Semantics for signal and results collections through linked data:
How country is my country?

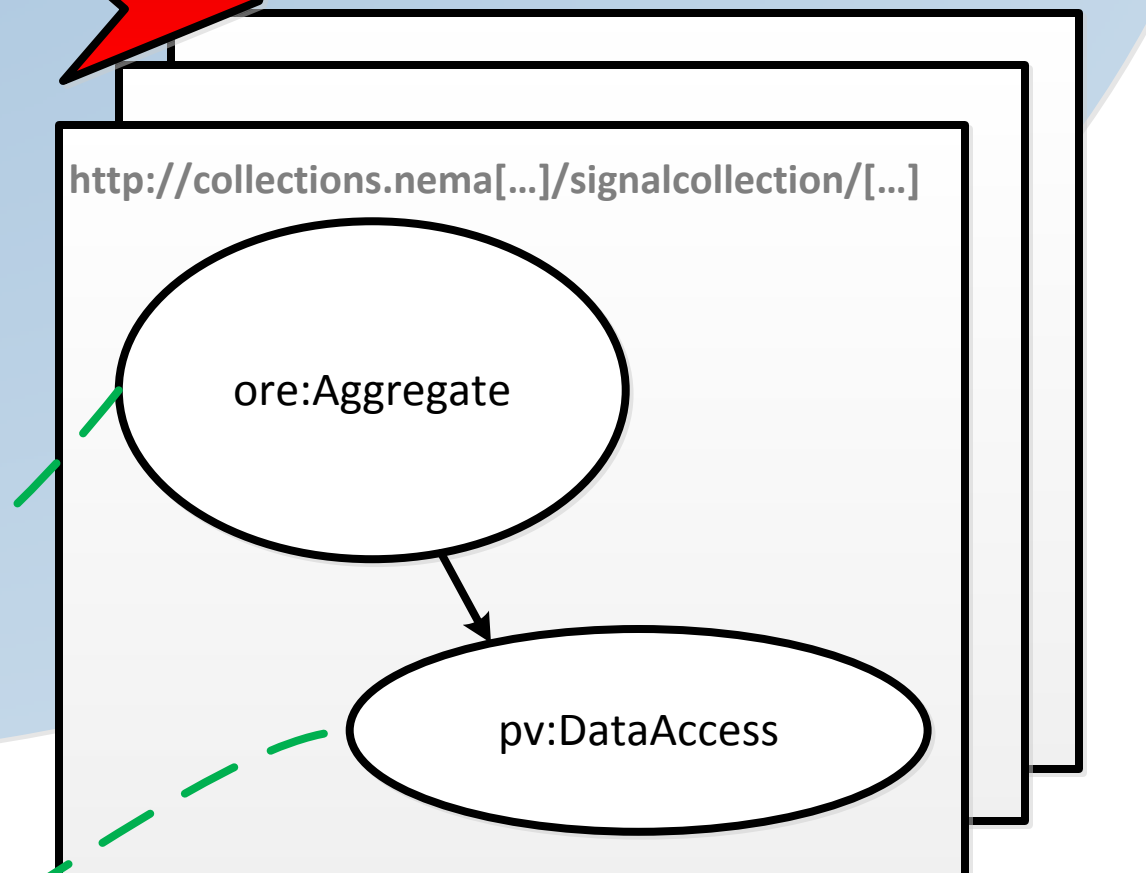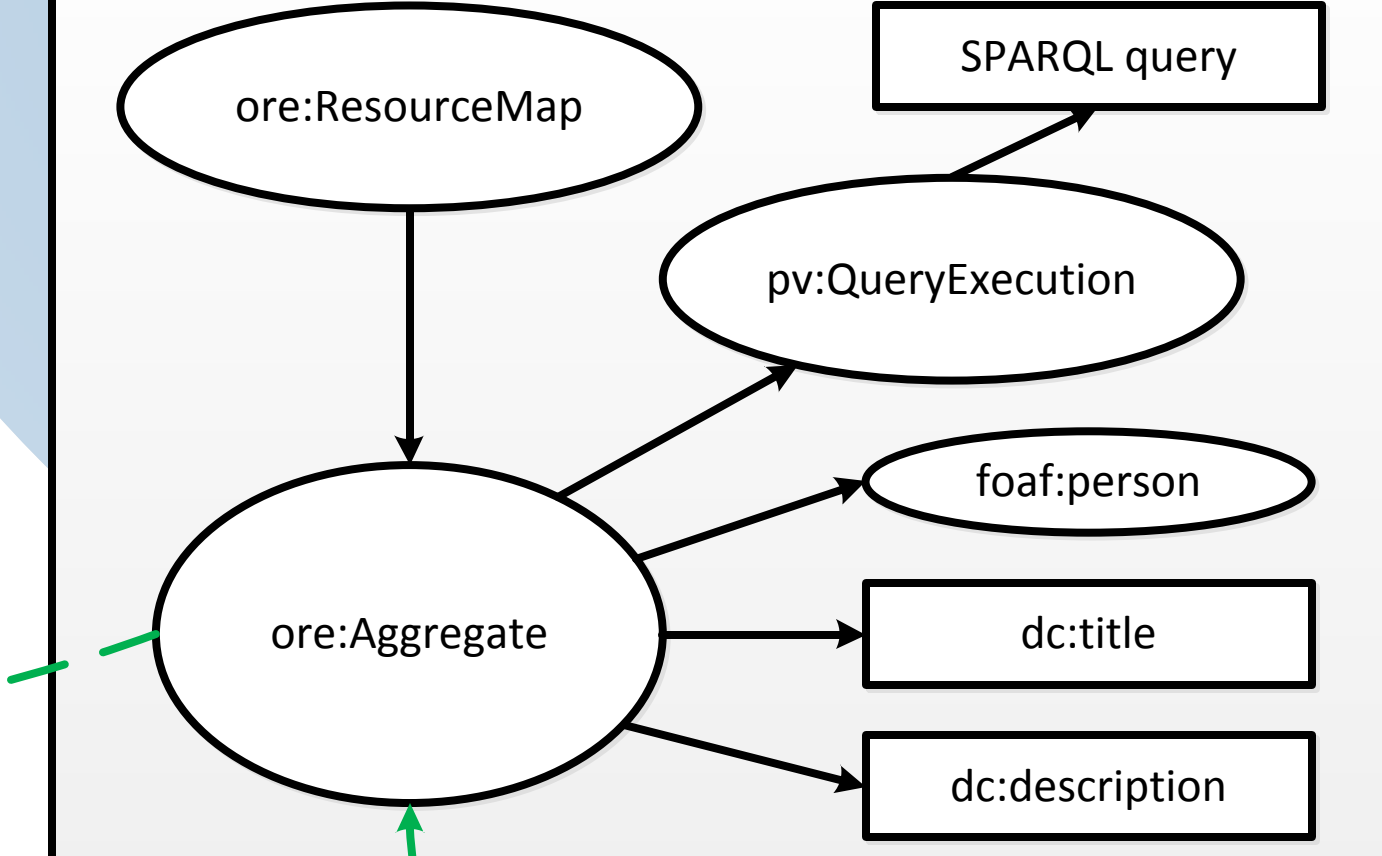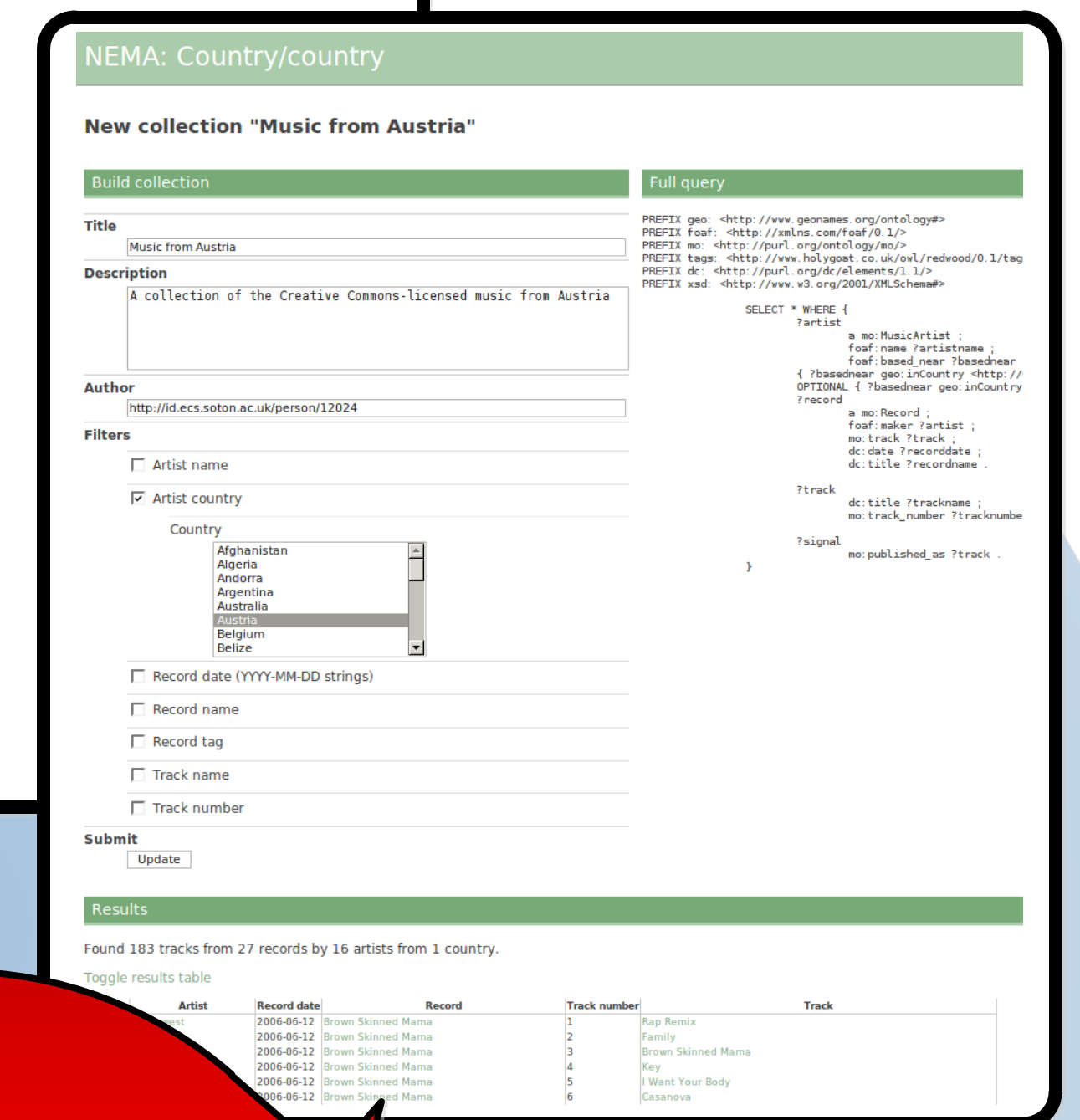Kevin Page[1,3], Benjamin Fields[2], Tim Crawford[2], David De Roure[1], Gianni O'Neill[3], Bart Nagel[3]

