LandCover2RDF: an API for computing the land cover of a geographical area and generating the RDF graph

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Motivation

Land cover classifications
* fundamental source of data to characterise Earth surface
* and to support change detection analyses

Land cover maps have been produced from different sources as a result of massive time-series image processing.

Proposal

A REST API (and a web user interface) that allows for computing the percentage of land cover classes of a geographic area according to a given map.

The computed data is then represented as an RDF graph based on an ontology dedicated to this kind of data focusing on their temporal and spatial dimensions.

Proposed API

Process pipeline for land cover integration and RDF generation.

```
curl -d "datasetId=land_cover_cesbio_2017" -d "wkt=POLYGON((1.3473654876713013, 1.63352225951501, ...))" http://melodi.irit.fr/rasterStats
```

This API is available via a web interface or a cURL command.

Use Case

* Evolution of land cover (CESBIO) on a French geographical area

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<th>TimeStart</th>
<th>TimeEnd</th>
<th>admin/sse</th>
<th>name</th>
<th>Total/vegetationCESBIO/TotalAreaCESBIO</th>
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<td>2016-12-31T23:59:59</td>
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<td>&quot;Blagnac&quot;</td>
<td>33.4916</td>
</tr>
</tbody>
</table>

Future work

* To integrate other classifications such as CLC and to align the various classifications versions
* New API will allow the user to add a new land cover of his choices