ActiveTriples

What is ActiveTriples and why?

Goal

Application developers should be able work with RDF data in a large triplestore as efficiently and conveniently as they do with modern web development frameworks using data in relation databases. As part of LD4L we aim to create a ActiveTriples gem that provides that functionality to Ruby developers as part of the Hydra framework. RDF data will for many purposes be able to be seen and manipulated to bounded "objects" that match certain patterns, and corresponding Solr indexes should be updated in lock-step with the RDF data. It is our hope that such a programming interface will make working with RDF data easier and more accessible.

Background

- Our community has experience with the success of Blacklight search that uses Solr and Ruby on Rails to provide standard search experience. Blacklight powers SearchWorks at Stanford, and is being implemented as the new catalog at Cornell.
- A second success of the library developer community is Hydra that adds "Create", "Update" and "Delete" functionality to Blacklight's "Read", filling out the suite of CRUD functions. Hydra is built on top of Fedora as the persistence layer with Solr for index speed.
- A key element of Hydra is a mapping between Fedora objects and Ruby objects, which brings the programming convenience of the familiar Object Relational Mapping framework to working with repository objects. This mapper follows the Ruby on Rail Active Record Model and is called ActiveFedora.
- There is currently a very active portion of the Hydra community working to support handling of RDF datastreams associated with Fedora objects using ActiveFedora.
- At Cornell we have some experience with the use of a triplestore as the merge-layer for data from multiple sources that is then indexed in Solr to drive our Blacklight catalog.