Protégé-OWL and the Semantic Web

- Presentation Abstract -

Holger Knublauch, Stanford Medical Informatics
holger@smi.stanford.edu

Abstract. Protégé has become one of the most widely used editors for the Web Ontology Language (OWL) and recently has been enhanced with a custom-tailored API for OWL and RDF application developers. In this presentation, we will provide an overview of OWL support in Protégé and show how Protégé can be used for the development of Semantic Web applications.

Background on Protégé-OWL

Protégé is a generic platform for the construction of modeling tools. It provides a flexible metaclass architecture and several extension points that allow programmers to create additional layers on top of the (frame-based) core model. Starting early 2003, we have developed a Protégé extension to support ontology modeling in the Web Ontology Language (OWL). This OWL Plugin has become a de-facto standard editor for OWL and increasingly serves as the foundation of other Protégé-based extensions and communities. In this presentation, we will give a brief overview of the features of Protégé-OWL and show a number of its extensions. For a complete overview and training about these issues, we will offer tutorials on the first day of the conference.

Developing Semantic Web Applications with Protégé

The open architecture of Protégé makes it easy for programmers to write code that queries, manipulates, visualizes or otherwise processes ontologies. For that purpose, Protégé comes with an open-source API that provides access to the current ontology, and offers extension points to alter the user interface. This allows programmers to develop ontology-based systems starting with the default Protégé system as a framework. Applications can start as Protégé plugins to benefit from the available infrastructure, and then gradually evolve into stand-alone applications, or spawn off modules that can be used in third-party projects. This approach has been used successfully for many years, based on the core Protégé API. This API, however, is not optimized for OWL and is therefore not the most convenient solution for Semantic Web projects. Therefore, Protégé-OWL 2.0 now provides a new Java API which can serve as a foundation of arbitrary Semantic Web applications. In this presentation, we will give an informal overview of this API and discuss issues related to ontology-driven software development.