

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



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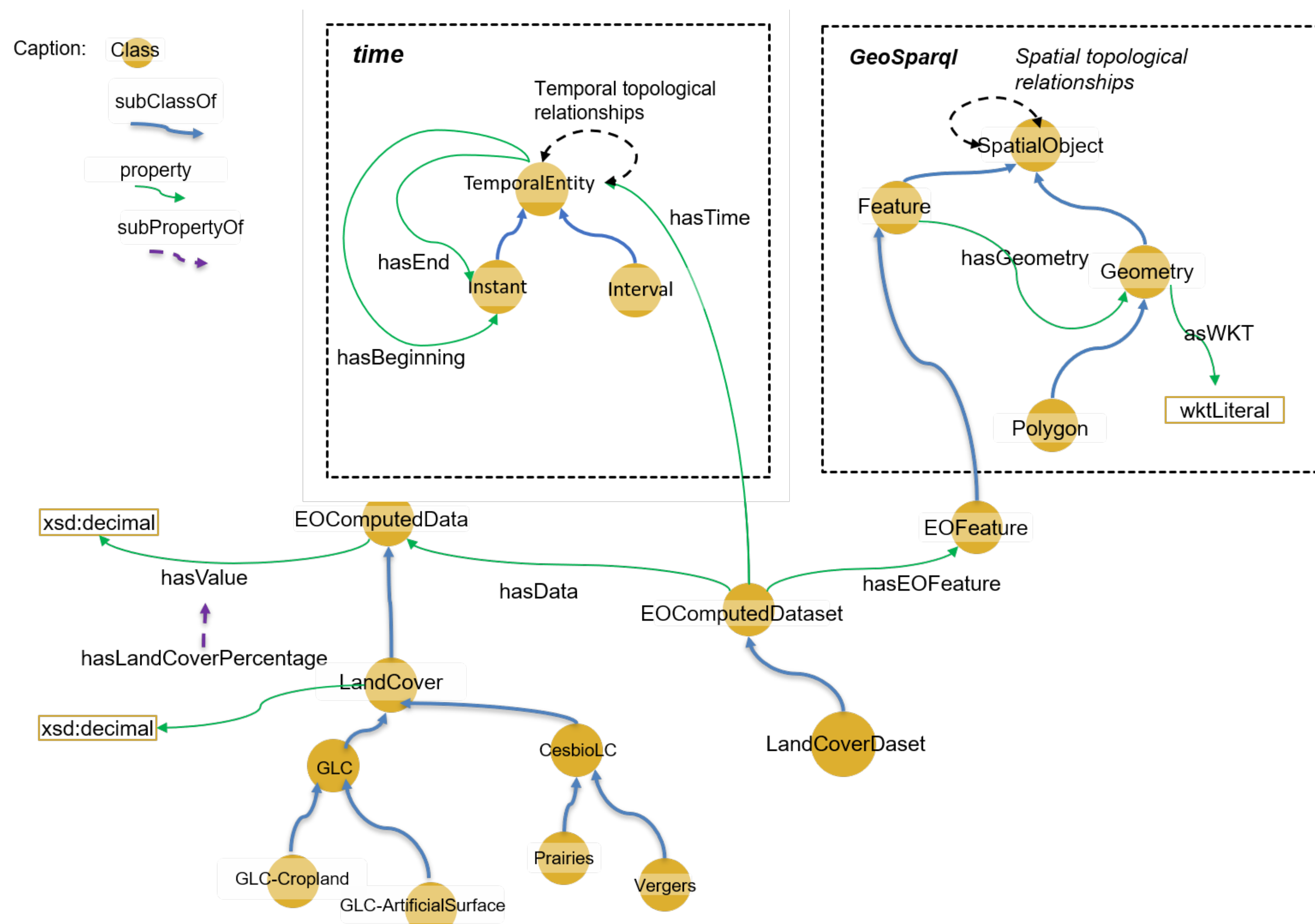
## Motivation

