OWL to English: a tool for generating organised easily-navigated hypertexts from ontologies

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**SWAT Natural Language Tools**

Annotate your OWL ontology, build a lesson from it, or convert it into English sentences or definition paragraphs.

**Select the ontology file**
- OWL/XML
- OWL/RL (txt)

**Select the output format**
- English sentences (use sentence per OWL axiom)
- OWL sets
- OWL properties
- OWL classes
- OWL axioms as OWL/RDF (text)

**Explanations of these options are given here**

- (Note some that may take some time to process because of complexity)

![SWAT screenshot](http://swat.open.ac.uk/tools/)

**Verbaliser outputs: lexicon, encyclopaedia & annotated OWL**

**Evaluation**

- **Tasks**
  1. Judge generated sentences for understandability and accuracy.
  2. Navigate a test generated by SWAT NLP tools to locate information and answer five questions. Judge how difficult the information was to find under two conditions: (a) organised text, (b) unorganised text.

- **Participants**
  - **Group 1**: 25 users/developers of the Experimental Factor Ontology.
  - **Group 2a**: 28 people from SIGGEN and SIGDial used the organised text.
  - **Group 2b**: 28 people from SIGGEN and SIGDial used the unorganised text.
  - None had expert knowledge of taxonomic anatomy.

**Conclusion**

- Studies with domain experts indicated that they preferred natural/English over strict fidelity to OWL semantics.
- SWAT verbalisations communicated the semantics accurately.
- Verbalisations assist domain experts in finding errors.

- Studies with general users indicated that people viewing an organised text found navigational tasks easier.
- Task accuracy was unaffected by text organisation.

**Structured verbalisations are useful for ontology development.**