

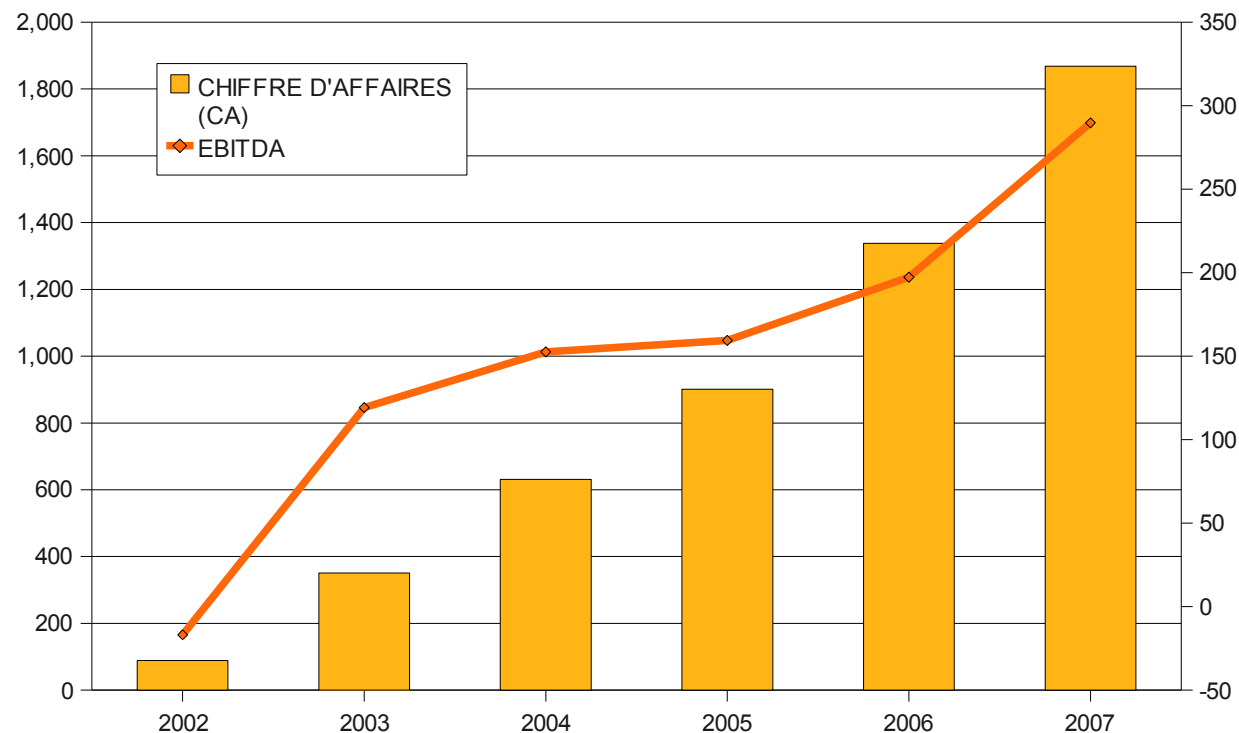


MapFish

A WebGIS 2.0 Framework: toolkit to build rich client WebGIS

Camptocamp, a Franco-Swiss company

- A **Franco-Swiss** company employing 42 professionals
 - ✓ Switzerland, Lausanne: 26 persons
 - ✓ France, Chambéry and Toulouse: 16 persons
- A **sustained** growth: between 50% and 70% since 2004

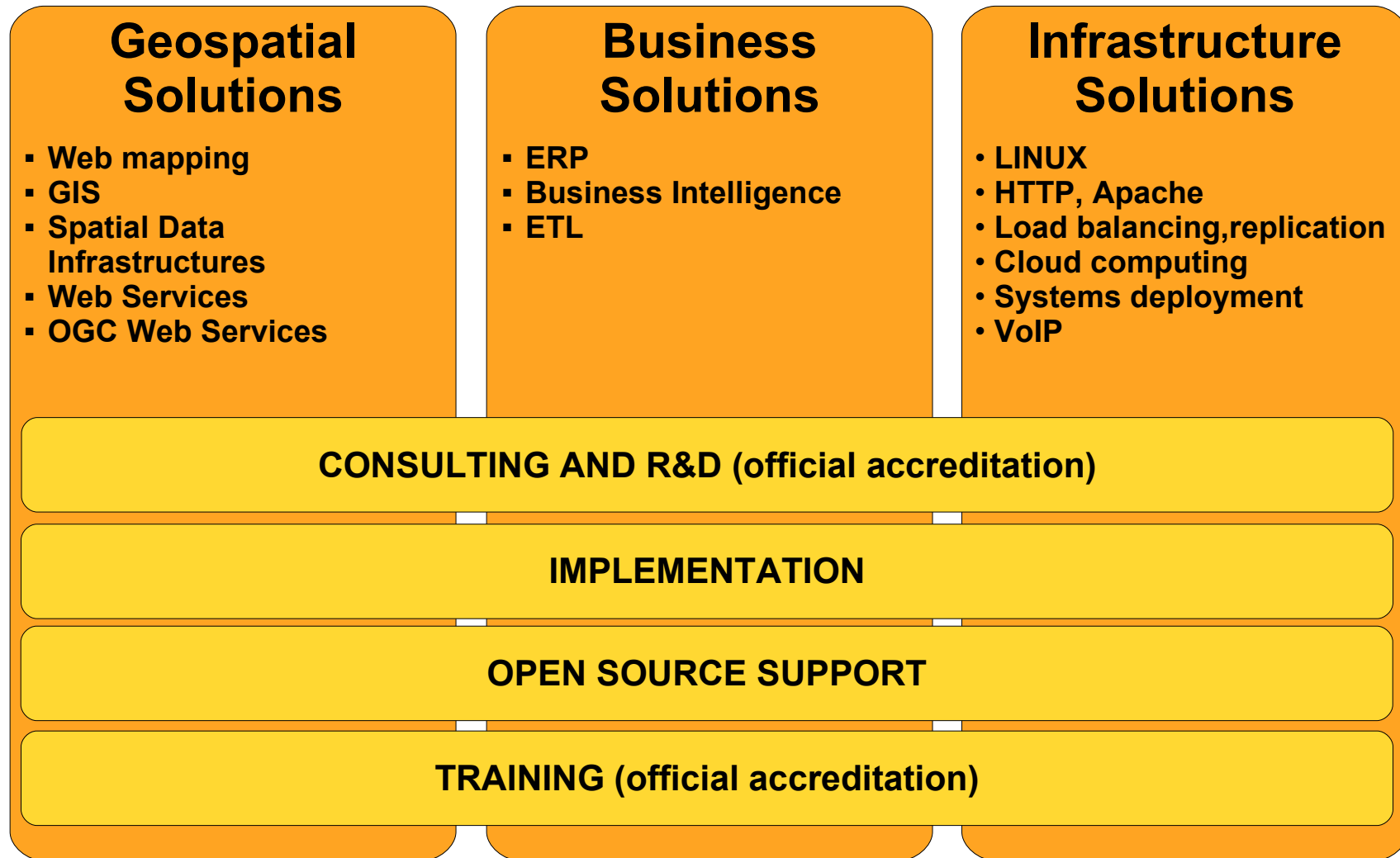


Service-oriented Open Source editor

- **Camptocamp is an Open Source editor and integrator for software**
 - ✓ Initiated by Camptocamp : **CartoWeb, MapFish and Spatial Data Integrator (SDI)**
 - ✓ Initiated by well-respected communities (OSGeo) : **GeoTools, GeoServer, Udig, GeoNetwork, MapServer, PostGIS, Open Layers, GeoExt, Ext**

