

# The CO-ODE and HyOntUse Projects

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## Extended Abstract

We present a new environment for building OWL ontologies. The editors, developed in collaboration with Stanford University, integrate two of the most widely used ontology editing tools – OilEd [1] (from University of Manchester) and Protégé [2] (from Stanford University). The aim is to provide a user-oriented, scalable, extendable and open source ontology development environment for diverse groups of users.

Ontologies are a pivotal concept for realising the vision of the “Semantic Web”. They are becoming increasingly important at all levels. Recently the new Web Ontology Language OWL [3] has become a standard for representing ontologies, but tools for OWL are still limited. Furthermore, ontologies come in many different forms from small local ontologies for specific applications to very large ontologies serving whole communities.

Ontology developers vary greatly in their experience and sophistication. Many of the most successful ontologies are built by subject matter experts with little knowledge of formal ontologies.

The CO-ODE & HyOntUse projects aim to produce environments<sup>1</sup> for users to manage their own ontologies, plus plug-and-play architectures for developers to build applications using them.

The teams behind OilEd (for OWL/DLs) and Protégé (for frames) together with AKT and Epistemics are working with users to produce a platform offering the best of breed for each community

We assume that different user interfaces will be required for different users and types of ontologies. We use Protégé plug-and-play architecture to make it easy to create multiple interfaces based on a single underlying infrastructure. We combine Protégé’s object-oriented frame view with the logic and classification power of OWL/OilEd and then add new user interface mechanisms to address well recognised limitations of each (Figure 1).

The tool we developed will be:

- Intuitive enough to be used by domain experts with little formal training.
- Flexible enough to support the specific needs of certain user communities.
- Transparent enough to provide easily-used debugging tools and explanations.
- Open enough to support several languages and development paradigms (OWL, RDF(S), DL, Frames).

Our current prototypes provide ontology visualisation and support common tasks through “wizards”.

- OWLViz provides the user with a view of the ontology before and after classification for easy comparison (Figure 2).
- OWL Wizard will provide a plug and play architecture for supporting task-based actions on the ontology (Figure 3).

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<sup>1</sup> <http://protégé.Stanford.edu> → plugins → backends → OWL; <http://www.co-ode.org>

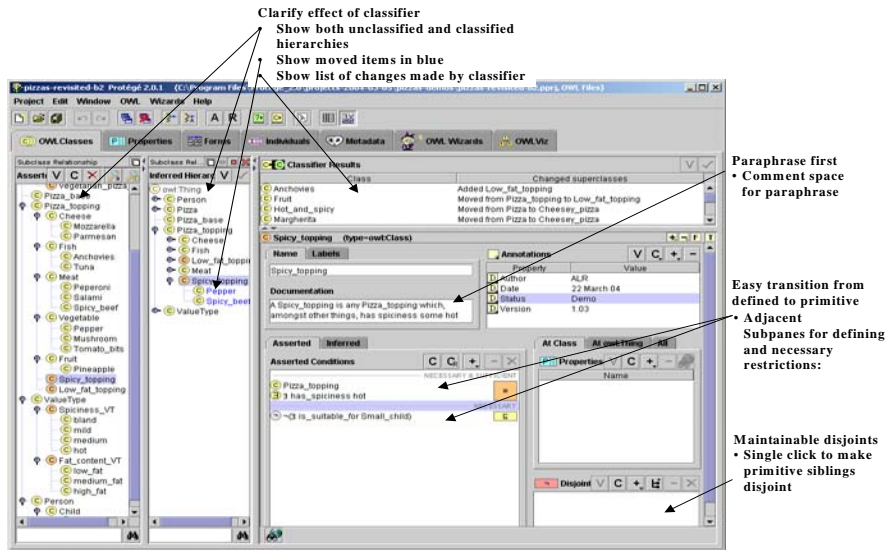


Figure 1: Initial “Logician’s Interface”

Other developments include much improved expression editors, usability aids such as text completers, and facilities inherited from the new version of Protégé including drag and drop features and the potential for multi-user operation.

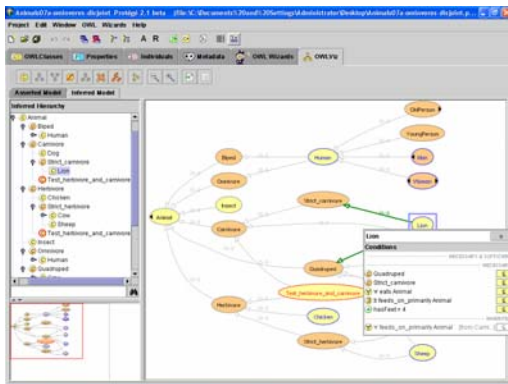


Figure 2: OWLViz

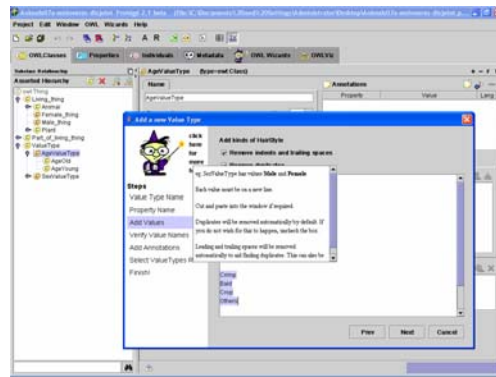


Figure 3: OWL Wizard

## References

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3. Deborah L. McGuinness and Frank van Harmelen (editors). OWL Web Ontology Language Overview. <http://www.w3.org/TR/owl-features>, Dec, 2003.