Collaborative Protégé

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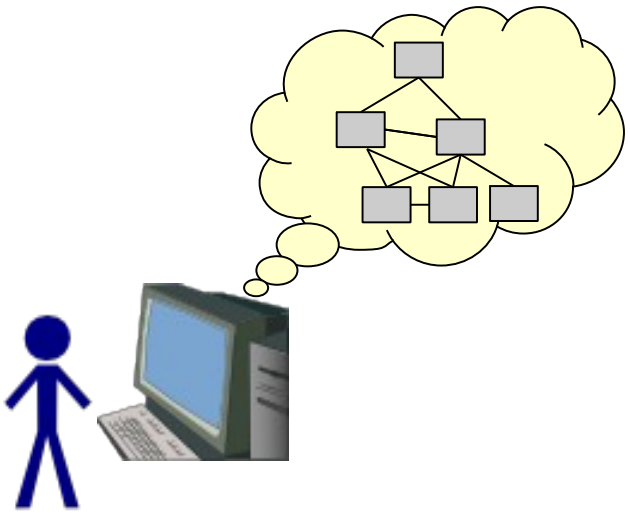
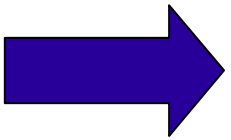
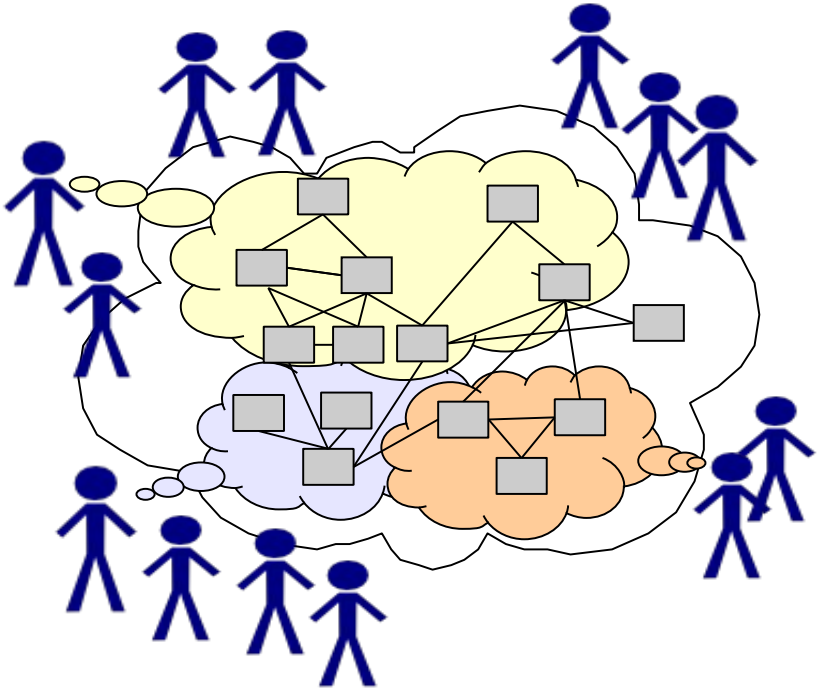
10th International Protégé conference

