Towards a WPS platform dedicated to an urban knowledge infrastructure
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Towards a WPS platform dedicated to an urban knowledge infrastructure

I/ Context

This poster presents an implementation of the WPS (Web Processing Services) specification that provides specialized geographic analysis and processing tools to researchers, local authorities and private organizations and companies within IRSTV’s Spatial Data Infrastructure (SDI).

We present a descriptive meta-language that allows GIS specialists to WPS-enable their existing SQL processes and then push them within the WPS component of the SDI.

II/ Proposal

Exposing a SQL script as an online geoprocess using Web Processing Services (WPS)

```
CREATE TABLE buffered AS
SELECT ST_BUFFER(geom, buffer_size) FROM input;
```

- Multiple inputs & outputs
- Multiple formats supported
- SQL Spatial: OGC Simple Feature SQL
- Vector and raster
- Custom functions (hydrology, noise maps, grid analysis…)
- Full support for OGC WPS 1.0

III/ Implementation

Internet

WPS

HTTP

Website

OrbisGIS Server

GDMS Server

Custom Process Provider

Metadata parser

DataSourceFactory

Parser

deegree

Script catalog

View

Execute

Script

IV/ Use case

I want to create a process to compute the watershed from a river outlet using a DEM

I write a SQL script

GIS specialist

I publish it on a WPS server

WPS

DEM

I want to compute a watershed

I query the WPS process with my own data

I get the results in my desktop GIS