Towards a WPS platform dedicated to an urban knowledge infrastructure
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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)

- 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

Creating a WPS service requires the following steps:

1. **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

2. **I want to compute a watershed with my own data**
   - I query the WPS process
   - Consumer
   - I get the results in my desktop GIS

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**SQL script**

```sql
CREATE TABLE buffered AS
SELECT ST_Buffer(the_geom, buffer_size) FROM input;
```