Budapest
18. July 2007

Evolution of ontology development



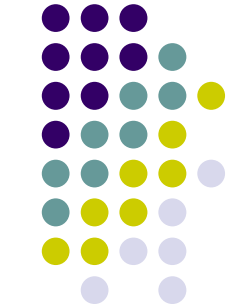




- Single ontology developer
- Small size ontologies
- Desktop applications

- Community of ontology developers
- Large ontologies
- Web applications

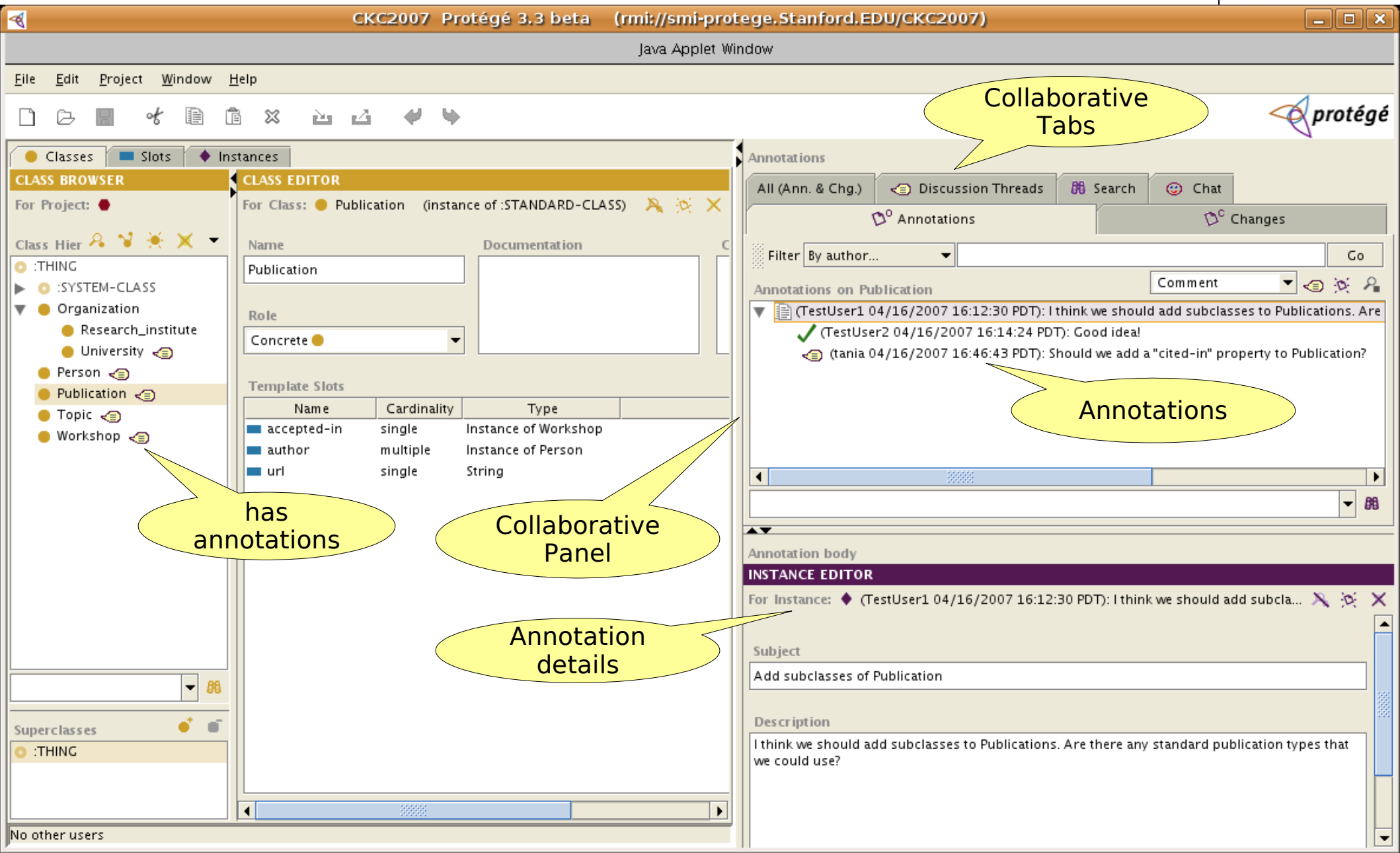
Collaborative Protégé Functionalities



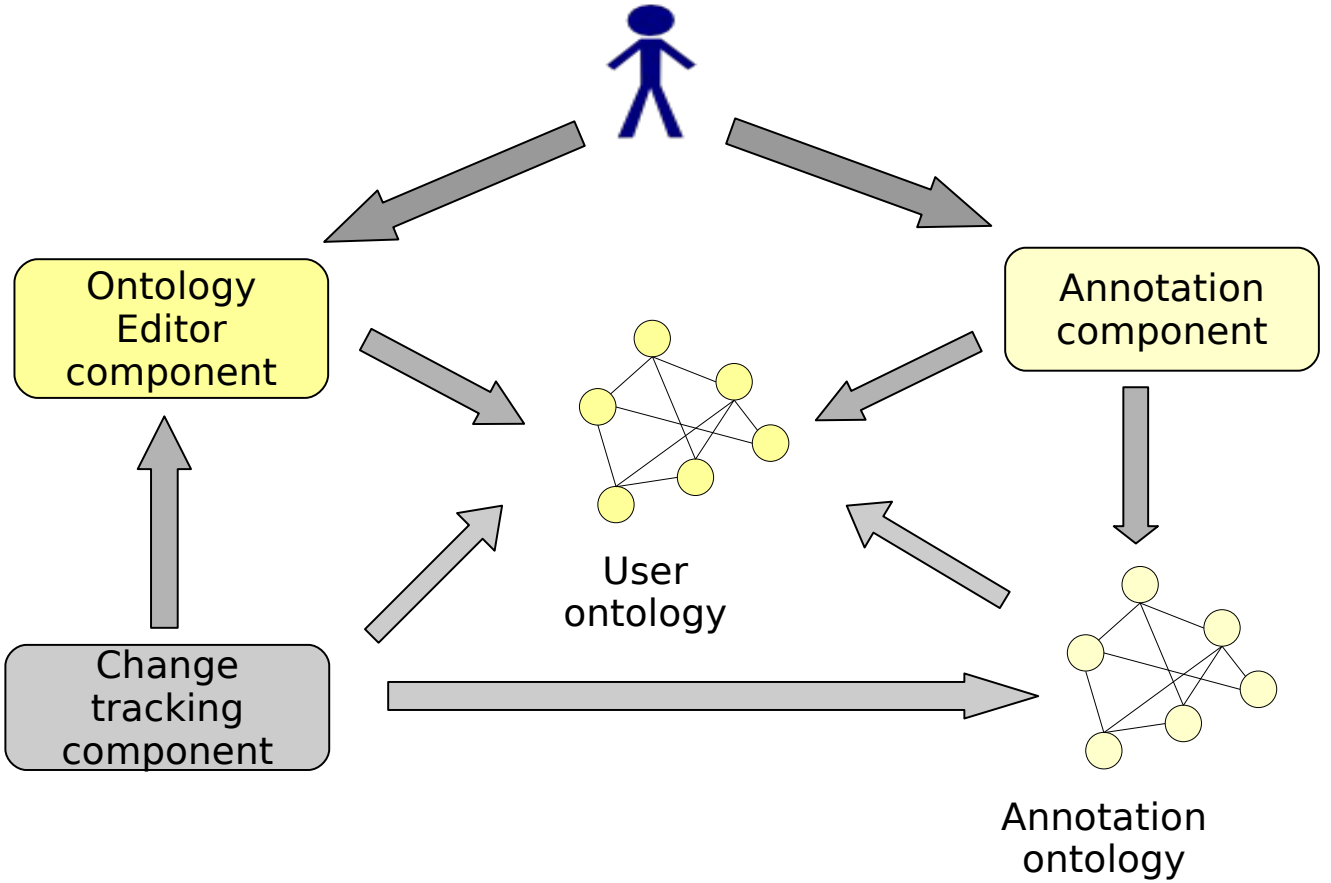
- Extension of existing Protégé system
- Support for:
  - annotating ontology components and changes in the ontology
  - discussion threads
  - proposals and voting
  - searching and filtering
- Works in Protégé OWL and Frames
- Available in multi-user and stand-alone modes
- Distributed with Protégé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