- **Camptocamp helps clients move forward in every part of their businesses with the latest Open Source applications and technologies**

Camptocamp's strategic activity domains



MapFish is ...

- **Open Source** (GPL & LGPL)
- A **WebGIS** development **toolkit**
- **Not an application** but a **Framework**
- Based on :
 - ✓ **OpenLayers** JavaScript library
 - ✓ **ExtJS** JavaScript library
 - ✓ MapFish Server is responsible for server side treatments and composed of several modules which can be implemented in several languages:
 - **Pylons** Python
 - **Ruby on Rails** Ruby
 - **Symfony** PhP
 - Java
 - Other libraries (SQLAlchemy, Shapely, iText, ...)

MapFish is also ...

- Using **extensively OpenLayers** on the client side
 - ✓ MapFish developers are OpenLayers developers
 - ✓ New OpenLayers version \implies New MapFish version
- **OGC-compliant**
 - ✓ query components
 - ✓ editing components
 - ✓ ...
- **Very modular**
 - ✓ The Client part and the Server part are uncoupled
 - ✓ MapFish defines a RESTful protocol for creating, reading, updating and deleting features
 - ✓ The representation format used is GeoJSON (compatible WFS format)

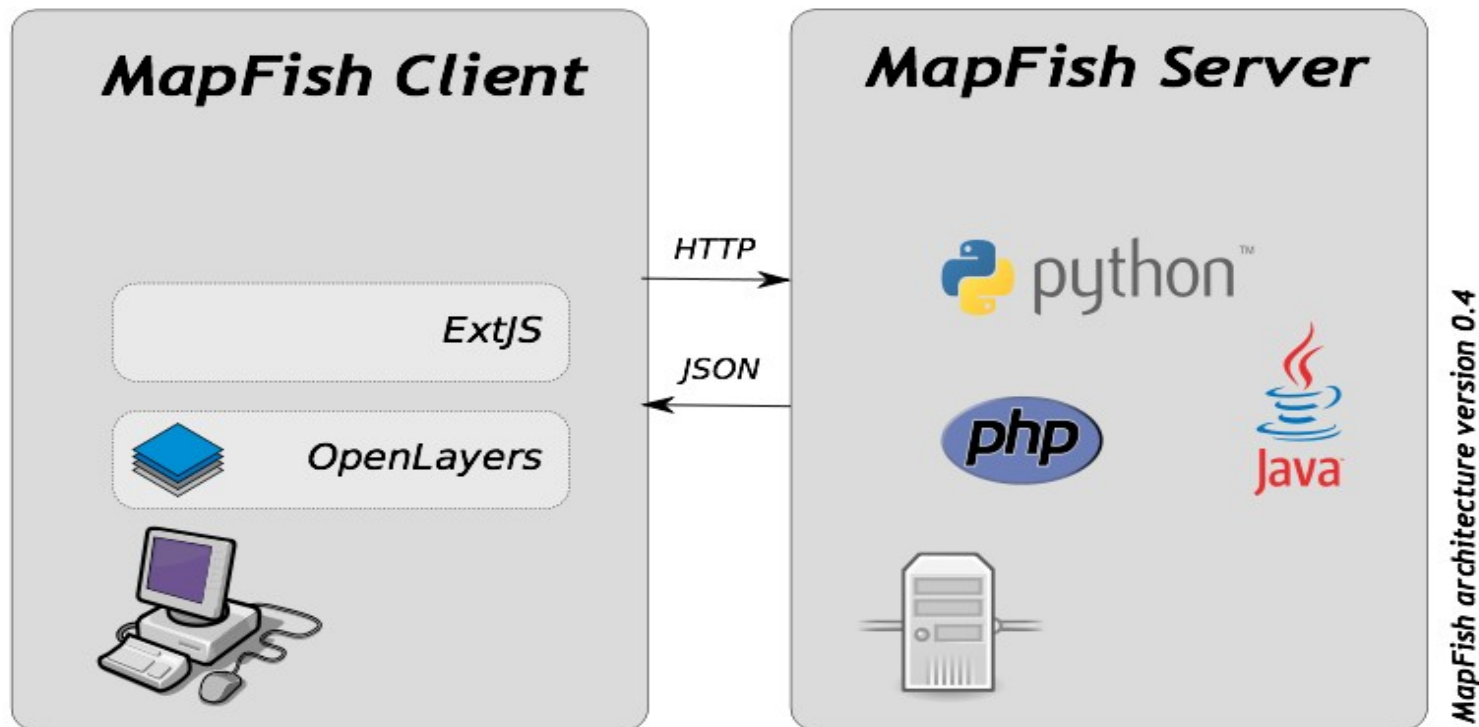
Development status

- **Version 1.1** – January 2009 (3 to 4 yearly releases)
- MapFish is subject to the **OSGEO incubation process**
 - ✓ pending resources: mentor and code reviewers

MapFish provides ...

