By accessing the domain k-base, Squiggle is able to suggest other related meanings that can be of interest for the user.

The Conceptual Indexing is based on 3 steps: (1) concepts and entities recognition (wrt the domain k-base), (2) semantic annotations of media (with concepts’ URLs) and creation of indexes for fast and optimized search at run-time.

**Conceptual Indexing**
- The media analysis (i.e., the extraction of relevant information) is decoupled from indexing: Squiggle is designed as a plug-in architecture that allows for adding new components developed by the multimedia community.
- Squiggle needs a domain-specific knowledge base (ontology and instances), created or derived by available sources and expressed with regards to the SKOS model (see http://www.w3.org/2004/02/skos/core/).
- The Conceptual Indexing is based on 3 steps: concepts and entities recognition (wrt the domain k-base), semantic annotations of media (with concepts’ URLs) and creation of indexes for fast and optimized search at run-time.

**Semantic Search**
- On the one hand, a traditional search displays syntactically-matching results (that can be very different from user’s intended meaning).
- On the other hand, the query is analysed to identify its possible meanings that are proposed to the user’s manual disambiguation.

After user’s explicit choices, Squiggle returns those media that are indexed with the corresponding concepts or instances from the domain-specific ontology.

An explanation box illustrates how the result is achieved, by considering different wordings and different languages of the selected meanings.

**Results**
- Squiggle is an intuitive search engine with strong characteristics of usability (simple and self-explaining boxes).
- The semantic capabilities of Squiggle improve both the precision and the recall of traditional search engines.
- Squiggle demonstrates its potentials in some real-world implementations:

  **Squiggle Ski**, for alpine skiing images developed for the XX Winter Olympic Games of Torino2006. Try it on-line at http://squiggle.cefriel.it/ski!

  **Squiggle Music**, for personal collections of music files indexed by author, title and music genre. Try it on-line at http://squiggle.cefriel.it/music!

  **Squiggle Med**, for medical literature bibliographic references, based on PubMed and MeSH. Coming soon at http://squiggle.cefriel.it/med

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