A Controlled Natural Language Interface for Semantic MediaWiki

Jie Bao (RPI), Paul R. Smart (Southampton), Nigel R. Shadbolt (Southampton), Dave Braines (IBM UK), Gareth Jones (IBM UK)

Motivation

Combine the power of Semantic Wikis and Controlled Natural Languages (CNL) for building a shared repository.

Challenges

- **Usability**
  - in a collective environment, knowledge engineers may find it difficult to understand other’s contributions.
  - users may prefer different languages styles of even different languages.

- **Automatic content integration**
  - sometimes content needs to be automatically imported without user intervention.

- **Expressivity constraints**
  - semantic wikis do not always support the full range of OWL modeling formalisms and axioms.

Solutions

- **Usability**
  - use CNLs for production and understanding benefits.
  - multiple OWL-compliant CNLs: e.g. Rabbit (English, Chinese), ACE-OWL.

- **Automatic content integration**
  - develop an RDF import mechanism for SMW.

- **Expressivity constraints**
  - extend SMW with an OWL meta-model.

Prototype system: [http://tw.rpi.edu/proj/cnl](http://tw.rpi.edu/proj/cnl)