Jambalaya *Express*
Ontology Visualization on Demand

Rob Lintern
Margaret-Anne Storey

CHiSEL
Computer Human Interaction & Software Engineering Lab
Department of Computer Science, University of Victoria
A Short History

• Why Viz at all?
  – Human support – ontologies not just read by machines!
  – Pictures & diagrams support understanding (hopefully!)

• Other Approaches
  – OntoViz, OWLViz, TGViz, ezOWL
  – IsaViz: visual RDF editor
  – Many many graph-like visualization tools!

• What is Jambalaya?
  – Jambalaya = SHriMP + Protégé & Protégé-OWL glue
  – What is SHriMP?
    • Nested (or un-nested) graph
    • Originally for software understanding
    • Has other plug-in variations (eg. Creole)
    • Smooth animated zooming & layouts
    • Embedding of AWT/Swing widgets (eg. Protégé forms) within viz
Where are we now?

• Still thinking…
  – Where should a visualization be?
  – When would the user want to see it?
  – How is the data best represented in the viz?

• Fundamental Visualization Question
  – How can we provide a **useful** visualization at the moment a user **needs** it?

• Need better support for task-driven “visualization-on-demand”
  – Viz should be available from other tabs
  – Viz should immediately answer a specific question
  – Viz should not take too long to generate
Scalability Challenges

• NCI Thesaurus
  – Good scalability test-bed
  – OWL client-server database project
  – Over 1 million rows in table

• Incremental loading
  – Progress dialog with cancel
  – Confirmation if potentially too much data
  – Nested graph approach helps (like a tree widget)

• Data Filters
  – Ex. Don’t show me any individuals/instances
JambalayaTab - Express

- "Express View" buttons
- Drag-n-Drop
- "Root Classes"

Short History

Now?

 Scalability

Express

Query View

Where Next?
Query View

- Bottom up approach instead of top down (like others)
- invoked from Class’ right-click menu
Where Next?

- More Express Views
  - Problem! What should they be? Each usage of Protégé is different! Multiple ‘meta-model’ variations.

- User-defined “interesting” nodes and arcs
  - Inspiration: next presentation, Selective Ontology Viewer
  - Automatic working set and Degree-of-Interest

- User-defined mapping from Protégé objects to Jambalaya objects and visual variables, and “graph transformations”
  - Ex. Show subclasses of a particular class in blue
  - Ex. Show certain classes (e.g. reified relations) as arcs
  - Inspiration: IsaViz Graph Stylesheets (GSS)

- Ontology-Driven Ontology Visualization
  - One approach: CVF (Neil Ernst Master’s Thesis)
  - Inspiration: Large Model Visualization from this morning

- Automatic Image Retrieval - for fun(?) 😊
Questions, comments, suggestions...
rlintern@uvic.ca

Download ...“soon”...
www.thechiselgroup.org/jambalaya

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