OpenLayers: SOS and INSPIRE

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Contents

- Sensor Observation Service client for OpenLayers
- INSPIRE View Service support in OpenLayers
- GEOZET project for the Dutch government
SOS client

- Tested against 52 North SOS (excellent e-mail list support!)
- Uses SOS version 1.0.0
- Available as of OpenLayers 2.9
- Needs Proj4js 1.0.1
OpenLayers vectors

Previously there was a separate layer for everything, but now we have:

Layer.Vector

Protocol: how to communicate with the server (WFS, SOS etc.)

Strategies: how to request data (BBOX, Fixed)
Building blocks

- A Format to read the SOS GetCapabilities response
- A Format to read/write SOS GetFeatureOfInterest responses/requests
- A Format to read/write SOS GetObservation responses/requests (only supports getting latest observations)
Building blocks

An SOS protocol that can be used with a vector layer

In the future: a convenience SOS Layer?
Check out the OpenLayers example named sos.html

GetCapabilities -> GetFeatureOfInterest -> GetObservation

SOS client example
We need to do 1 GetObservation request per offering (to get the actual measurement values), this can get quite expensive, but is the consequence of the current SOS specification.
European legislation for an SDI

Specifications for:

View Service (WMS)

Discovery Service (CS-W)

Download service (WFS or ZIP file)
Dutch National Geo Registry needs to be INSPIRE compliant

INSPIRE View Service uses WMS 1.3.0, OpenLayers only supported WMS 1.1.X
Based on OGC:WMS 1.3 (axis order confusion!)

Additional changes needed for multi-lingual support: extra parameter LANGUAGE and extra section in GetCapabilities

sandbox/bartvde/inspire
Axis order
Axis order

The problem: the underlying projection library (Proj4js which is based on Proj.4) does not have a notion of axis order, though it is stored in the EPSG database.

We came up with an extra property on OpenLayers.Layer.WMS called yx which is an object with EPSG codes that need reverse axis order (LatLon instead of LonLat).
So as of OpenLayers 2.9 there now is WMS 1.3.0 support for all WMS interfaces: GetCapabilities, GetFeatureInfo and GetMap.
GEOZET project

- Geographical search and view service, accessibility is a key aspect of the project
- Pure client-side printing, wide range of browsers
- Used to publish announcements from local governments on a national level
- Uses PostGIS, Geoserver, GeoWebCache, OpenLayers and GeoExt
Cluster strategy
Project deliverables

- Created our own Renderer (point data only), which creates anchors with images, based on an attribute in the dataset
- Created a Sort Strategy so that the TAB key sequence is logical
- A PanZoomBar as an ExtJS component (uses ZoomSlider)
- Wished the new OpenLayers.Strategy.Filter (thanks tschaub!) had existed before this project was started
Questions?