http://protege.stanford.edu/doc/collab-protege/

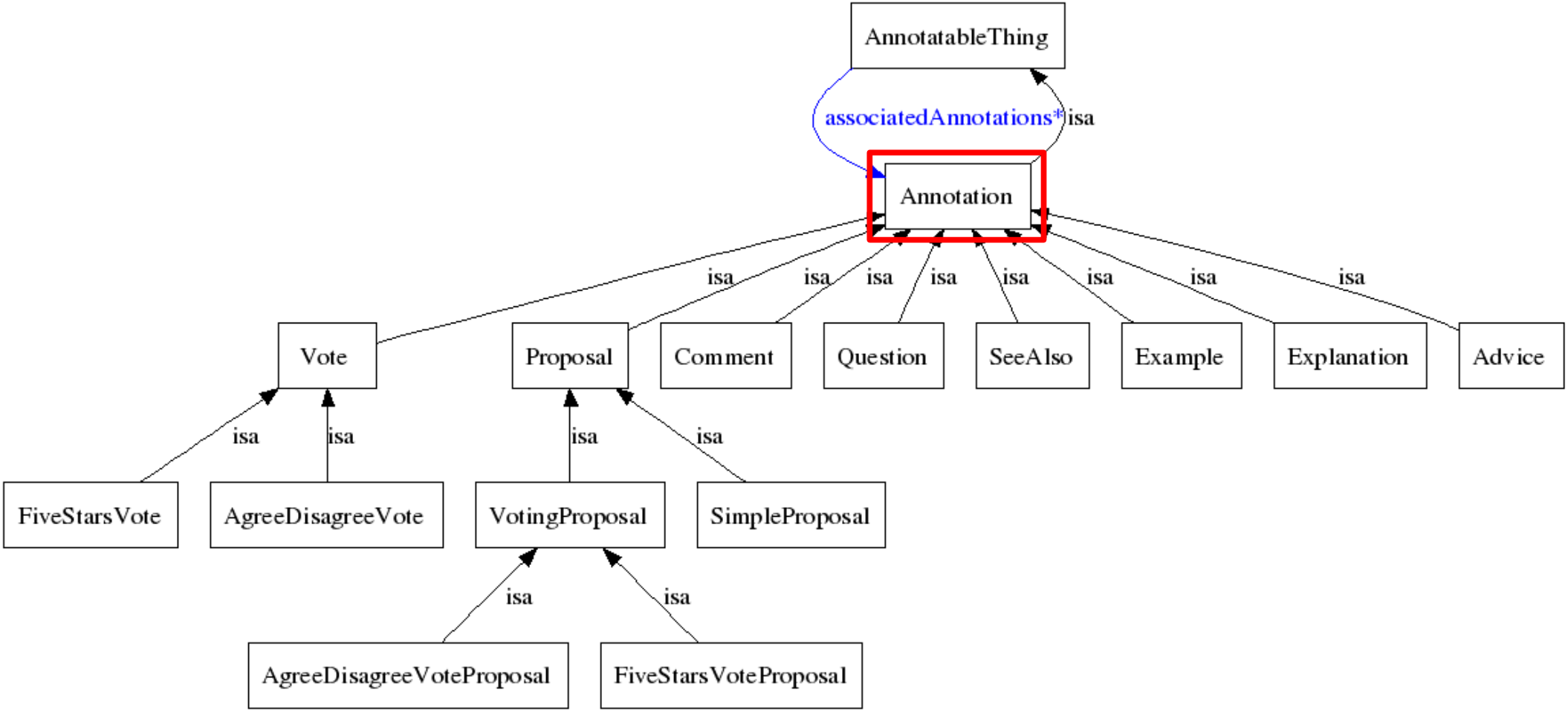
Collaborative Protégé GUI



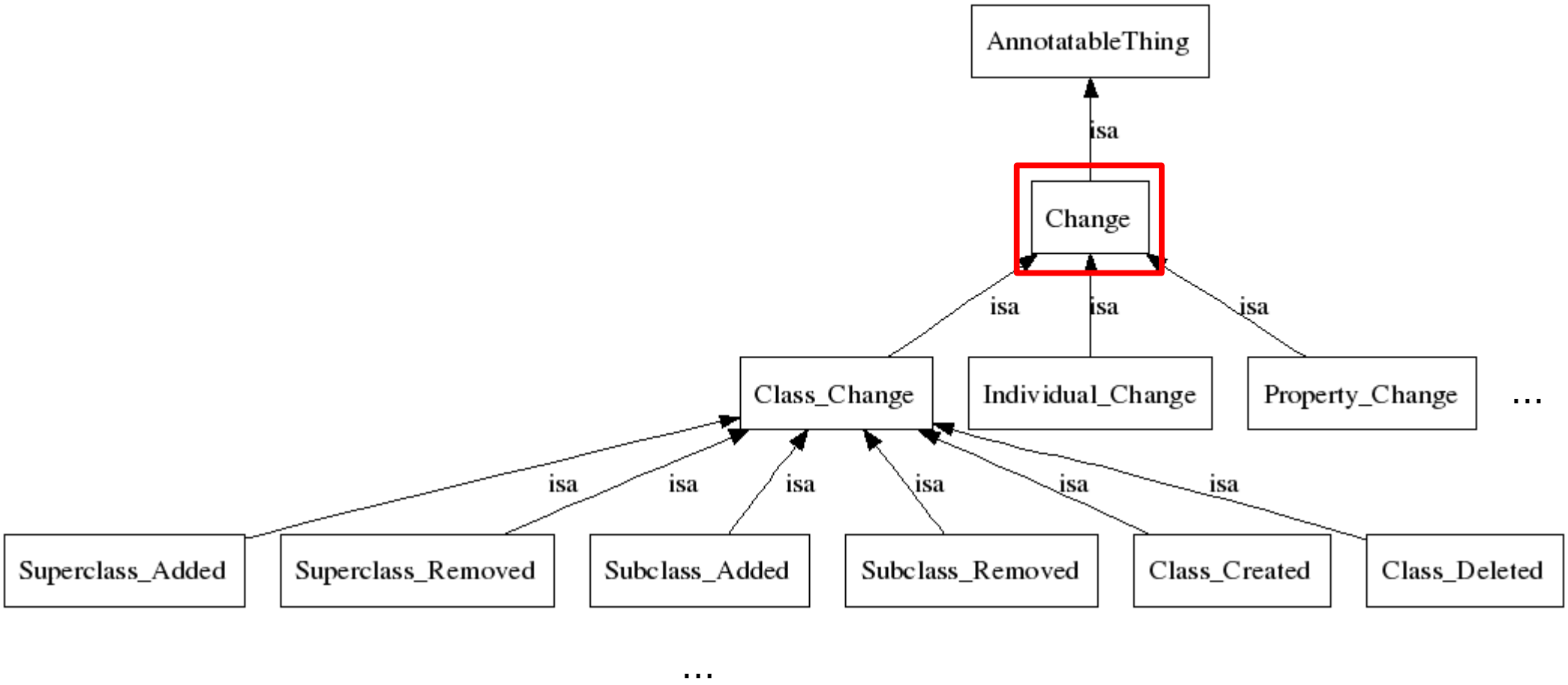
Interactions in Collaborative Protégé

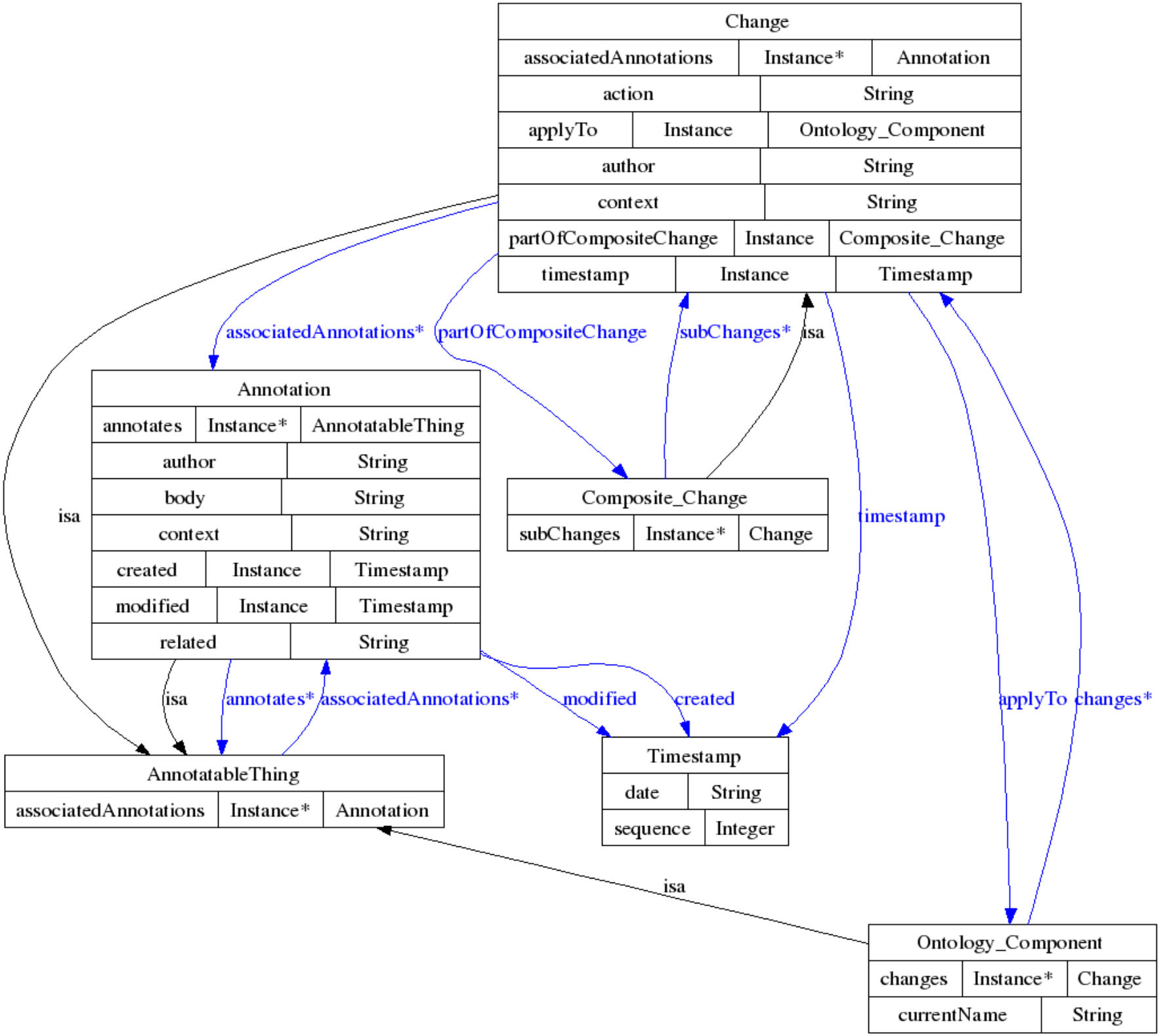


Annotation ontology
Annotation class

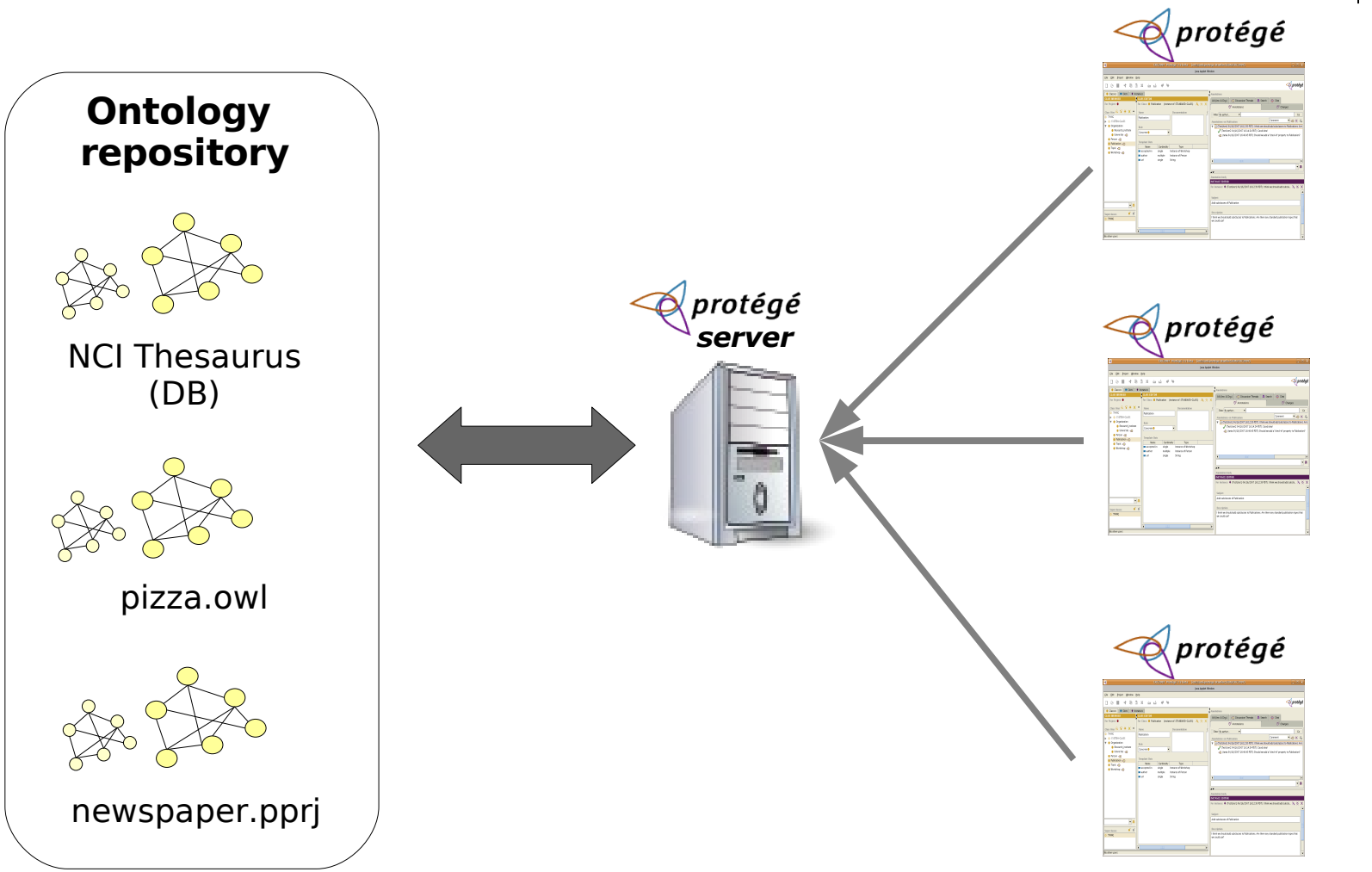


Annotation ontology
Change class

