

Online watershed boundary delineation: sharing models through Spatial Data Infrastructures

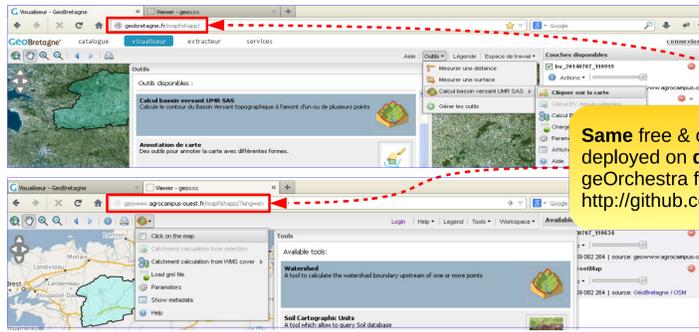
Squidiant H., Béra R., Ruiz L., Aurousseau P., Cudennec C.
UMR 1069 SAS, Agrocampus Ouest – INRA, Rennes, FRANCE

2013

Multiple instances of WPS add-on

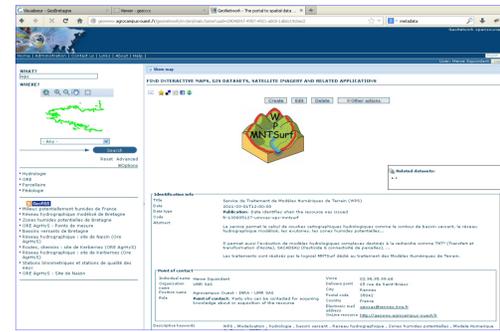
GéoBretagne
Regional SDI
Brittany Council, France

GéoSAS
Research unit SDI
UMR SAS, Rennes, France



Same free & open source add-on deployed on different portals based on geOrchestra from public repository : <http://github.com/geosas/wpsbv>

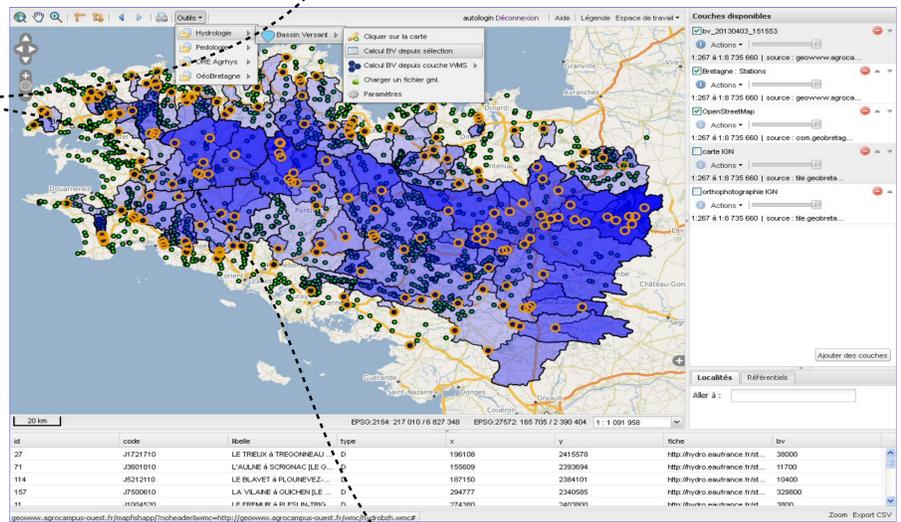
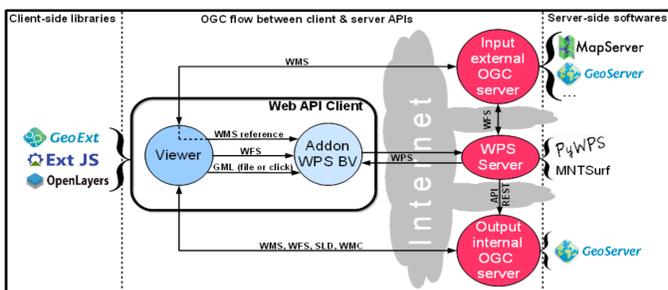
ISO 19119 Service Metadata



2012

WPS client as an SDI add-on

Dynamic generation of watershed delineation from a Web browser. The WPS receives an OGC WFS flow as input, then uploads the output layer onto a GeoServer. This layer then benefits from geOrchestra viewer's OGC capabilities: SLD (styling), WMS/WFS (requests), WMC (context saving), Shapefile download, PDF Printing, ...



2011

WPS client as a desktop GIS add-on

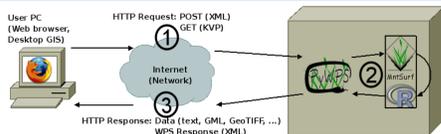
QUANTUM GIS + WPS Client (1.0.2)
Client for OGC Web Processing Services



Dynamic generation of the watershed boundaries upstream one or more selected locations. Processing is triggered from a desktop GIS.

WPS Server

PyWPS + MNTSurf =



Name : agrocaWPuS
Url : <http://geowww.agrocampus-ouest.fr/cgi-bin/hswwps.cgi>
Standard OGC : Web Processing Service 1.0

2010

Spatial Data Infrastructure



<http://geowww.agrocampus-ouest.fr>

OGC-compliant Web Portal



2009

Spatial Data Architecture

<http://www.georchestra.org>

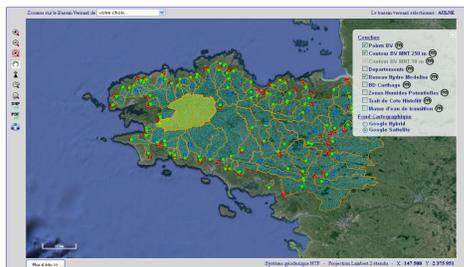


GeoServer Map service
GeoNetwork OpenSource Catalog service, metadata
Mapfishapp Viewer

Ext JS
OpenLayers
GeoExt

2008

Web : dynamic map



OpenLayers
GeoServer

Map displays of preprocessed data and dynamic requests on spatial layers (river catchments, modelled hydrographic network, on-site measurements)

1996

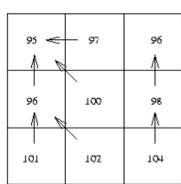
Website

Static maps of watersheds published as images.

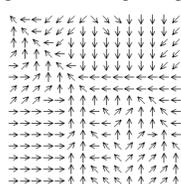
1992

Processing software

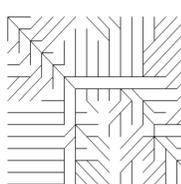
MNTSurf under development: Hydrological modelling & Digital Elevation model



Digital Elevation Model



Drainage flow model



Drainage flow tree

Processing of watershed delineation

Raster & Vector