[1]Oxford e-Research Centre, University of Oxford, UK / [2]Department of Computing, Goldsmiths University of London, UK

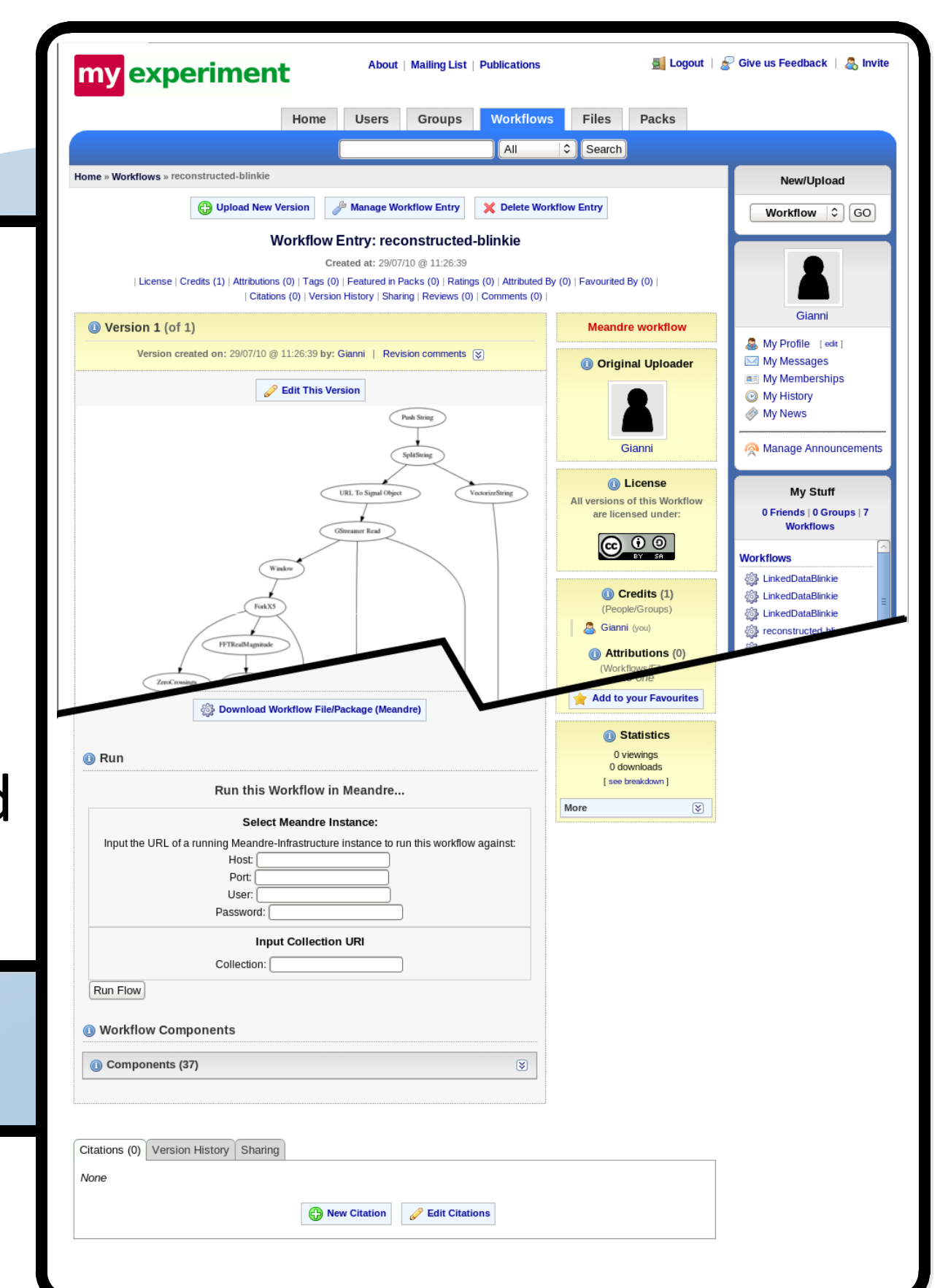[3]School of Electronics and Computer Science, University of Southampton, UK

An **Audio File Repository** is created for signal data (*e.g. a subset of tracks from Jamendo*). The Repository provides a **linked data** service, offering clients either the signal itself (*MP3*) or metadata for the signal: references to other linked data resources about the signal in RDF...

...which is also imported into a triplestore to provide a SPARQL endpoint.

