Ontology Term mapping

Current process (manual, can be automated):

• Fetch .owl files from sourceforge repository
• Convert to n-triple format
• Parse in Ruby, compiling a list of unique subjects URIs
• For each unique subject, get label and definition, and add an entry to portal database for easy lookup by subject URI
• Next step: mapping between portal objects and Ontology Terms stored in our database:
  • Portal object: stimulus, which has a stimulus_id field
  • Ontology Term:
    URI: http://purl.bioontology.org/NEMO/ontology/working/NEMO_data.owl#NEMO_0000540
    Label: stimulus_ID
    Definition: A label that denotes a stimulus used in an experiment.
• Map in stimulus.rb that creates the association we need:

```ruby
def self.column_uri_map
    {
        :stimulus_ID => "http://purl.bioontology.org/NEMO/ontology/working/
                      NEMO_data.owl#NEMO_0000540",
        :stimulus_intensity => "http://purl.bioontology.org/NEMO/ontology/working/
                                NEMO_functional.owl#NEMO_0000367",
        ...
    }
```

But what about pull-down selectors in the interface for things like a stimulus_role?

• nonlinguistic_sound
• face
• ...

In ontology, there is no relationship between these items and stimulus_role, so we have to map them explicitly in portal code:

```python
def self.ontology_term_choices_mapping  
    {  
        :stimulus_role => [  
            "nonlinguistic_sound",  
            "http://purl.bioontology.org/NEMO/ontology/working/  
                NEMO_functional.owl#NEMO_0000411"],  
            "face",  
            "http://purl.bioontology.org/NEMO/ontology/working/  
                NEMO_functional.owl#NEMO_0000411"]  
    …  
    ]  
}
• This is ugly and prone to introduction of errors.

• Would be much nicer if ontology explicitly reflected the relationship between stimulus_role and its possible choices: sound, face, etc.

• Is there a instance_of or similar relationship?