The Geoportal of Rhineland-Palatinate

Central component for a SDI on regional level

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History

2005

I.   Establishment of a an organization to coordinate the buildup of the SDI for Rhineland-Palatinate by cabinet order

II. Development of the concept for constructing a central Geoportal solution based on widespread used OGC standards **and** Open Source Software

III. Tender for realizing the concept

2006:

Phase of realization

IV. Development of fine-concept

V.   Programming of the needed modules

01/2007:

Opening the portal for public access

2007 - now:

Adopting the software to meet the additional requirements of users and INSPIRE

Key Points for the concept

Problems at the beginning

– Many mapservers had unclean implementations of the OGC standards

– Only a small number of institutions had OGC WMS

– There was no functional catalogue service specification to exchange standardized metadata (no encoding rules exists for ISO19115)

– The catalogue service specification don't support metadata about webservices! (the idea of a soa publish/find/bind concept could not be implemented at this time)

– Searching for single layer of a WMS or single featuretypes of a WFS was not possible

Consequences:

– The central component of the portal is a service registry based on a special relational database schema in which the service metadata xml files are cached and can be and qualified by the registrating person

– The search modules are not based on searching over OGC catalogue service interfaces, but on a direct sql search

– The search goes down to the content of the OWS Capabilties documents – the content of a hierarchial WMS is atomized to every single layer

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Key Points of the used software

Free and Open Source Software

– No costs for licences

– Freely distributable to other organisations/countries

– Scaleable without further software costs

– Many companies can work independent

Only Software with big communities

– Reducing the chance that the development will end some day

Used Software:

– CMS: Typo3

– RDBMS: mysql, postgresql/postgis

– Mediawiki

– OGC Server: Mapserver, Geoserver

– OGC WMS/WFS Client/Service Registry: Mapbender

– OS: Debian Linux (Etch/Lenny)

– OGC Catalogue Broker (experimental): geonetwork-opensource

Key Points of Mapbender

OGC Client

➔ parallel requests of WMS

➔ clientside:lightweight javascript client

➔ serverside: php based

➔ configurations: stored in postgres rdbms

➔ multi GUI system

➔ decentral administration of GUI's

➔ supported standards: WMS / WFS / WFS-T / WMC / geojson / gml / georss

➔ stateless integrable in external webpages (export of the wmc client configuration as an openlayers-javascript client - HOWTO)

Key Points of Mapbender

Service Registry

– **monitoring of registrated services**

➔ central notification system for service provider

➔ subscription system for notification of service user

– c**entral serving of all ows capabilities documents (per id) for the whole country**

➔ Supporting UpdateSequence parameter for OWS capabilities caching

– **central security component based on http-digest authentication**

➔ can act as a OWS-proxy for the registrated services

➔ access thru proxy can be logged to database

– **central user management and authorization system**

➔ only one account for accessing all secured services in Rhineland-Palatinate

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Live Demo

http://www.google.de/

Geoportal.rlp

What is Geoportal.rlp not?

➔ It's **not a metadata broker**

➔ it actually **cannot harvest metadata** from catalogue services

➔ it has **no catalogue interface** to be harvested by other metadata brokers - but a very fast interface to publish the service metadata in the central german Environmental Information Portal (www.portalu.de)

➔ It's **not** an OWS Server – only a facade for the capabilities documents

Use Case for a central Registry

➔ The concept was developed for a country with 4 mio people

    ➔ 24 NUTS 3 level regions

    ➔ 163 LAU 1 level regions with own administrations

    ➔ 2258 LAU 2 level regions without own administrations

➔ for the reasons mentioned above - the maximum amount of OWS in this infrastructure would not become more than 5000

At the End

But it's **fast**, **relieable**, can serve many use cases – and the users like it!

Thanks for your attention!