The **Collection Builder** web application queries linked data sources such as Jamendo to create a collection, then grounds the collection using signal from an Audio File Repository, cross-referencing with the Jamendo URIs. *e.g. a collection of tracks recorded by artists from Austria.*
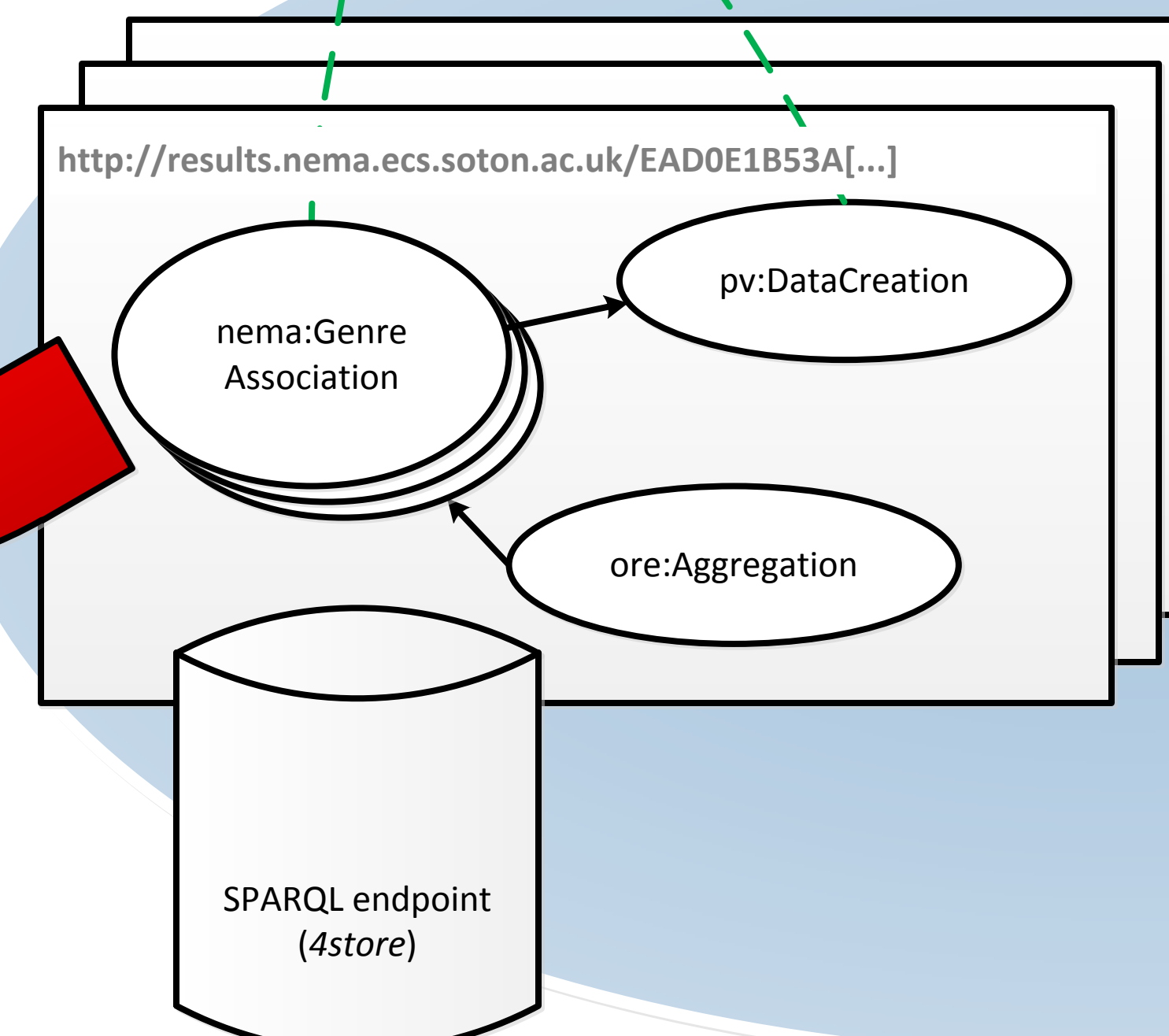
The collection metadata is passed into **myExperiment**, where a *genre analysis* workflow is selected. URIs for constituent elements of the collection are passed to the workflow...

...in **Meandre** where the *genre* workflow reads in signal and RDF from the Audio File Repository and writes out analysis results...

...to the **Results Repository**, which maintains consistent references to the originating URIs and indexes the results in a triple store.

The **Results Viewer** web application provides the user with analysis by combing linked data from many sources across the web: the Audio File Repository, the Collection Builder, the Results Repository, and the wider Semantic Web (including Jamendo, GeoNames, DBpedia, BBC Music).

e.g. compare the weighting of country music from genre classifiers by country.

Links between linked data services form a web of data

http://www.nema.ecs.soton.ac.uk/