Protégé:
Past, Present, and Future

Ray Fergerson
Stanford
Past

• Prehistory (1987-1997)
  – Mark’s Thesis
  – Protege-II
  – Protege/Win
  – “Workshop 1”
  – Workshop 2

• Workshops 3-5 (1997-2001)
Mark’s Thesis

• PROTÉGÉ system
• Developed as a tool for building knowledge-acquisition tools (a *meta-tool*) for medical planning applications
• Hardcoded *Ontology (or meta-ontology)* geared for planning applications
• Ran on Lisp machines
• User community ~1
Protégé-II

• Generic meta-tool
  – No hardcoded ontology
  – No assumptions about “planning”
• Constructed as three distinct applications:
  – ontology editing
  – form customization
  – instance creation
• Ran in NextStep environment
• Written in Objective-C, Lisp…
• User community ~10
Protégé/Win

• DARPA funding
  – required MS Windows reimplementation

• Protégé/Win
  – Same three applications as Protégé-II
  – Ran on Windows machines
  – Written in C++

• Beginnings of an outside user community
  – Small, mostly academic
  – User community ~100
“Workshop 1”
Pavia, June 1995

• Four guys from four different countries meet in a restaurant in Italy and eat pizza and drink lots of alcohol
• Protégé discussed? Concrete outcome?
• Decided to re-implement Protégé/Win as a framework into which user-created plug-ins could be added.
  – domain-specific slot widgets
  – read/write data to other file formats
• Decided to adopt Java programming language
Workshop 3
Lidingö, September 1997

• Prototype of new system: Protégé/Java
• Demonstrated “undo” functionality
• Described ability to add tabs
• Subsequently decided…
  – We haven’t gone “far enough” to integrate with other knowledge-base systems such as Ontolingua, CYC, and Loom
  – To adopt Generic Frame Protocol (OKBC) as our knowledge model
  – Throw away previous work and start over
• Protégé-2000 Release 1.0
• Users demonstrated:
  – domain independent slot widgets
  – tab widgets
Workshop 5
Newcastle, July 2001

• Protégé-2000 1.6 (almost) released
• Free
• Open source
• Growing and diverse user community

Memorable events:

– The Logic Emergency
– The Religious Experience
Present

- Staff additions
- User community
- protege-discussion mailing list
- Funding
- Publications
- Protege 2.0
- Next few months
Staff Additions

• Research Staff
  – Holger Knublauch
    • Protege/OWL integration
    • Protege in Software Engineering Environments

• Development Staff
  – Jennifer Vendetti
    • Builds, Source code control
    • FAQ, Plugins library, web site development
    • Graph Widget
User Community

Protege Weekly Registration Totals

Total Registered Users: ~10000
protege-discussion

• 1400 members, 4500 messages
• List is maturing
  – From: “Ask and Stanford answers”
  – To: A forum where users get help and advice from other users
• Technical Improvements
  – Administrative load almost eliminated
  – Blocking “Unsubscribe me” messages, vacation notices, and spam
Funding

• National Cancer Institute
• National Library of Medicine
  – “National Resource for Biomedical Ontologies and Knowledge Bases”

• National Institute of Standards and Technology
• Protege Affiliates
  – Damiler-Chrysler
  – Sowerby Centre for Health Informatics at Newcastle
  – FastTrack Systems
Publications

• “The History Paper”

• “Ontology 101”

• Book
Protégé 2.0 “demo”
Workshop 5 Wish List

• Improved diagram widget   DONE
• Improved API documentation  DONE
• Inherited own-slot values (through API or UI)  NOT DONE
• Undo    PARTIALLY DONE
• Archive and restore buttons   DONE
• Drag-n-drop everywhere   NOT DONE
• Tear-off tabs   DONE
• Synchronizing tabs on selected classes   DONE
• Selected class-instance API call on instances tab   DONE
• Search and replace slot values   NOT DONE
• Database inclusion   NOT DONE
• Adding things to included projects   NOT DONE
Next Few Months

- 1.9 release (End of July)
- 2.0 release (Fall, 2003)
  - Multi-user support
  - Improved performance (>1M frames)
  - Project inclusion from multiple directories
Future

TBD!

• Improve web site
• Improve usability of application
• Browser-based interface (?)
• Holdovers from previous wish list…
• Namespaces
• Plugin validation test suites
• ???
Workshop 6 Wish List

- Come back Wednesday afternoon