- **A WebGIS development toolkit**
- **GIS typical functionalities**
 - ✓ Layer Tree
 - ✓ Map queries
 - ✓ Search
 - ✓ Editing
 - ✓ ...
- **Advanced functionalities** (available in version 1.1)
 - ✓ Offline support – based on Gears
 - ✓ PDF printing – features printed as vectors, map rotations, scale bars, legends, tables, notes, templates

Global Architecture



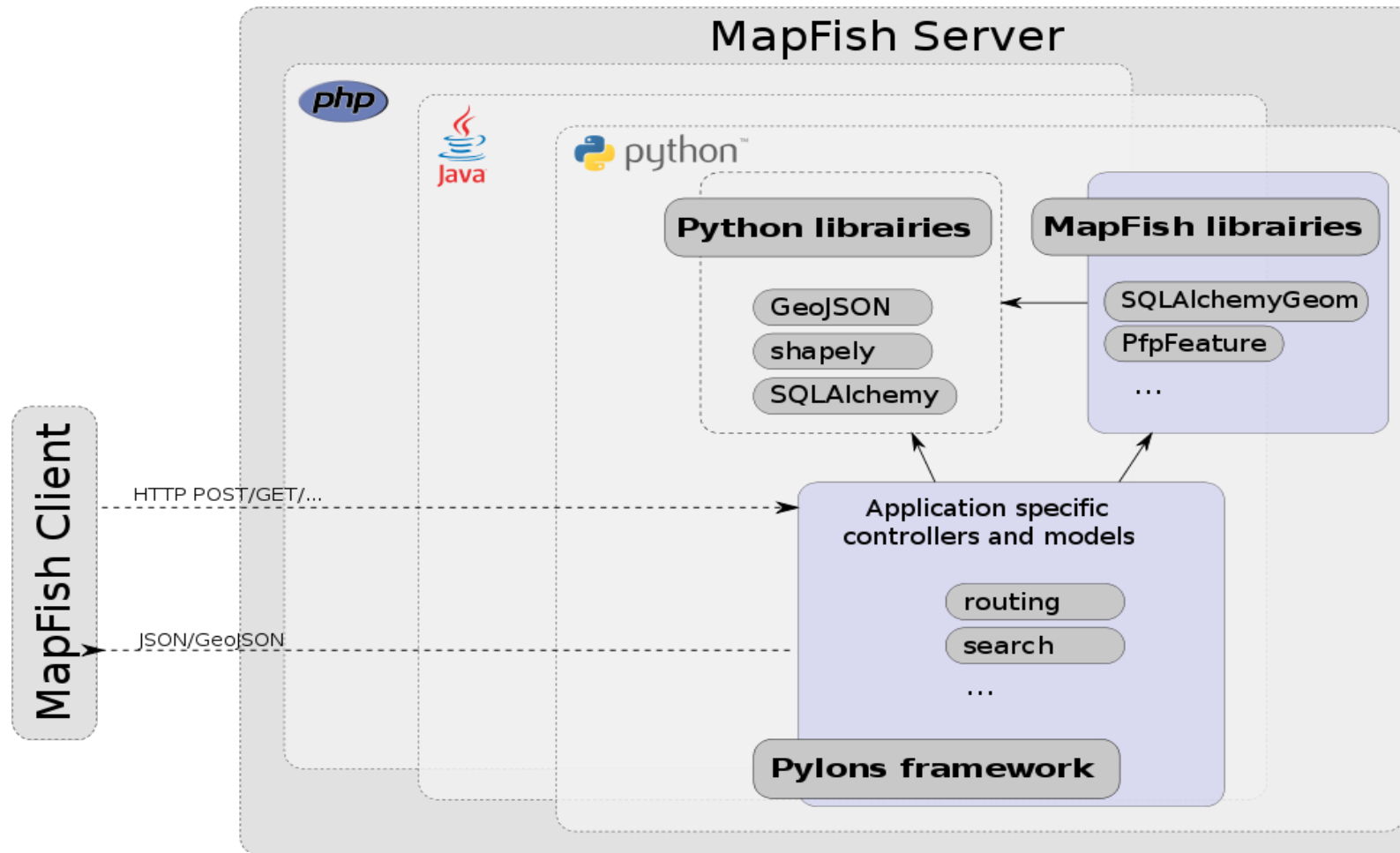
▪ MapFish Client

- Javascript components
 - Core components
 - Graphical components (Ext)
 - Open Layers
- Interaction with Web Services (developed with MapFish Server)

▪ MapFish Server

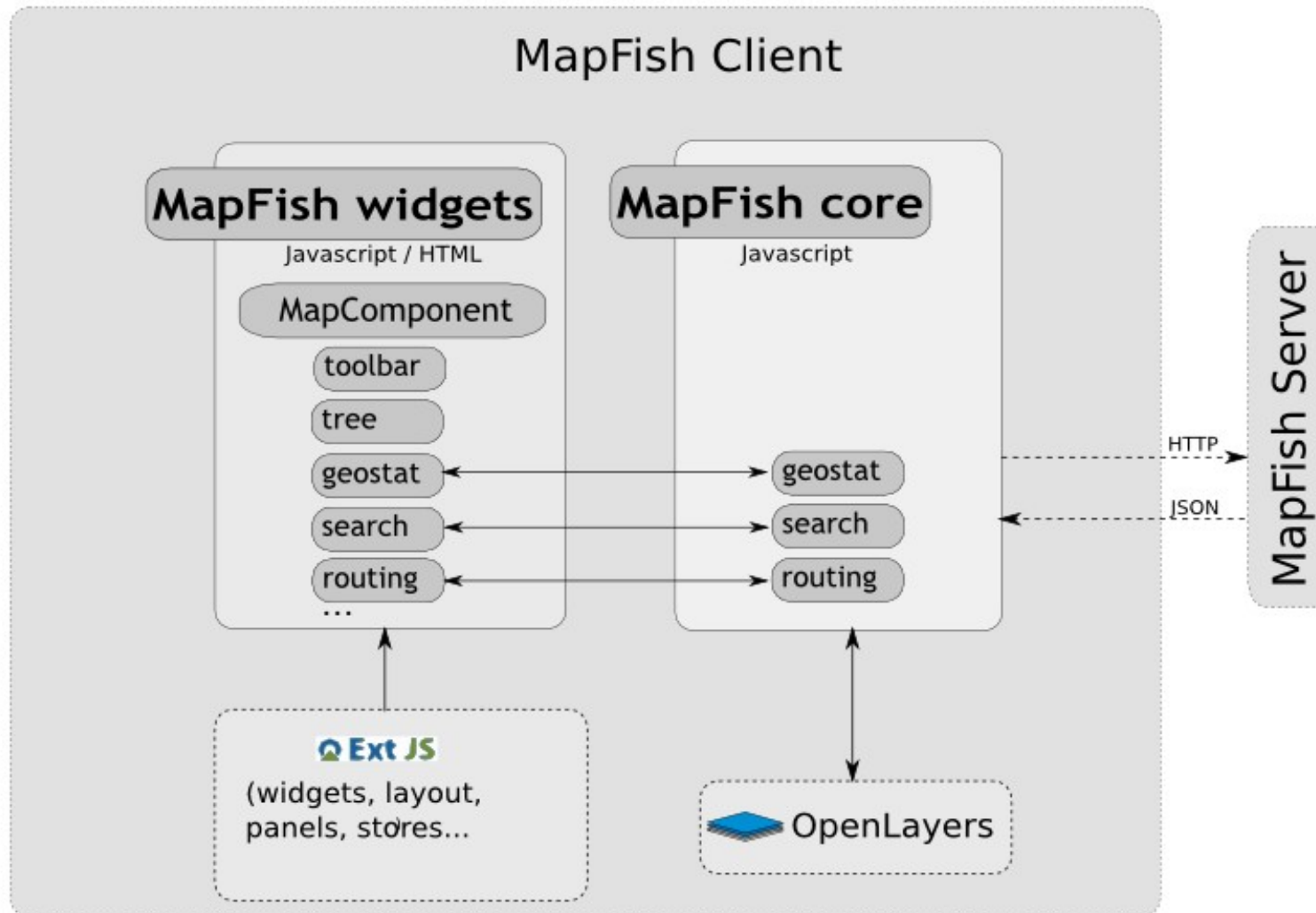
- Development framework
- Component libraries

