SemantEco Annotator

Patrice Seyed1,2 (seyeda2@rpi.edu), Katherine Chastain2 (kchastk@rpi.edu), Brendan Ashby2 (bashbyb@rpi.edu), Timothy Lebo2 (tlebot@rpi.edu), Evan Patton1 (pattoe@rpi.edu), Deborah L. McGuinness2 (dlm@cs.rpi.edu)

(1) DataONE, University of New Mexico, 1 University Boulevard, Albuquerque, NM 87131 (2) Rensselaer Polytechnic Institute 110 8th St., Troy, NY, 12180 United States

The Idea:
- Utilize community standard vocabularies to describe data and metadata.
- Provide a broadly useable tool that makes it easy to annotate data for reuse, understandability, and integration.
- Make linked data conversion easy and accessible, even to non-experts.

Standard Conversion:
- One column typically represents the subject of triples in that row.
- Other columns relate to that row subject, either directly or indirectly.

Cell-Based Conversion:
- When the subject of a triple is not the subject of the row.
- For example, to save space, Units and Characteristics of the Measurements appear in the column headers.
- We can represent information that is contained in places other than the data table itself.

Vocabularies:
- Employ existing ontologies, including OBO-E (Extensible Observation Ontology) and W3C PROV-O (Provenance Ontology).
- The annotator provides a large, searchable index of ontologies to use and re-use.

Bundling:
- Several columns together represent aspects of one entity.
- Z Max and Sample Z describe maximum lake depth and sample depth, respectively. Coupled with the Lake Name, these three columns describe a “Water Site” for each Sample.
- The researcher knows this entity exists in the data. The annotator allows him or her to explicate it in a machine-readable format.

Future Work:
- Allow incorporation of the annotator in a variety of semantic applications.
- Provide templates of expected relations for additional conversion guidance.
- Refine ontology search and expand available index.

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Glossary:
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