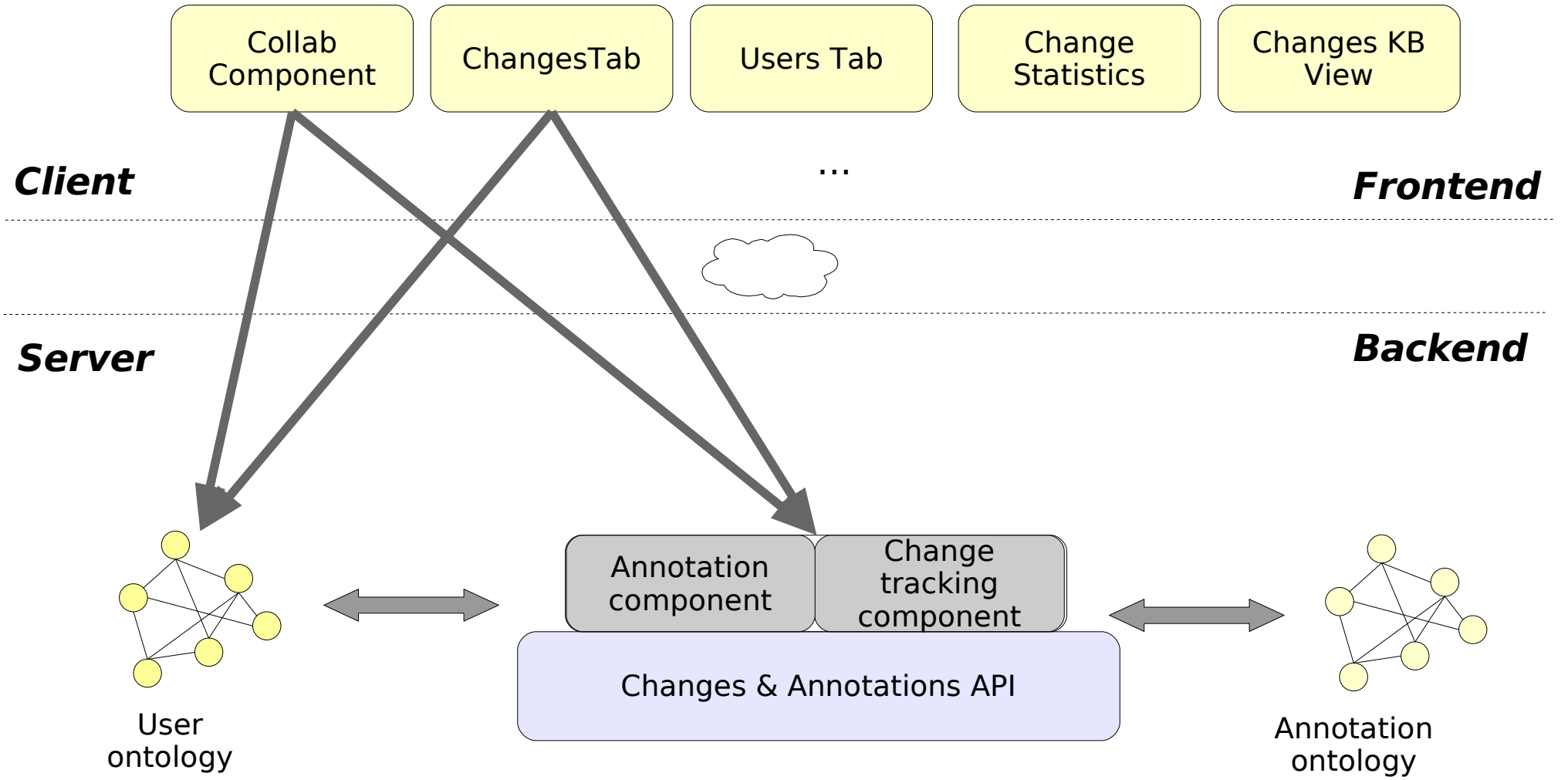



Change
associatedAnnotations Instance* Annotation
action String
applyTo Instance Ontology_Component
author String
context String
partOfCompositeChange Instance Composite_Change
timestamp Instance Timestamp
associatedAnnotations*
partOfCompositeChange
subChanges*
isa
Annotation
annotates Instance* AnnotatableThing
author String
body String
context String
created Instance Timestamp
modified Instance Timestamp
related String
Composite_Change
subChanges Instance* Change
isa
timestamp
isa
annotates*
associatedAnnotations*
modified
created
applyTo
changes*
AnnotatableThing
associatedAnnotations Instance* Annotation
Timestamp
date String
sequence Integer
isa
Ontology_Component
changes Instance* Change
currentName String