Server Architecture (for Python)



MapFish server architecture version 1.0

Client Architecture



MapFish client architecture version 0.2

Differences between OL & MapFish

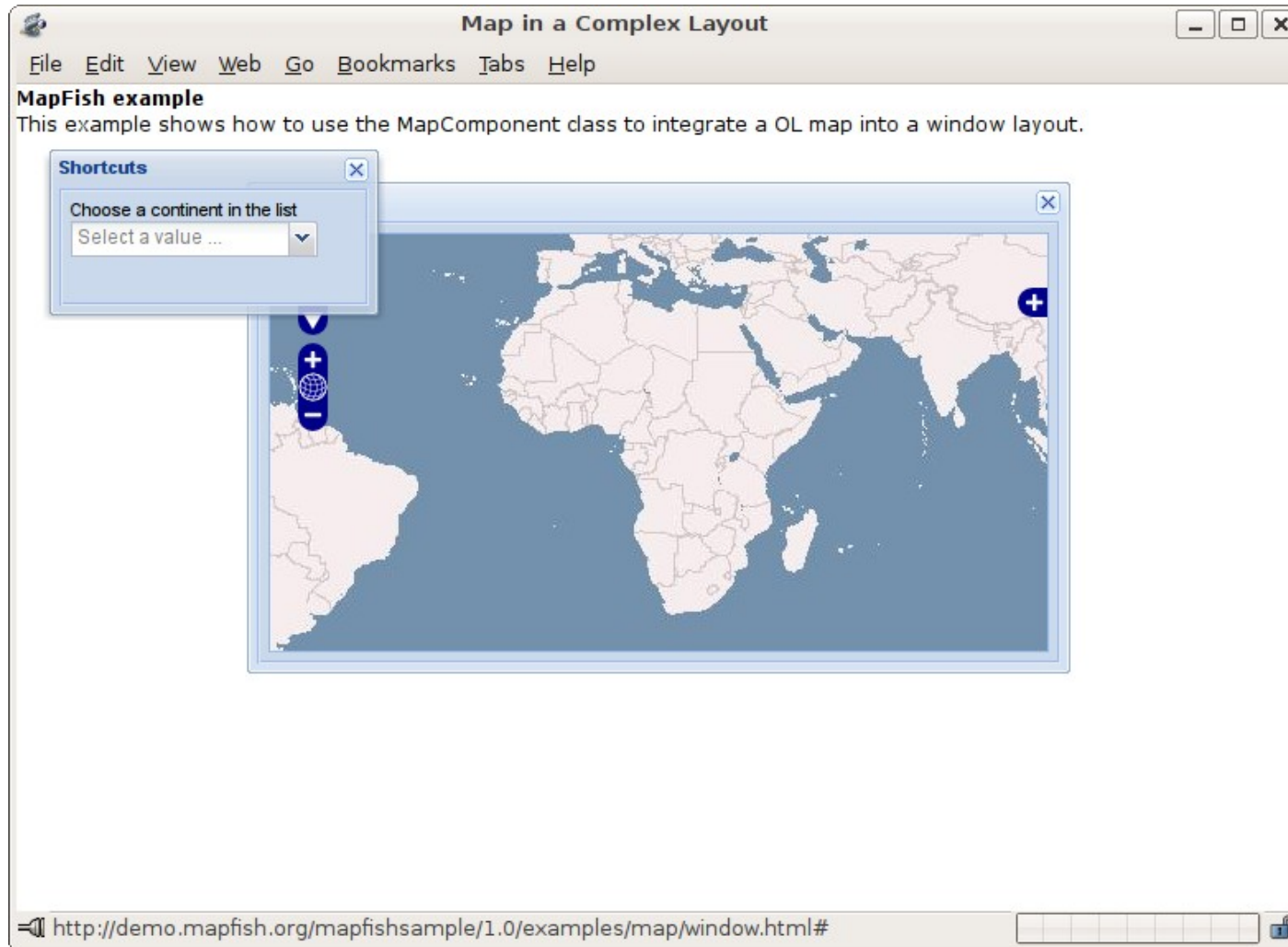
■ OpenLayers

- ✓ JavaScript library
- ✓ Client side only
- ✓ Functions closely connected to the map
- ✓ Not a development framework
- ✓ Generic, but off specific business applications needs

■ MapFish

- ✓ Supports OpenLayers on the client side
- ✓ Client side and server side
- ✓ WebGIS application development framework
- ✓ Map connected functions
- ✓ JavaScript graphical components (based on Ext)
- ✓ Functions oriented towards business applications

Example: Pop-up window / Block



Example: Pop-up window / Search

Welcome to Map Cycling in Switzerland

deutsch
français
italiano

Close Layer Tree

Map Satellite Search... Print

Cycling in Switzerland

- Routes
- Sections
- Local offers
- Cycle rental
- Cycle service

Hiking in Switzerland

Mountainbiking in Switzerland

Skating in Switzerland

Canoeing in Switzerland

Rail, bus, boat

Places

Accommodation

Sehenswürdigkeiten

2 Treffer

6 Alpine Passes Trail Section La Sage—Arolla

Characteristic wooden houses in Les Haudères. At the foot of glistening glacier giants and jagged rocks in Val d'Arolla, through woodland, across meadows and fields rich with flora. The untamed river bed of the La Borgne makes you aware of natural dangers.

