# Load files

This time we will use a graph <urn:demobox>

demo-image.ttl – Just the image and parameters given

london-all.ttl – London points of interest retrieved from DBPedia

# The given parameters

Demo image is the image and bounds supplied:

TAI\_timestamp

0x1CC66EFF3ECDCA50

Content ID for Image:

urn:uuid:87015BD8-C84B-4778-B593-5EF16982E452

west bound longitude

1.442095184333063

east bound latitude

359.9336157658092 - normalized to -0.06638423419082073

south bound latitude

51.27892518278613

north bound latitude

52.31403780479302

Notes:

1. Although bounds here are expressed in degrees, the representation is in radians. The range of longitudes is -pi/2 to pi/2. The range of latitudes is -pi/4 to pi/4
2. In addition to the bounds Well-Known-Text for the bounding box is also supplied, so that it can be spatially indexed.

# Queries

Four example queries are provided in template form.

1. *query-images-and-times* - retrieves all images and the time they were taken. Note: There’s only one image in this set
2. *query-image-at-time –* Given a time retrieve images at that time. Give the single time in the parameters above as your time and it should retrieve the content id
3. *query-bounds-given-contentid* - given a content id, returns the north, south, east, west bounds, in radians.
4. *query-university-within-image-box* - given a content id finds all POIs in the DBPedia London set for POIs, whose names match “university”. There should be 10 results.

# Enabling spatial index

I don’t believe I said how to enable the spatial index in previous documentation. This needs to be done to have efficient spatial queries, once after the repository is created. The command is

PREFIX ontogeo: <http://www.ontotext.com/owlim/geo#>

INSERT DATA { \_:b1 ontogeo:createIndex \_:b2. }

Updates don’t go to the same SPARQL endpoint. If the query endpoint is

<host>:7200/repositories/poi

Then the update endpoint, against which the above should be posted is

<host>:7200/repositories/statements.