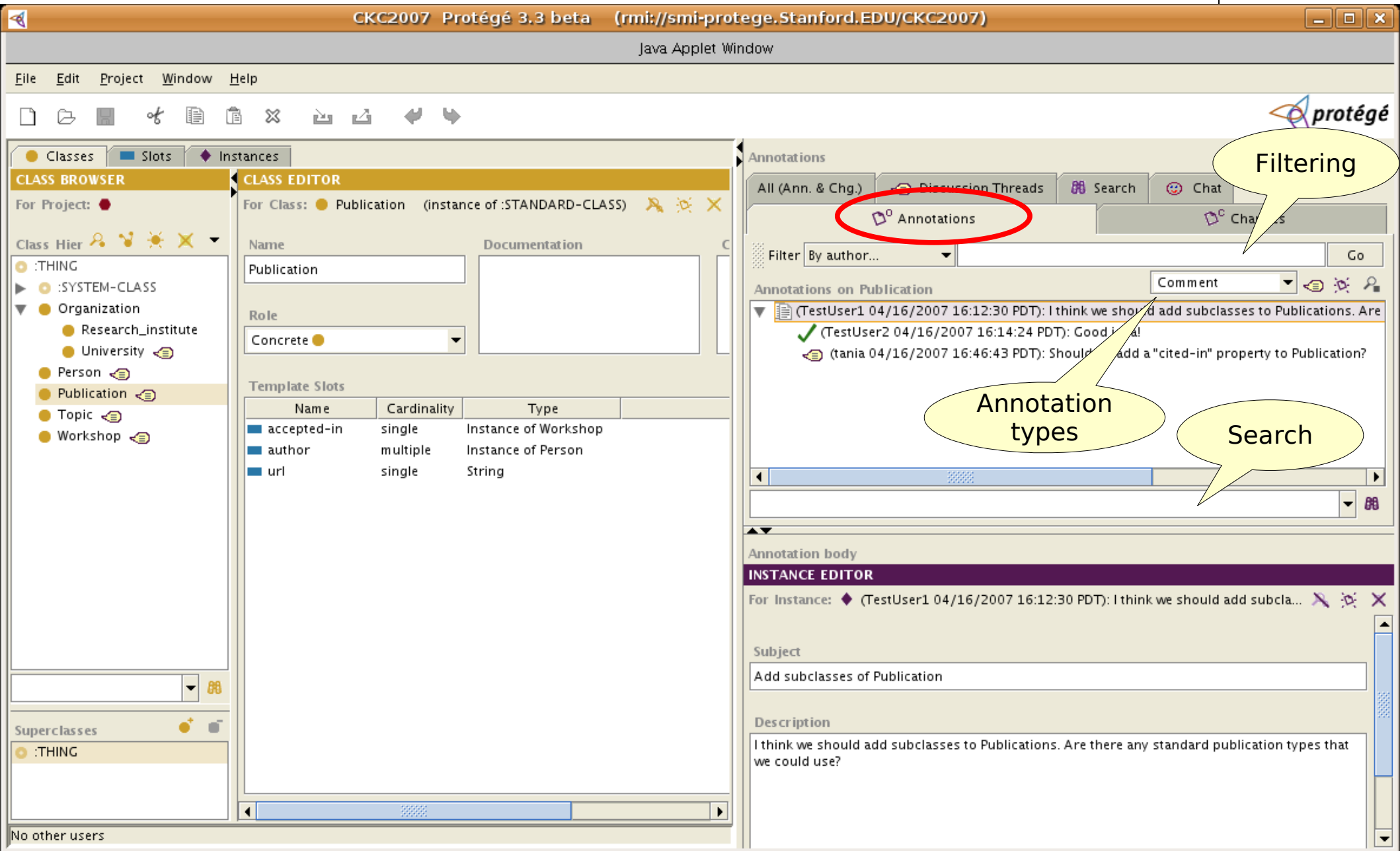
Runtime Setting with Multi-user Protégé



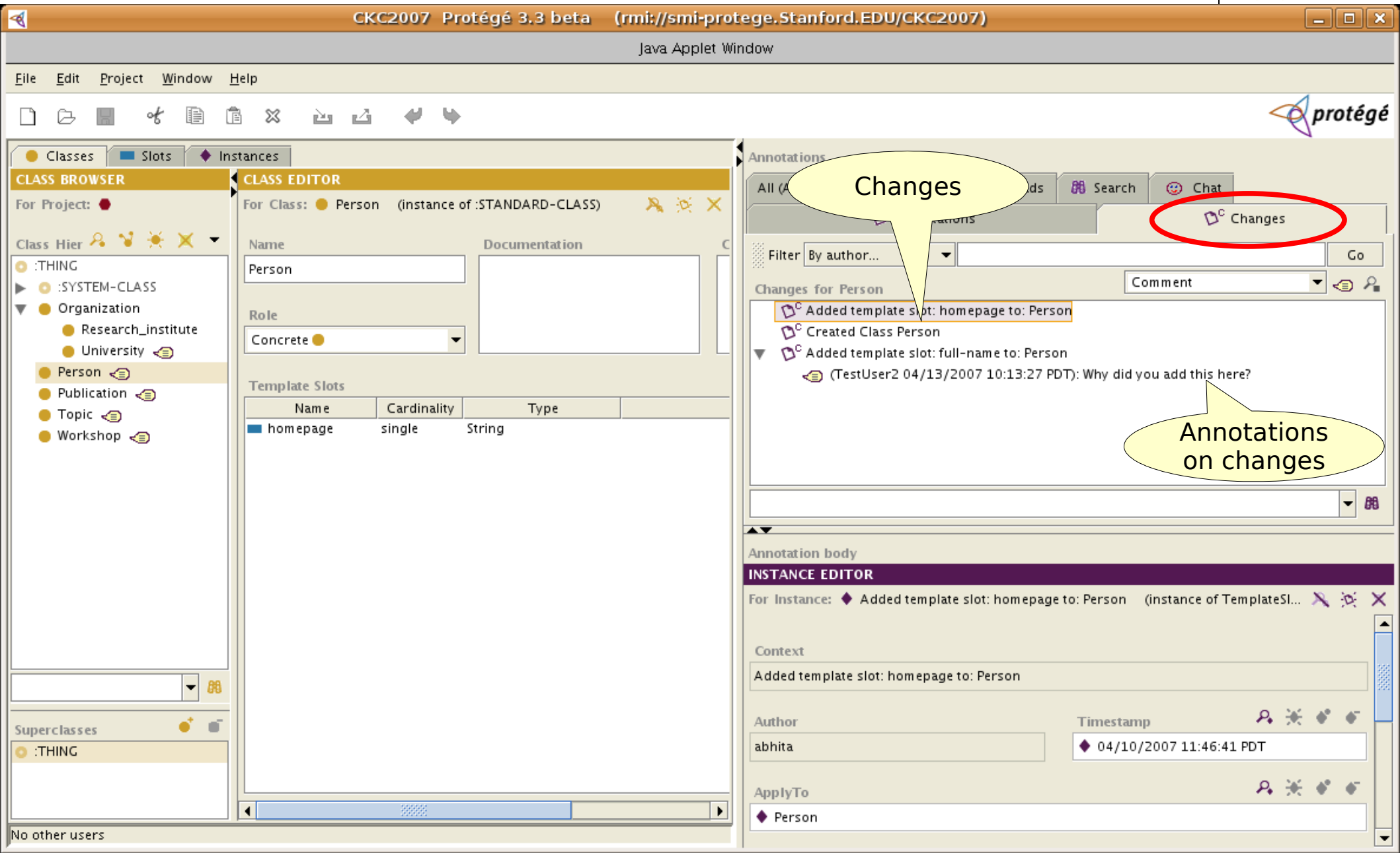
Client-server architecture



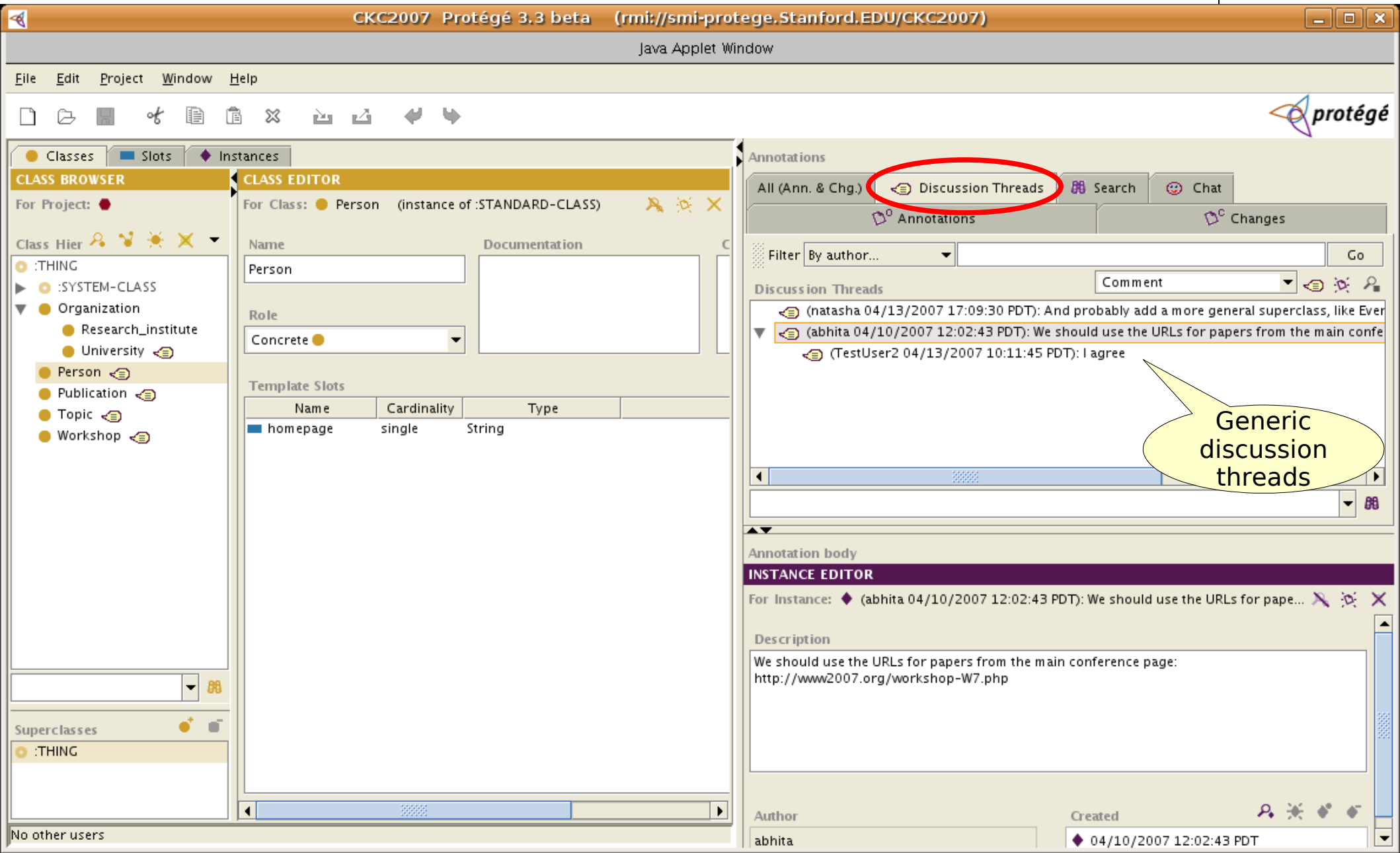
Annotations Tab



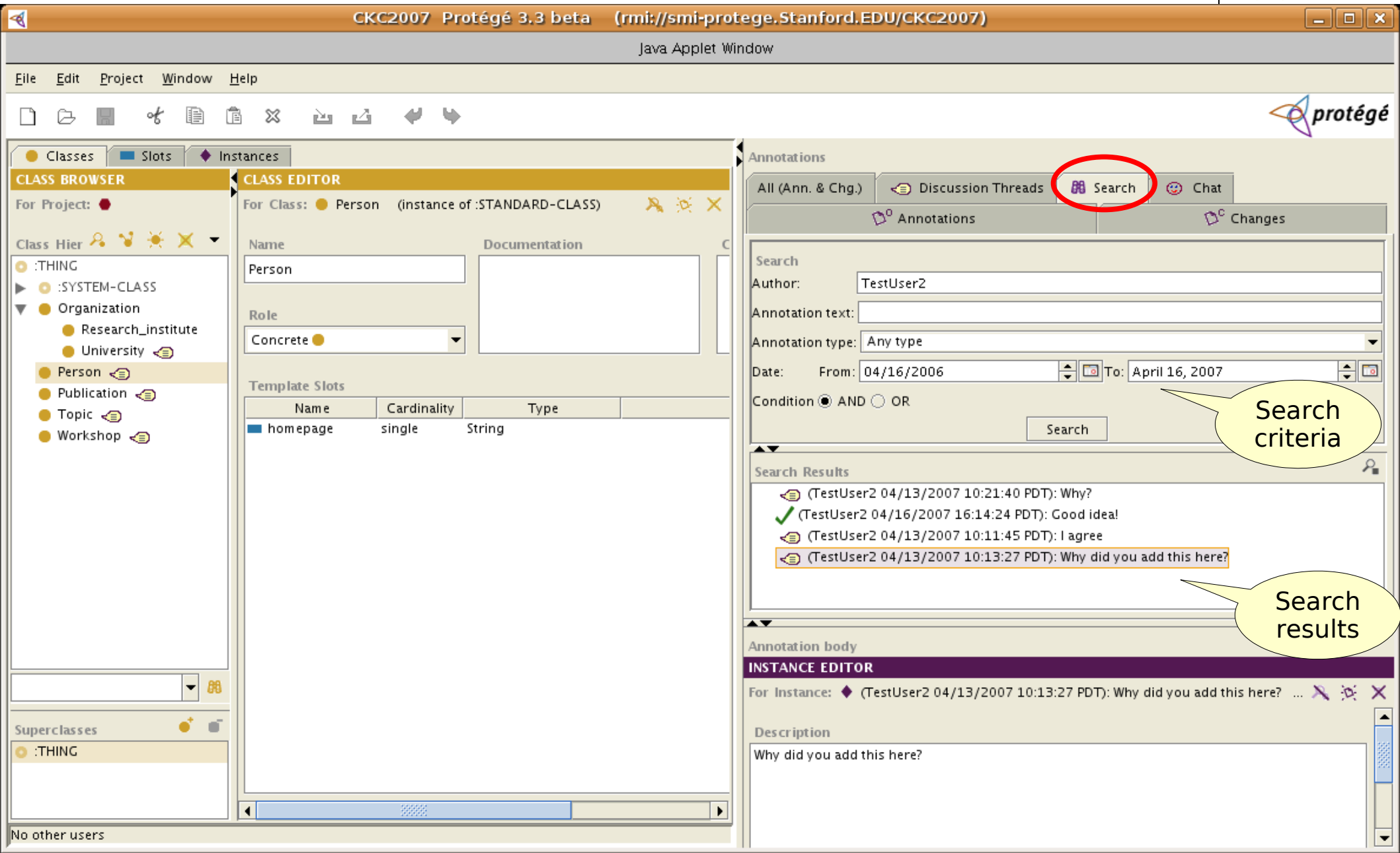
Changes Tab


CKC2007 Protégé 3.3 beta (rmi://smi-protege.Stanford.EDU/CKC2007)
Java Applet Window
File Edit Project Window Help
protégé
Classes Slots Instances
CLASS BROWSER
For Project:
Class Hier
:THING
:SYSTEM-CLASS
Organization
Research_institute
University
Person
Publication
Topic
Workshop
Superclasses
:THING
CLASS EDITOR
For Class: Person (instance of :STANDARD-CLASS)
Name
Person
Documentation
Role
Concrete
Template Slots
Name Cardinality Type
homepage single String
No other users
Annotations
Search
Chat
Changes
Filter By author... Go
Changes for Person
Comment
Added template slot: homepage to: Person
Created Class Person
Added template slot: full-name to: Person
(TestUser2 04/13/2007 10:13:27 PDT): Why did you add this here?
Changes
Annotations on changes
Annotation body
INSTANCE EDITOR
For Instance: Added template slot: homepage to: Person (instance of TemplateSl...
Context
Added template slot: homepage to: Person
Author
abhita
Timestamp
04/10/2007 11:46:41 PDT
ApplyTo
Person