Route markieren
Mehr Information

6 Alpine Passes Trail Chur—St-Gingolph

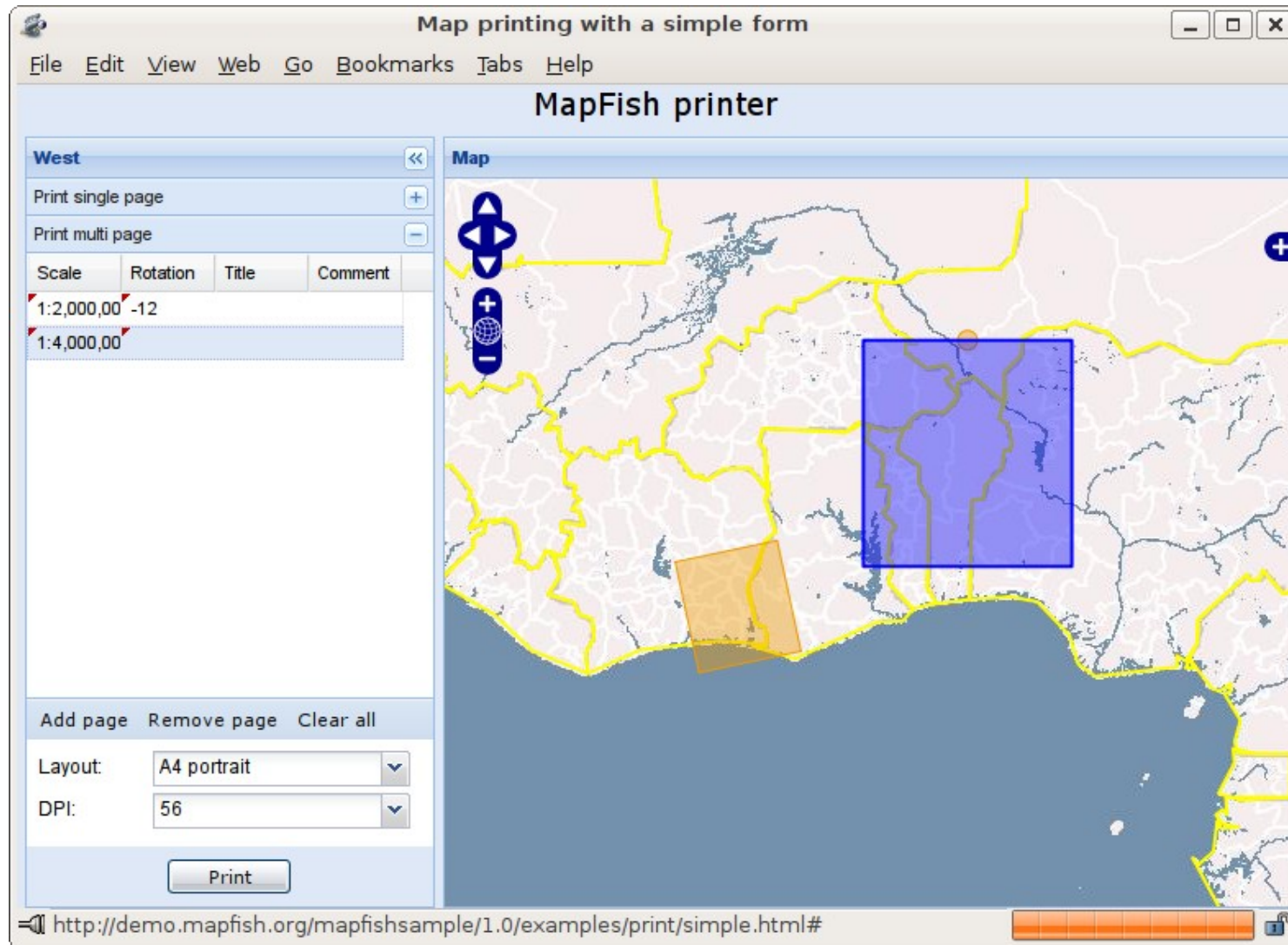
The Alpine Passes Trail strings together many of the most beautiful passes in the Graubünden and Valais Alps in 33 stages. One highlight follows another from the Greina Plateau to the passes and lake landscape at the foot of the Dents du Midi.

Route markieren
Mehr Information

Coordinates (m): 605000, 104578

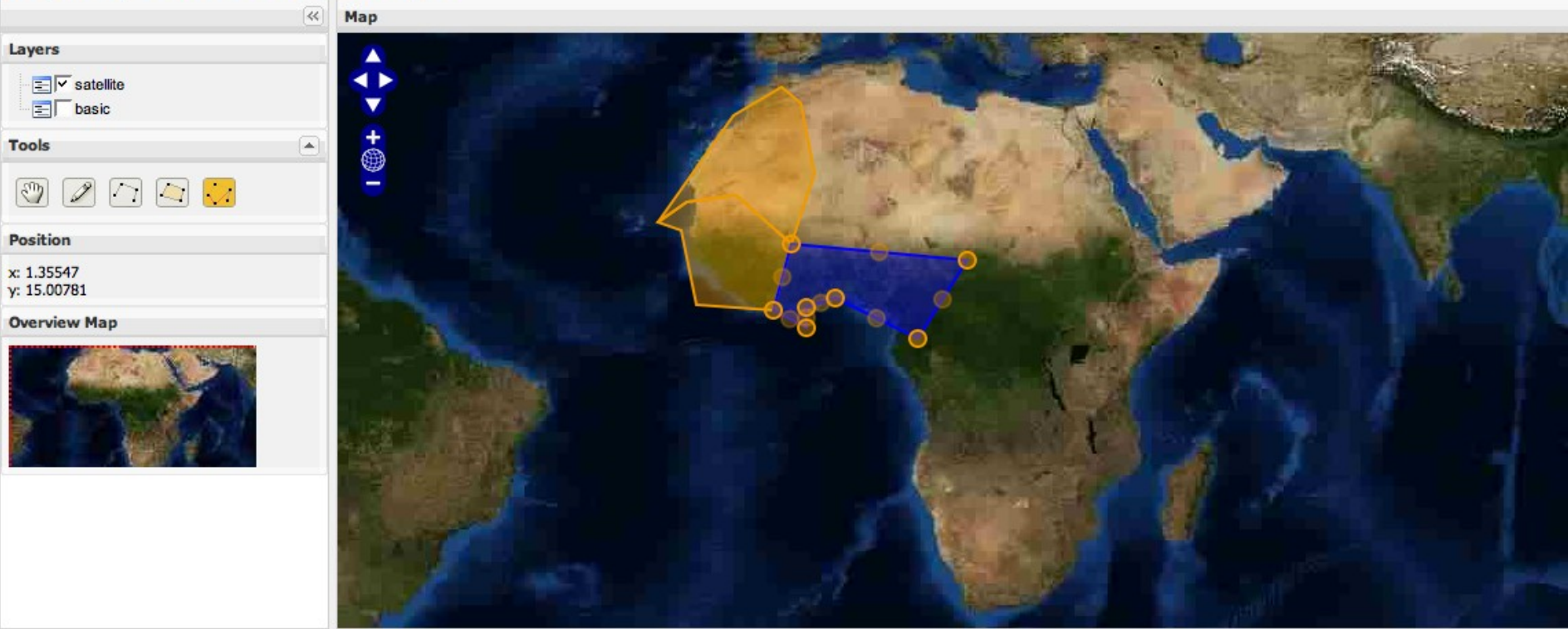
Publishing credits | Copyright & privacy policy | Contact Help

Example: Printing



Example: Editing

MapFish, FeatureList example



The screenshot displays the MapFish web interface. On the left, there is a sidebar with the following sections:

- Layers:** Includes 'satellite' (checked) and 'basic' (unchecked).
- Tools:** Contains icons for pan, edit, draw line, draw polygon, and draw point.
- Position:** Shows coordinates x: 1.35547 and y: 15.00781.
- Overview Map:** A small thumbnail map of the current view.

