is an interface that enables search, portrayal, evaluation and sharing of spatial and non-spatial data.
- GeoPortal is a solution based on interoperable standards (OGC, W3C, OASIS, ISO). GeoPortal is interconnected to other resources through the Internet. It helps to create a distributed structure of information and knowledge with spatial position.
What is GeoPortal?
What is GeoPortal?

GeoPortal

Catalogue

Maps

Transform

WMS

Data

Service X

Catalogue

Data
What is not GeoPortal

• Central data storage
• Closed web application with maps
• A solution that does not offer an open interface and that creates one-way collection space for spatial information (e.g. Google)
• A solution that does not support search of data and information and their portrayal and use by help of other resources (GeoPortal can be limited to paid outputs)
3 ways ...

Public Administration
INSPIRE
Defined life-cycle (?)
Standards (OGC)
Administration, legislative ...
Top-down initiative

Community
OSM, soc. networks
Unclear life-cycle
+/- Standards
Rich data sources

Portals
Google, Yahoo, ...
Common internet user
Proprietary
Dependent on providers (data ownership, licences...)

4th Way?
Solution provided by CCSS and WirelessInfo: interconnection of information of public administration, commercial sector and social networks into one large distributed network of information and services. Intellectual Property Rights to information and services are preserved (provider can decide to whom and how the data and the services will be provided).

INSPIRE compliant, exploitation of open standards. Our “4th WAY” is a support for building of Single Information Space in Europe for the Environment (SISE) a Shared Environmental Information Space” (SEIS).
The Philosophy

- The philosophy of 4th Way 2 SDI is to offer:
- Free access to spatial information for everybody.
- Possibility to publish and share data for everybody based on user’s decision.
- Possibility to interconnect any portal based on INSPIRE principles and OGC services with the network of 4th way 2 SDI.
- Networked structured as Web. There is no hierarchy of systems (pyramid).
INSPIRE GeoPortal Architecture

GeoPortal

Discovery
View maps
Analysis
Download
Transform
Authoris.

CSW
WMS, SLD
WPS
WFS, WCS
WPS
• Independent components
• Composition according to user requirements
• Based on SOA
• Possibility to integrate with other resources
• Maximum openness
  – Open Source
  – Open Standards
• Extension to non-GIS community
  – Open Search
  – Administration of other (non-spatial) data sources
MIcKA

- Metadata catalogue MIcKA is a place where metadata are stored and published as a catalogue service by CSW (Catalogue Service for Web). This product is translated into 16 languages. MIcKA is used in several pan-European projects. It has integrated the thesaurus GEMET (INSPIRE). It allows import of several formats including ESRI ArcCatalog, MIDAS, WMS, WFS, CSW, etc.. MIcKA supports catalogue service OGC CSW 2.0.2 (+ISO AP 1.0) and INSPIRE profile which is important for European projects. Metadata can be put or retrieved by CSW-T.
MIcKA (Metadata Editor & CSW)
Catalogue client

• Catalogue client allows the search through connected metadata catalogues by catalogue service OGC CSW. Data can be searched by text or by elements defined in standards (OGC CSW 2.0.2, AP ISO, INSPIRE). Basic elements can be extended by user demands. These element will not be searchable in on other connected catalogues. First version of the catalogue uses cascading of multiple services.
Catalogue Client
Map Viewer

- MapViewer (developed by Help Service - Remote Sensing) is a JavaScript-based WebGIS map application built using the HSLayers JavaScript library. It extends OpenLayers and adds new functionalities including WMS and WFS client, printing of hard copy maps, vector editing capabilities and others. Several features, which are still in the INSPIRE proposal stage (e.g. Transformation service), are used as well.
Basic Portal4everybody
Components

Metadata Extractor

• The main purpose of GeoPortal is to take care of spatial data, but there can be also a need to publish non-spatial data (e.g. documents, web pages). This is done by Metadata Extractor. This program is very easy to use, thanks to its construction. It is only needed to specify which file or URL is wanted to be published. The Metadata Extractor extracts the metadata and stores them on the portal. Metadata is stored in MIcKA in Dublin Core standard which is specialized on non-spatial data. Metadata extractor also allows to publish whole pages. This is done by uploading zip file which contains these pages.
Metadata Extractor

Select input type:
- URL
- File

URL: http://www.env.cz

Identifier:
- um:uuid:2134d000-d82b-11de-81ce-02e2dee9a393
- http://www.env.cz

Title:
Ministerstvo životního prostředí

Abstract:
Oficiální webové stránky Ministerstva životního prostředí ČR

Subject:
- životní prostředí
- MŽP
- státní správa
- ministerstvo

Creator:
- MŽP ČR
- Ministerstvo životního prostředí ČR

Contributor:

