

## ESWC 2018 - STTL : SPARQL Template Transformation Language

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The tutorial consists in studying and extending a Linked Data navigator powered by STTL. There is an archive with a core application containing:

- **profile.ttl** : specification of the **demo** service
- **sttl** : the transformation
- **sttl/format** : HTML formats for the transformation
- **query** : SPARQL queries
- **data** : RDF data

The **demo** service is a workflow composed of :

- Load an RDF document
- Run an STTL transformation which generates HTML from the RDF graph
- It may be extended with a SPARQL query

The STTL transformation consists in displaying sensor measures on a map ; selecting and displaying sensors in decreasing order of sensor value as well as computing aggregates such as min, max, etc. The HTML display uses different CSS colors according to value ranges.

### Run the server

```
java -jar corese-server-4.0.2.jar -pp /home/path/eswc/profile.ttl -lh -debug
```

Windows:

```
java "-Dfile.encoding=UTF-8" -jar corese-server-4.0.2.jar -pp C:\home\path\eswc\profile.ttl -lh -debug
```

### Access the service

Web browser at **<http://localhost:8080>**, click on **Demo** (top right) then select **Demo**

### Exercise

Map is interactive, you can click on a marker

In profile.ttl, uncomment Query initialize.rq, stop & run server

In query/initialize.rq, change the bounds of iterator xt:iota (e.g. xt:iota(300, 400)), stop & run server

In template sttl/place.rq, select another sensor property and compare the maps (e.g. ?p a aqio:CarbonMonoxideProperty), click on Demo. Try other properties. At the end, reset aqio:AirQualityIndexProperty

In template sttl/resource.rq, uncomment filter (us:value(?value) <= 30), click on Demo

In template sttl/aggregate.rq, display max in red and min in blue, click on Demo

In profile.ttl, uncomment Query insert1.rq, stop & run server, some places have a link to DBpedia

In template sttl/gmap2.rq, change function us:icon to display other icons, click on Demo