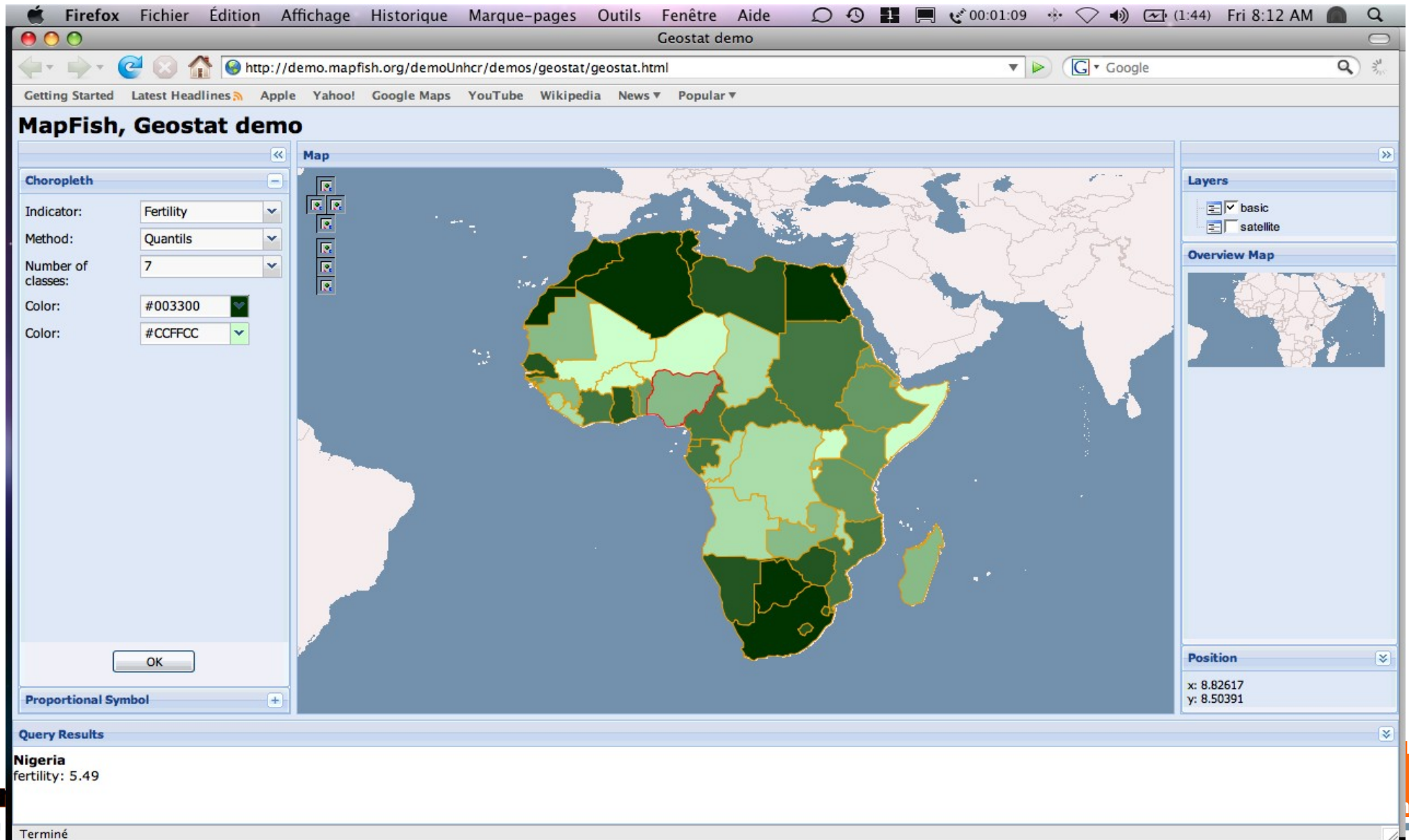
The main map area shows a satellite view of Africa with two polygons: a yellow one in the north and a blue one in the south. The Feature List table at the bottom provides details for these features.

Feature List

⊖ Delete selected features

Name	Geometry type	Surface [km ²]	Length [km]
Zone 1	Polygon	1650473	5219
Zone 2	Polygon	1833858	6663
Et ma 3ème zone	Polygon	1916668	6665