Publisher:

Loading "http://portal.plan4all.eu/extractor/?SID=BA3E1EBF-EFE6-C9A9-3878-0657B4D6...ser=SID@BA3E1EBF-EFE6-C9A9-3878-0657B4D6E754&lang=eng", completed 27 of 29 items
GeoHosting

- GeoHosting is a complex system composed of single components. These components are integrated into one functional system. The system enables easy creation and publication of new map compositions. It enables you to work not only with your own geographic data but also through web services with external geographic data. The number of available online data sources is still increasing. The advantage is that original data stays at the level where they are collected and maintained (one of the INSPIRE principles). Therefore there is no duplication of data. Up-to-date source data guarantee up-to-date map compositions.

- There are three steps for using GeoHosting:
  - Upload the data to the server
  - Create the map composition
  - Publish the map composition
Data Administration: DataMan

Plan4all

Data Manager

Available databases:
- spacial_rfc_sys
- geometry_columns
- aida_ilvm
- sldta
- aida_muler

Other actions...
Service Publication: MapMan

Mapman

Plan 4 all

Project info
- Name: European protected areas
- SRS: oapsg4326
- Extent: -10, 34, 30, 71

Layers
- By orders
- By folders
- RASTER_HH_DOR40
- 01-Prehled_kladu_II_VM_1.shp

Symbols
- No map symbols

Add map layer

Select how you want to add map layer to map project.

- WMS server
- Catalog client
- Internal server data
- WFS server
- PostGIS

Favorite servers
- Select from favorite servers

Connection parameters
- WMS server address

Secure access parameters (optional)
- User name
- Password

Connect

Cancel
Basic Portal4everybody
Components

Simple CMS

• Simple CMS allows editing of the home page of the Unified Resource Management portal. This function is dedicated to administrator. Simple CMS allows the following:

  define the content and the system of the menu,
  publish articles, publish external links in the menu,
  publish predefined map compositions from GeoHosting, order information, publish RSS channels.
Simple CMS

Články - Olomouc

Olomouc Urban Atlas

2010-05-17

Maps

Olomouc

Setting

Legend
Additional Components

• Additional components can be easily integrated into the GeoPortal4Everybody (like.g. PyWPS, MediaWiki, Moodle).
Licensing

• All components of the Geoportal4everybody (except MIcKA) are published as Open Source under GPL license. MIcKA is expected to be published as an Open Source software during this year.
GeoPortal4everybody Examples

- **Plan4all portal**
  portal for accessing European Spatial Data
  http://portal.plan4all.eu

- **Envirogrids Black See URM portal**
  portal is focused on Black See Catchment
  http://www.envirogrids.cz

- **NaturNet Educational portal**
  portal developed in the NaturNet Redime project, currently extended by the NaturNet Plus project focused on educational about sustainable development
  http://portal.naturnet.org
GeoPortal4everybody Examples

- Czech UNSDI portal
  portal supporting discovery, publishing and visualisation of data in third worlds
  http://www.unsdi.cz

- Czech Metaschool portal
  portal supporting education about SDI on secondary schools
  http://www.metaschool.cz

- Czech Humboldt portal
  portal focused on implementation of forestry scenario of the Humboldt project
  http://portal.esdi-humboldt.cz/
GeoPortal4everybody Examples

- Habitats reference laboratory
  portal focused on information about biodiversity and costal zones

- EarthLookCZ portal
  reference laboratory for testing of GMES services in the Czech Republic
  http://portal.earthlook.cz

- Portal for education about SDI
  the portal established for the purpose of the SDI-EDU project
  http://portal.sdi-edu.czu.cz

- Zemgale Planning Region portal
  portal developed for Zemgale planning Region in Latvia
  http://giz.zpr.gov.lv/
Solution for You

1. GeoHosting
   - **Free of charge**: the information stay as your property, but you enable their use on the base of Common Creative License
   - **Commercial**: possibility to use the full infrastructure with open API. In this case you are the only one owner of all the information and you decide to whom and how the data will be provided.

2. Interconnection of your portal with building infrastructure based on standards (OGC).

3. Connection of desktop applications into building infrastructure.

4. The possibility to exploit free of charge our solution published under Open Source GPL.

5. Building in of our components into your non-GPL solution with use of dual licensing. Our specialists will provide help, consultations and guarantee.

6. Commercial installation of INSPIRE compliant portal solution on your servers with user support and guarantee.
More Information

• Additional information and news are available at
  • www.4thway2sdi.org
  • www.geoportal4everybody.eu
  • or you can contact our support centre
  • help@4thway2sdi.org, info@4thway2sdi.org
  • help@geoportal4everybody.eu, info@geoportal4everybody.eu