WP4. Knowledge Engineering

ontotext

Milen Chechev

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Work done

- November 2010 - D4.1 – Knowledge representation infrastructure.

- May 2011 - D4.2 – Aligned semantic models and instance bases

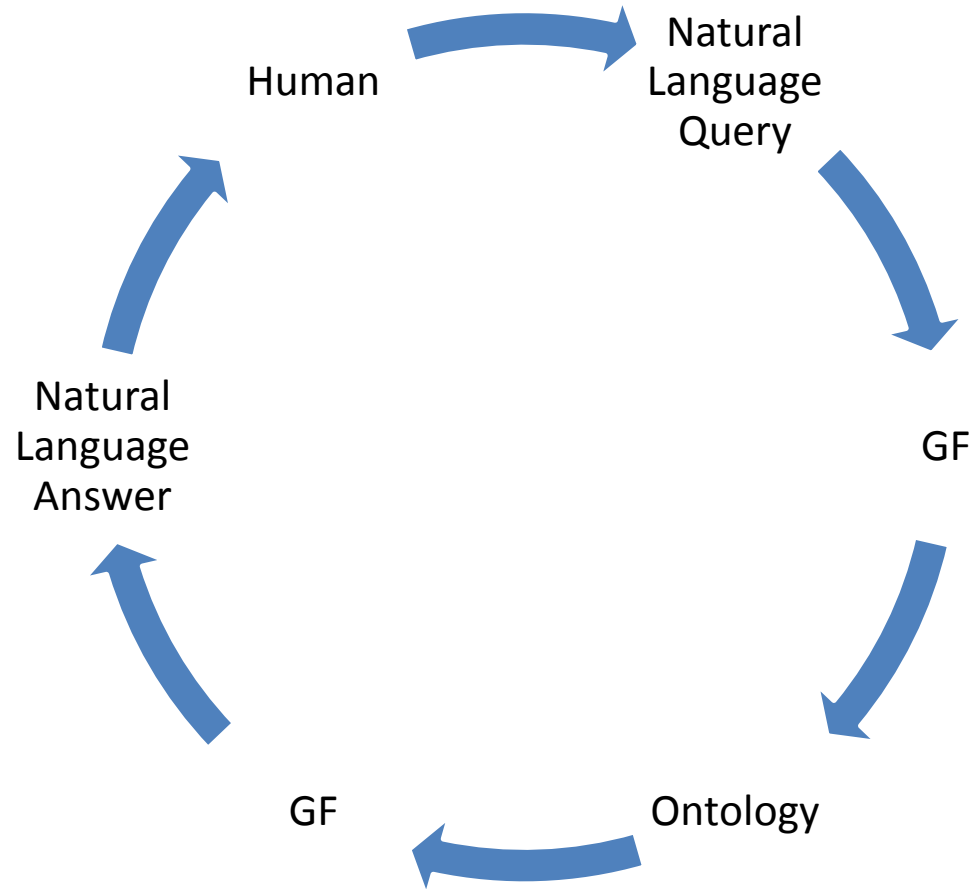- September 2011 (coming soon) - D4.3 Grammar Ontology Interoperability

- Prototype – http://molto.ontotext.com

• OWLIM - a semantic repository that stores all structured data such as ontologies, background knowledge, etc., and provides SPARQL query mechanism and reasoning;

• RDFDB - an API that provides a remote access to the stored structured data via JMS;

• PROTON Ontology -   a light-weight upper-level ontology, which defines about 300 classes and 100 properties, covering most of the upper-level concepts, necessary for semantic annotation, indexing and retrieval;

• KRI Web UI a UI that accesses OWLIM through the RDFDB layer. The web UI gives the user the possibility to browse the ontologies and the database, to execute SPARQL queries, etc.

D4.2 – Data Models and Alignment

- Linked Open Data

- Reason-able view
  - DBpedia - the RDF-ized version of Wikipedia, describing more than 3.5 million things.
  - Geonames - a geographic database that covers 6 million of the most significant geographical features on Earth.
  - PROTON - an upper-level ontology, 542 entity classes and 183 properties.

D4.3 Grammar-Ontology Interoperability

Grammar-Ontology Interoperability (details)

- Controlled language
- Auto complete
- Steps:
  - NL to GF Abstract representation (all samples are preprocessed offline)
  - Semi automated transformation from GF Abstract representation to SPARQL (through predefined rules)
  - The data is retrieved from the Owlim semantic repository
  - Semi automated transformation from the results to GF Abstract representation
  - GF Abstract representation to NL

Prototype

Prototype(2)

Future work

- ontology-grammar interoperability in the specific domain of the museum and patent use cases (WP7, WP8)

- Combine free text search and rdf search (needed for WP7)

- Improvements in the user interface

Thank you for your attention!

Questions

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