

10/03/07:

Successfully built database on Orbit, in Jena persistent schema, of the FMA in OWL with Marianne's generated transitive closure links included in the main triple store. I am experimenting with querying this ontology, not to get the resources that stand in the transitive closure of a specified property to another resource, but instead to get all of the edges in the original graph involved in the closure. So, for example, I don't just want to know that both the "Right atrium" and the "Wall of right atrium" are in the transitive closure of "part" for "Heart". I want to know that the edges "Heart"->"part"->"Right atrium" and "Right atrium"->"part"->"Wall of right atrium" are edges in that closure. The following queries work, but are slow (on the order of > 4 min.):

PREFIX dl:

<http://bioontology.org/projects/ontologies/fma/fmaOwlDlComponent_1_4_0#>

PREFIX rdfs:<<http://www.w3.org/2000/01/rdf-schema#>>

PREFIX rdf:<<http://www.w3.org/1999/02/22-rdf-syntax-ns#>>

PREFIX trans:<<http://localhost/dtc#>>

```
SELECT ?esoph_part_1 ?esoph_part_2
WHERE
{
  dl:Esophagus trans:part ?esoph_part_1 .
  dl:Esophagus trans:part ?esoph_part_2 .
  ?esoph_part_1 dl:part ?esoph_part_2
}
```

PREFIX dl:

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PREFIX trans:<<http://localhost/dtc#>>

```
SELECT ?esoph_cont_1 ?esoph_cont_2
WHERE
{
  dl:Esophagus trans:continuous_with ?esoph_cont_1 .
  dl:Esophagus trans:continuous_with ?esoph_cont_2 .
  ?esoph_cont_1 dl:continuous_with ?esoph_cont_2
}
```