### 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

## Land cover model



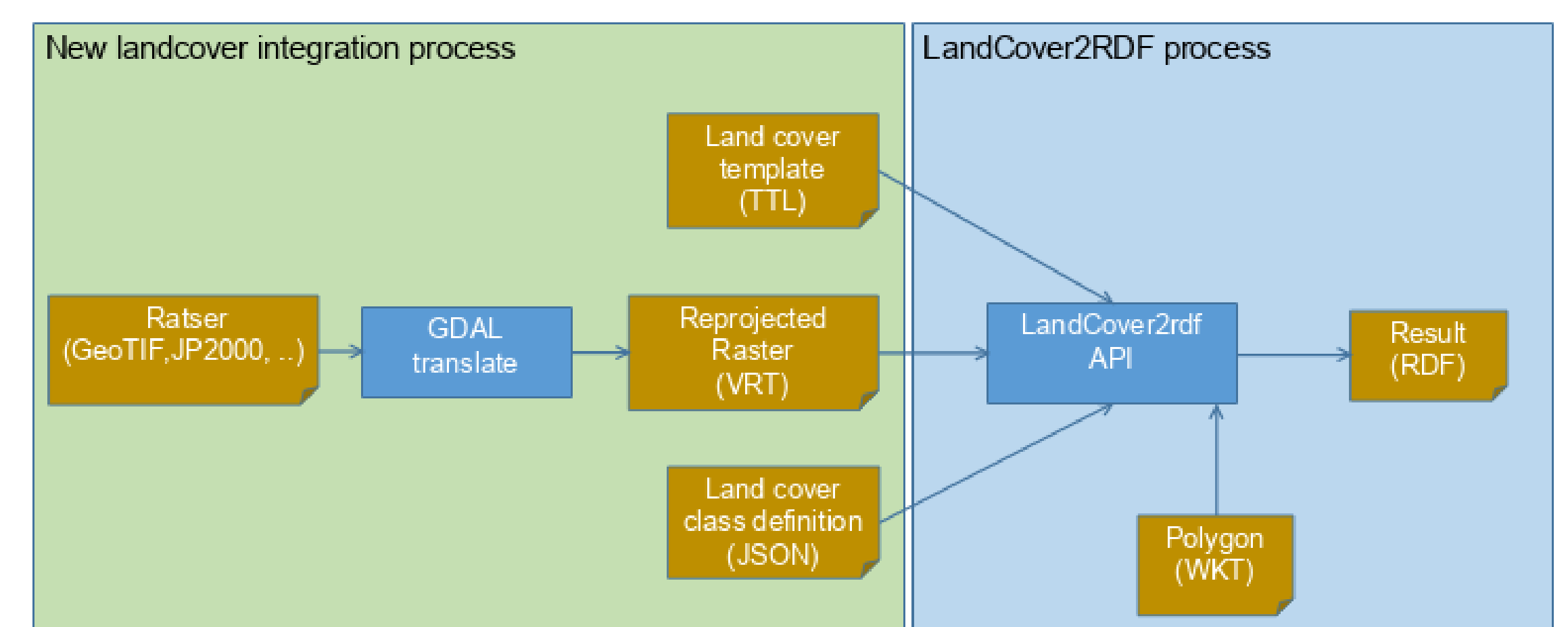
The core of the model reuses standard vocabularies (upper boxes) extended with a specialisation to represent the land cover data.

## 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 -data "datasetId=landcover_cesbio_2017" --data "wkt = POLYGON((1.347365487671301343.63352225951501, ...))" http://melodi.irit.fr/rasterStats`

## Landcover2RDF

This API generates landcover data from different sources into RDF format (Turtle).

**Land cover :**

GLC Share 2014

**Polygon (WKT - EPSG:4326):**

**Output format :**

RDF / Turtle

**Polygon samples**

- [City of Blagnac \(France\)](#)
- [City of Toulouse \(France\)](#)
- [City of Paris \(France\)](#)
- [City of Berlin \(Germany\)](#)

Generate

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

## Use Case

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

IcTimeStart	IcTimeEnd	adminInsee	name	totalVegetationCESBIO	totalUrbanCESBIO
2016-01-01T00:00:01	2016-12-31T23:59:59.999	<a href="http://id.insee.fr/geo/commune/31069">http://id.insee.fr/geo/commune/31069</a>	"Blagnac"@fr	33.0485	59.4996
2017-01-01T00:00:01	2017-12-31T23:59:59.999	<a href="http://id.insee.fr/geo/commune/31069">http://id.insee.fr/geo/commune/31069</a>	"Blagnac"@fr	31.3683	62.988

## 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