Example: Geostatistics



Example: Multimodal Routing

Démonstrateur POTIMART

Couches

- Places et Squares
- Points d'intérêt
- Routes Haute Garonne
- Lignes

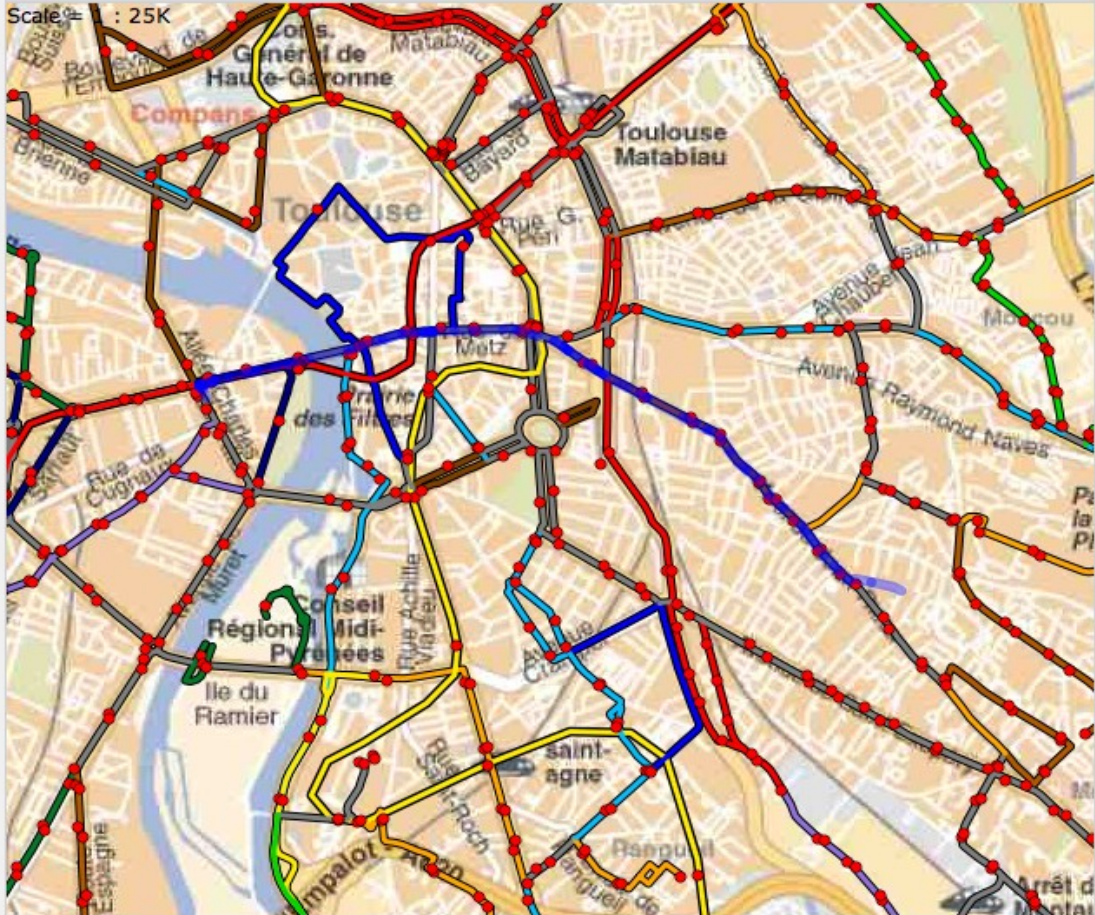
Itinéraires

Départ:


Destination:

Carte

Scale: 25K



Carte de contexte



Coordonnées

x: 528702.46633
y: 1845093.28054

Example: Tracking

TiticWeb Logout Auto refresh

Menu Carte Configuration

Liste des couches

Unités localisées

Unité	Date Gps	Sévérité
PTOPTIC1	15 Jan 1970 06:34:35	Ok
PTOPTIC2	15 Jan 1970 06:34:35	Ok
PTOPTIC3	15 Jan 1970 06:34:35	Ok
MTP_20	15 Jan 1970 04:43:58	Alarme
PT Gris	23 Dec 2008 05:30:55	Ok
PT Noir	24 Dec 2008 02:18:17	Ok
TAG ITOPTIC 2	15 Jan 1970 06:34:35	Ok
TAG ITOPTIC 3	15 Jan 1970 06:34:35	Ok
TAG ITOPTIC 4	15 Jan 1970 05:21:12	Ok
TAG ITOPTIC 5	15 Jan 1970 06:34:35	Ok
TAG ITOPTIC 6	15 Jan 1970 04:47:58	Ok
TAG ITOPTIC 7	15 Jan 1970 06:34:35	Ok
TAG ITOPTIC 8	15 Jan 1970 04:42:29	Ok
Tag 611	01 Oct 2008 12:03:35	Ok
Tag 613	01 Oct 2008 11:58:36	Ok
Tag 621	02 Oct 2008 01:03:09	Ok
Tag 622	02 Oct 2008 10:30:17	Ok

Page 1 of 1 Displaying 1 - 21 of 21

Recherche

Historique

Geofencing

Unité localisée : X1_A
Description : X1_A
Date gps : Tue Nov 04 2008 11:26:10 GMT+0100

Données cartographiques ©2008 Tele Atlas - [Conditions d'utilisation](#)

Evenements

Unité	Message	Date	Sévérité
demo1	Geofencing Alarm : ul with id : demo1 is in the geofencing area : 2	07 Oct 2008 05:18:25	Alarme
demo1	Geofencing Alarm : ul with id : demo1 is in the geofencing area : 2	07 Oct 2008 05:18:02	Alarme
demo1	Geofencing Alarm : ul with id : demo1 is in the geofencing area : 2	07 Oct 2008 05:17:58	Alarme
demo1	Geofencing Alarm : ul with id : demo1 is in the geofencing area : 2	07 Oct 2008 05:17:52	Alarme
demo1	Geofencing Alarm : ul with id : demo1 is in the geofencing area : 2	07 Oct 2008 05:17:48	Alarme
demo1	Geofencing Alarm : ul with id : demo1 is in the geofencing area : 2	07 Oct 2008 05:17:44	Alarme

