Protégé-OWL: Has it Really Been Ten Years?

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But it took a village to create Protégé

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The Context of the Paper

• The “language wars” of the preceding decade had ended: OWL won

• Outstanding work on ontology editing at places such as Manchester and Maryland demonstrated new ways to manage the complexity of ontology engineering

• Although people were beginning to talk about linked data, the Semantic Web still was construed mainly as machine intelligence at Web scale

• The Semantic Web was at its trendiest—at least according to Google
The original focus for Protégé was *not* ontology editing

- We wanted an IDE for building *intelligent* systems
- We wanted that IDE to support abstractions that were
  - More cognitively useful than those of expert-system “shells”
  - Translatable directly into software components for operational systems
- We saw ontologies as just part of the path to software engineering for more robust intelligent systems
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<th>Class Browser</th>
<th>Slot Inspector</th>
<th>Facet Inspector</th>
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<td><strong>Class name:</strong></td>
<td><strong>Slot name:</strong></td>
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<td>pager_number</td>
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<td><strong>Add new class facet</strong></td>
<td><strong>With selection do:</strong></td>
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<tr>
<td><strong>Delete slot</strong></td>
<td><strong>Modify facet</strong></td>
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<td><strong>Delete is-a link</strong></td>
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Respiratory tuberculosis, confirmed

Text:

Respiratory tuberculosis is a bacterial infection by Mycobacterium tuberculosis complex that includes Mycobacterium tuberculosis, Mycobacterium avium, Mycobacterium africanum, and Mycobacterium kanamycin. It involves the lungs and the respiratory tract, and can also affect other organs.

Detailed Definition:

Text

Add new value

External Definitions

Add new value
Protégé-OWL won us lots of friends

• OWL became a *de facto* standard, and Protégé could support it
• Protégé’s open, plug-in architecture made it possible for the Semantic Web community to build lots of great extensions and enhancements
• The availability of Protégé-OWL made OWL much more accessible to the ontology-engineering community—and a virtuous cycle had commenced
But Protégé-OWL caused us lots of headaches, too

• Many Protégé users just wanted a simple, frame-based ontology editor
• Layering OWL on top of a frame editor was an expedient choice, but it was architecturally clumsy—and it took us a lot of backtracking to fix that problem
• Academic groups really have no business building and maintaining complex software for use by thousands of people when funded only by “soft” money—unless they believe they have to
What have we learned after 10 years?

• Infrastructure is an underrated component of scientific success

• Sometimes, only academic groups can develop infrastructure that addresses the requirements of complex systems such as OWL

• Funding agencies need to place much more value on computational infrastructure

• Scientific communities—such as this one—make all the hassles seem worth it!
A free, open-source ontology editor and framework for building intelligent systems

Protégé is supported by a strong community of academic, government, and corporate users, who use Protégé to build knowledge-based solutions in areas as diverse as biomedicine, e-commerce, and organizational modeling.

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