Discussion threads Tab



Search Tab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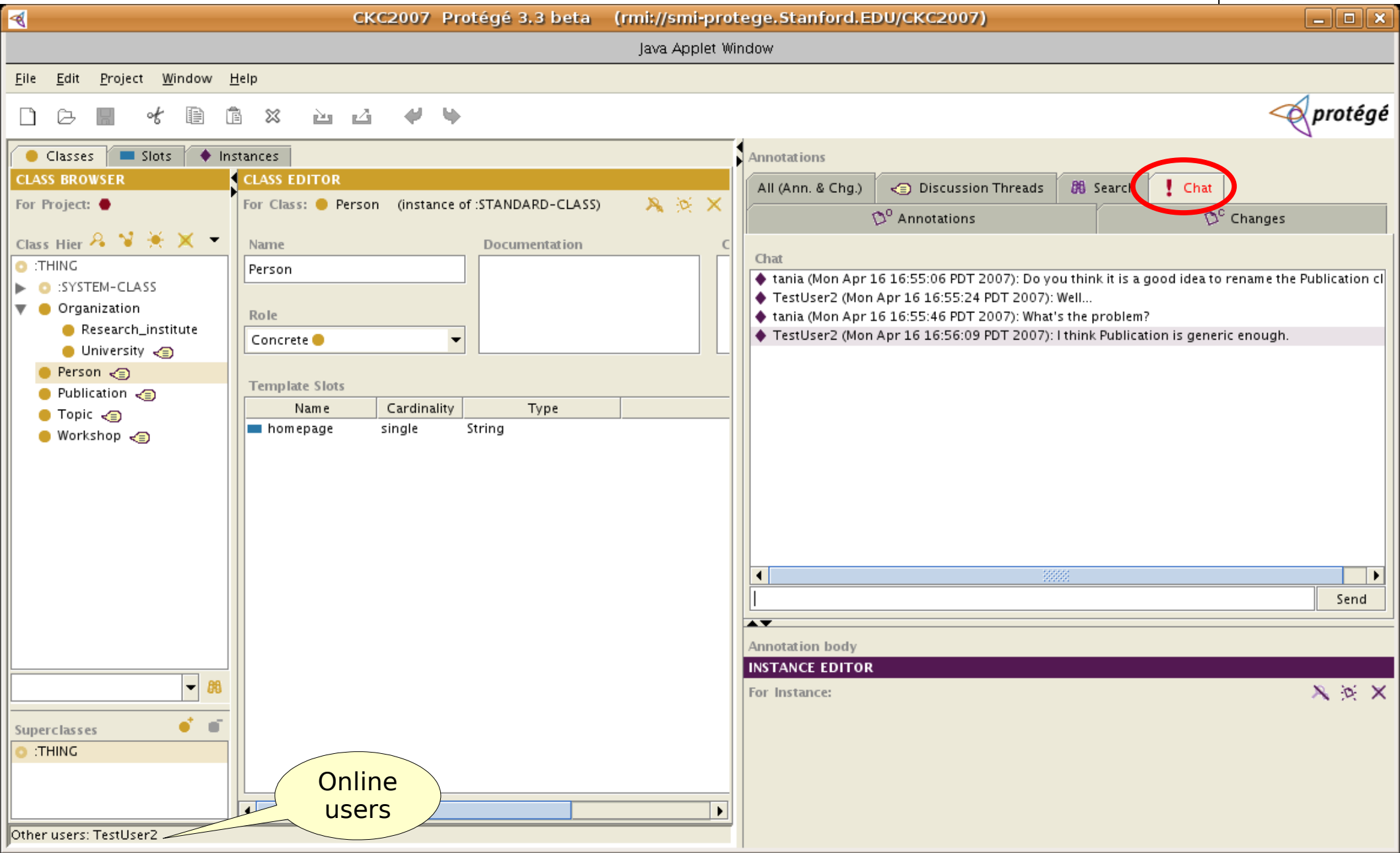
CLASS EDITOR
For Class: Person (instance of :STANDARD-CLASS)
Name
Person
Documentation
Role
Concrete
Template Slots
Name Cardinality Type
homepage single String
No other users
Annotations
All (Ann. & Chg.)
Discussion Threads
Search
Chat
Annotations
Changes
Search
Author: TestUser2
Annotation text:
Annotation type: Any type
Date: From: 04/16/2006 To: April 16, 2007
Condition AND OR
Search
Search criteria
Search Results
(TestUser2 04/13/2007 10:21:40 PDT): Why?
(TestUser2 04/16/2007 16:14:24 PDT): Good idea!
(TestUser2 04/13/2007 10:11:45 PDT): I agree
(TestUser2 04/13/2007 10:13:27 PDT): Why did you add this here?
Search results
Annotation body
INSTANCE EDITOR
For Instance: (TestUser2 04/13/2007 10:13:27 PDT): Why did you add this here?
Description
Why did you add this here?

Chat Tab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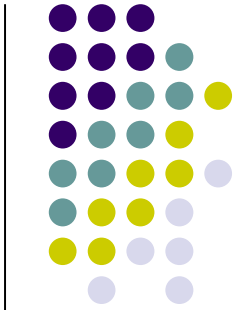
Name
Person
Documentation
Role
Concrete
Template Slots
Name Cardinality Type
homepage single String
Annotations
All (Ann. & Chg.)
Discussion Threads
Search
Chat
Annotations
Changes
Chat
tania (Mon Apr 16 16:55:06 PDT 2007): Do you think it is a good idea to rename the Publication cl
TestUser2 (Mon Apr 16 16:55:24 PDT 2007): Well...
tania (Mon Apr 16 16:55:46 PDT 2007): What's the problem?
TestUser2 (Mon Apr 16 16:56:09 PDT 2007): I think Publication is generic enough.
Send
Annotation body
INSTANCE EDITOR
For Instance:
Online users
Other users: TestUser2

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