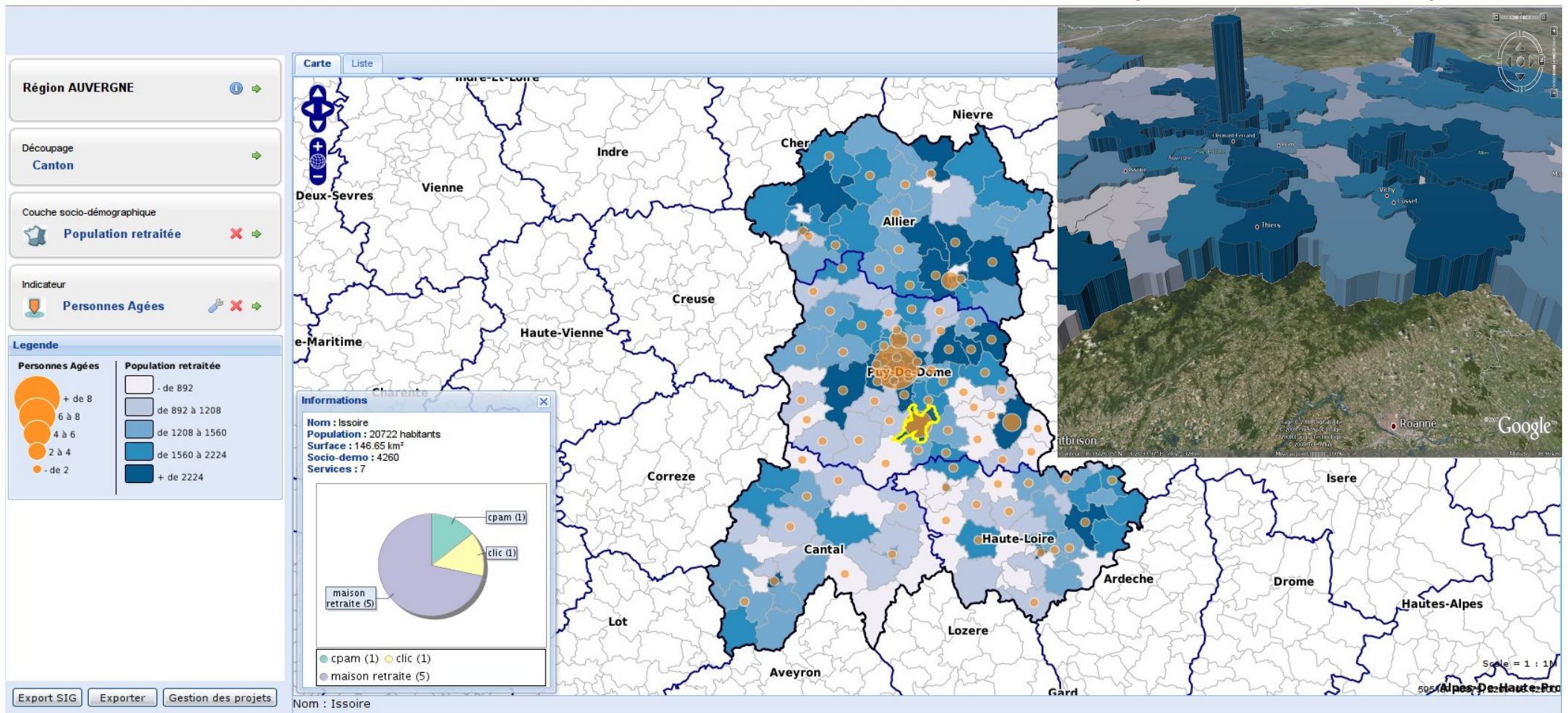
Page 1 of 1 Displaying 1 - 100 of 100

Example: 2D / 3D



Case study: Caisse des dépôts

■ <http://veille-territoriale.servicepubliclocal.net/cdc/> (admin/ admin)



Case study: IRSN

■ [http://sws.irsn.fr admin/1e3d1ad5/](http://sws.irsn.fr/admin/1e3d1ad5/)

Etude et surveillance de la radioactivité dans l'environnement

Sur ce territoire sont représentés 1151 points de mesures

Mesures effectuées sur la zone sélectionnée

Nature	Radionucléide	Unité
Milieu atmosphérique		
Milieu biologique		
Algues	Beryllium 7	Bq par kg
Algues	Beryllium 7	milliBq par mètre carré
Algues	Plomb 210	Bq par kg
Algues	Plomb 210	milliBq par mètre carré
Algues	Potassium 40	Bq par kg
Algues	Potassium 40	milliBq par mètre carré
Mollusques (chair, entier)	Beryllium 7	Bq par kg

Type de prélèvement : Plomb 210

Sources
© Fonds Raster Geosignal
© BD Carthage
© BD GEOFLA

Case study: UNHCR

- <http://prod-unhcr.camptocamp.net/map.html?offline=true>
edituser:edituser

UNHCR Information Management Platform

File Edit View Web Go Bookmarks Tabs Help

UNHCR
The UN Refugee Agency

Search Layer Tree **Editing** Print

Import Commit Delete

Layer to edit: Camp facilities

Attributes

comment:

status: 1

_type: Community services

name: waste disposal

camp_id:

ok

Edited features

Id	name	State
----	------	-------

Map

Sierra Leone Sierra Leone

100 m
200 ft

Online

To use the offline mode, you must install [Google Gears](#).

Map Queries

Overview Map

Shortcuts

Gerihun Camp

Coordinates

x: -11.57374
y: 7.93493

Administration interface

Informations données

NOM:

TYPE DE SOURCE:

TYPE D'OBJETS:

NOMBRES D'OBJETS:

PROJECTION:

Informations attributs

NOM	TYPE	LONG.	NULLABLE
gid	serial	4	Not Null
name	varchar	0	Nullable
iata_code	varchar	0	Nullable
country	varchar	0	Nullable
cntry_fips	varchar	0	Nullable
type	int4	4	Nullable
elev_ft	int8	8	Nullable
longitude	numeric	65535	Nullable
latitude	numeric	65535	Nullable

Layer Classification Properties

Type de classification:

Champ de classification:

Générer les classes

Conception	Expression
<input checked="" type="checkbox"/>	ALSACE
<input checked="" type="checkbox"/>	AQUITAINE
<input checked="" type="checkbox"/>	Auvergne
<input checked="" type="checkbox"/>	BASSE-NORMANDIE
<input checked="" type="checkbox"/>	Bourgogne
<input checked="" type="checkbox"/>	Bretagne
<input checked="" type="checkbox"/>	Centre
<input checked="" type="checkbox"/>	CHAMPAGNE-ARDENNE
<input checked="" type="checkbox"/>	CORSE
<input checked="" type="checkbox"/>	FRANCHE-COMTE
<input checked="" type="checkbox"/>	HAUTE-NORMANDIE
<input checked="" type="checkbox"/>	ILE-DE-FRANCE
<input checked="" type="checkbox"/>	LANGUEDOC-ROUSSILLON
<input checked="" type="checkbox"/>	LIMOUSIN

Selection Reminder

Foreground: Background: Border:

Symbols Color

Hide color details

R: 255 H: 0

G: 255 S: 0 %

B: 255 V: 100 %

Apply Close

MapFish (next) ...

■ Administration interface

- ✓ An administration application to automatically create MapFish applications
- ✓ 3 main components: Data Manager / MapFile Manager / MapFish Manager

■ Better integration between OpenLayers and ExtJS: led to the development of the **GeoExt project**

■ Development of the **server component in Java**

■ Orientation « **Spatial Data Infrastructure** » (link with the GeoNetwork catalog, data extractor, publication of OGC services)

■ What about a **MapFish client in Flash/Flex** based on Open Scales ?

■ MapFish distributed in **OSGeo4W**



Community, community, community ...



MapFish: the community

- Web site: <http://www.mapfish.org>
- Subversion
- Mailing lists (dev & users)
- IRC chat
- Blog : <http://mapfishblog.blogspot.com>



The screenshot shows a blog post from camptocamp. The header includes the camptocamp logo and the tagline 'News about life, improvements and contributions to the project'. The post is dated Friday, January 16, 2009, and is titled 'MapFish 1.1 is released!'. The main text of the post reads: 'The MapFish Team is very proud to announce MapFish 1.1! You can [download it](#). Don't miss the [demos](#) (you probably know my [favourite](#) ;-). The main new features of this release are: **Server-side components** - Rails plugin - printing of vector layers **Client-side components** - recenter widget - layer tree context menus - feature store - Google Earth/MapFish integration example - print action (print button in a toolbar) The release's wiki page is [accessible here](#).' On the right side of the page, there are sections for 'GeoExt' (Specification phase, Promising styler, GeoExt: Where to start?, GeoExt: go,go,go!), 'Links' (OpenERP by Camptocamp, MapFish, GeoExt, OSGeo), and 'Subscribe To' (Posts, All Comments).

