Collaborative Protégé

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Evolution of ontology development

- Single ontology developer
- Small size ontologies
- Desktop applications

- Community of ontology developers
- Large ontologies
- Web applications
Collaborative Protégé Functionalities

- Extension of existing Protégé system
- Support for:
  - annotating ontology components and changes in the ontology
  - discussion threads
  - proposals and voting
  - searching and filtering
- Works in Protégé OWL and Frames
- Available in multi-user and stand-alone modes
- Distributed with Protégé installation

http://protege.stanford.edu/doc/collab-protege/
Collaborative Protégé GUI

- Collaborative Tabs
- Annotations
- Collaborative Panel
- Annotation details
- has annotations
Interactions in Collaborative Protégé
Annotation ontology
Annotation class
Annotation ontology
Change class

```
AnnotatableThing
  ↓
  isa

Change
  ↓
  isa

Class_Change
  ↓
  isa

Superclass_Added
  ↓
  isa

Superclass_Removed

Subclass_Added
  ↓
  isa

Subclass_Removed

Class_Created

Class_Deleted
```

...
Runtime Setting with Multi-user Protégé

Ontology repository

- NCI Thesaurus (DB)
- pizza.owl
- newspaper.pprj

Protégé server

Protégé instances
Client-server architecture

Client

- Collab Component
- ChangesTab
- Users Tab
- Change Statistics
- Changes KB View

Server

- User ontology

Changes & Annotations API

Frontend

- Annotation component
- Change tracking component

Backend

- Annotation ontology
Annotations Tab

Filtering

Annotation types

Search
Changes Tab

Annotations on changes
Discussion threads Tab

Generic discussion threads
Chat Tab

Chat window showing online users and chat messages.
Future directions

- Modularization – API access
- Plugin architecture
- Optimizations of the Annotation & Changes ontology
- Optimizations with respect to performance and scalability

- Support for different workflow models
- Implementation as a web application