Integration of NDL-OWL with ORCA

Yufeng Xin and Ilia Baldine
RENCI NRIG

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RESEARCH \ ENGAGEMENT \ INNOVATION

NDL-OWL in ORCA

- New code to be showcased at GEC7
  - NDL-OWL domain abstraction
  - NDL-OWL ID path computation
  - Support for stitching
- RDF tools used by ORCA team
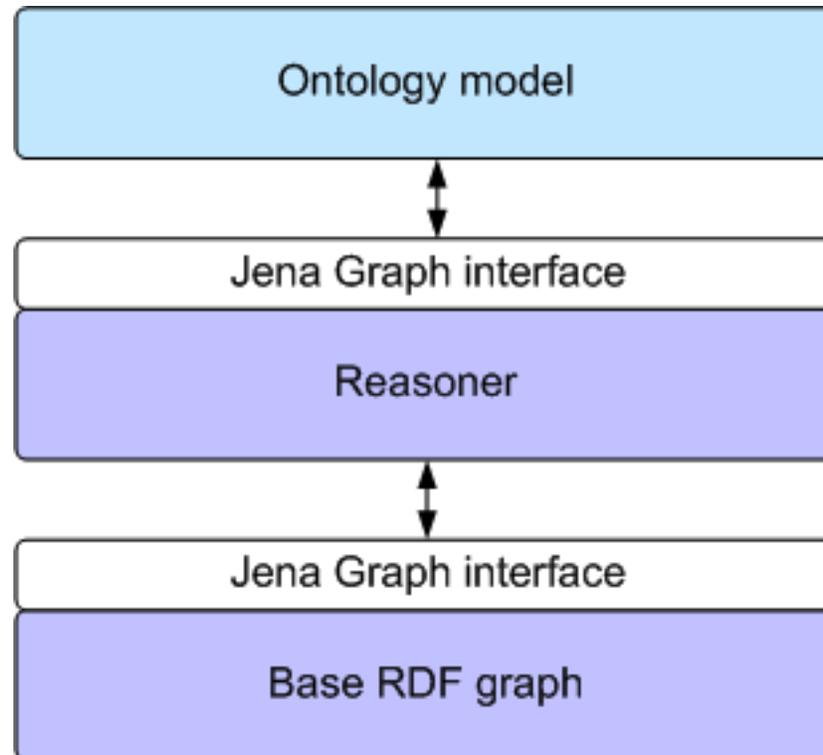 - Protégé
  - Jena toolkit
  - MIT CSAIL Tabulator

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RDF/OWL

- ## Semantically rich
  - Easy to link distributed RDF files
  - Inference capabilities
- ## Easy to implement and maintain the schema/data models
  - Protégé toolkit
- ## Easy to build applications
  - Jena API and others
    - RDF/RDFS/OWL Parsing
    - Application algorithm = manipulating in-memory model (graph)
    - SPARQL query API
   - Plug-in inference

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NDL-OWL based applications demo

- Intra-domain cross-layer path provisioning
  - Shortest Path computation
  - New client interface and label assignment
  - Cross Connect
  - Virtual connection

- Inter-domain path provisioning (Same layer)
  - Domain abstraction
  - Inter-domain path computation
  - Label assignment dependency tree (via Label translation)

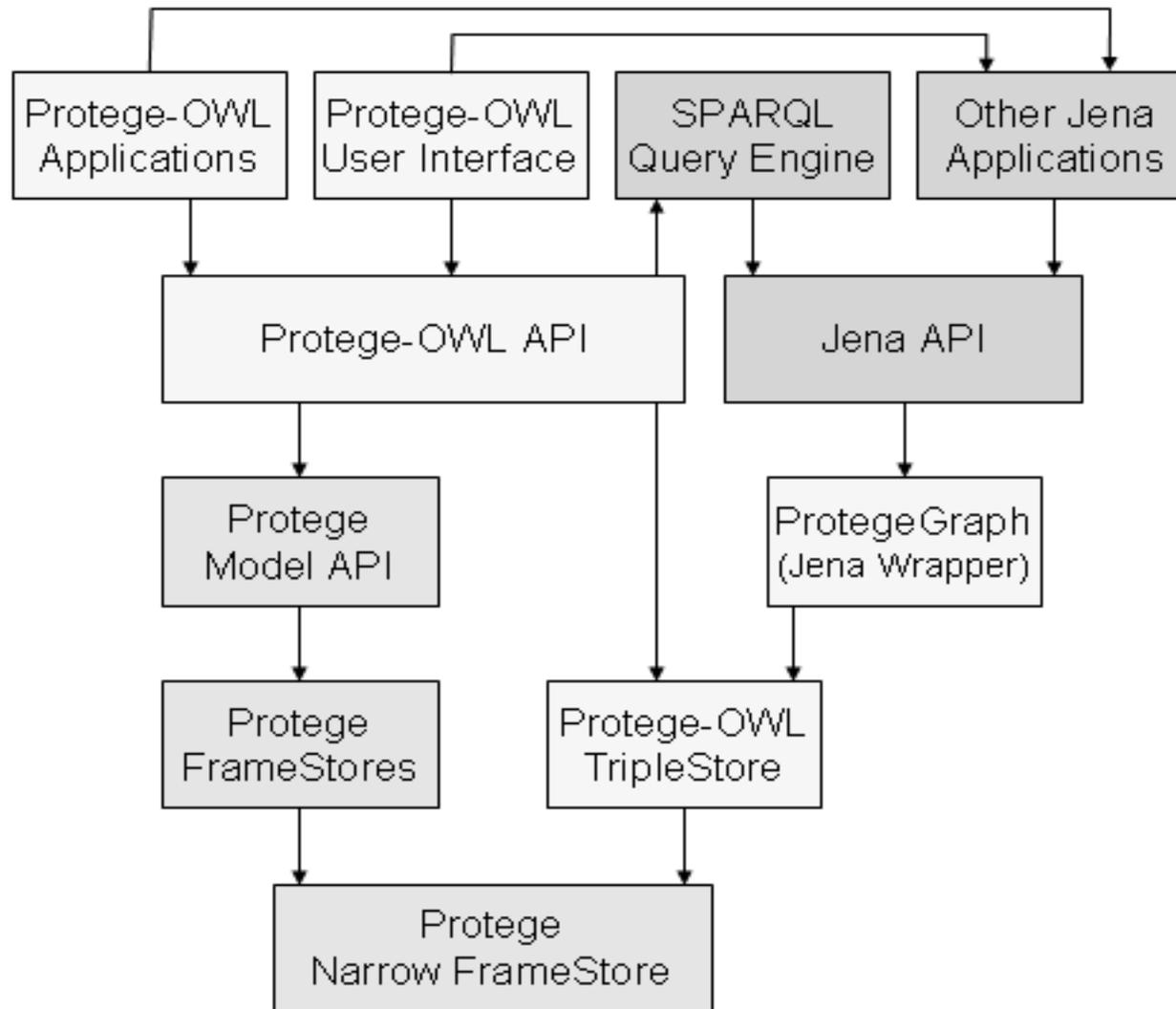- Virtual topology embedding (stitching support)

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JENA API (1)

JENA API (2)
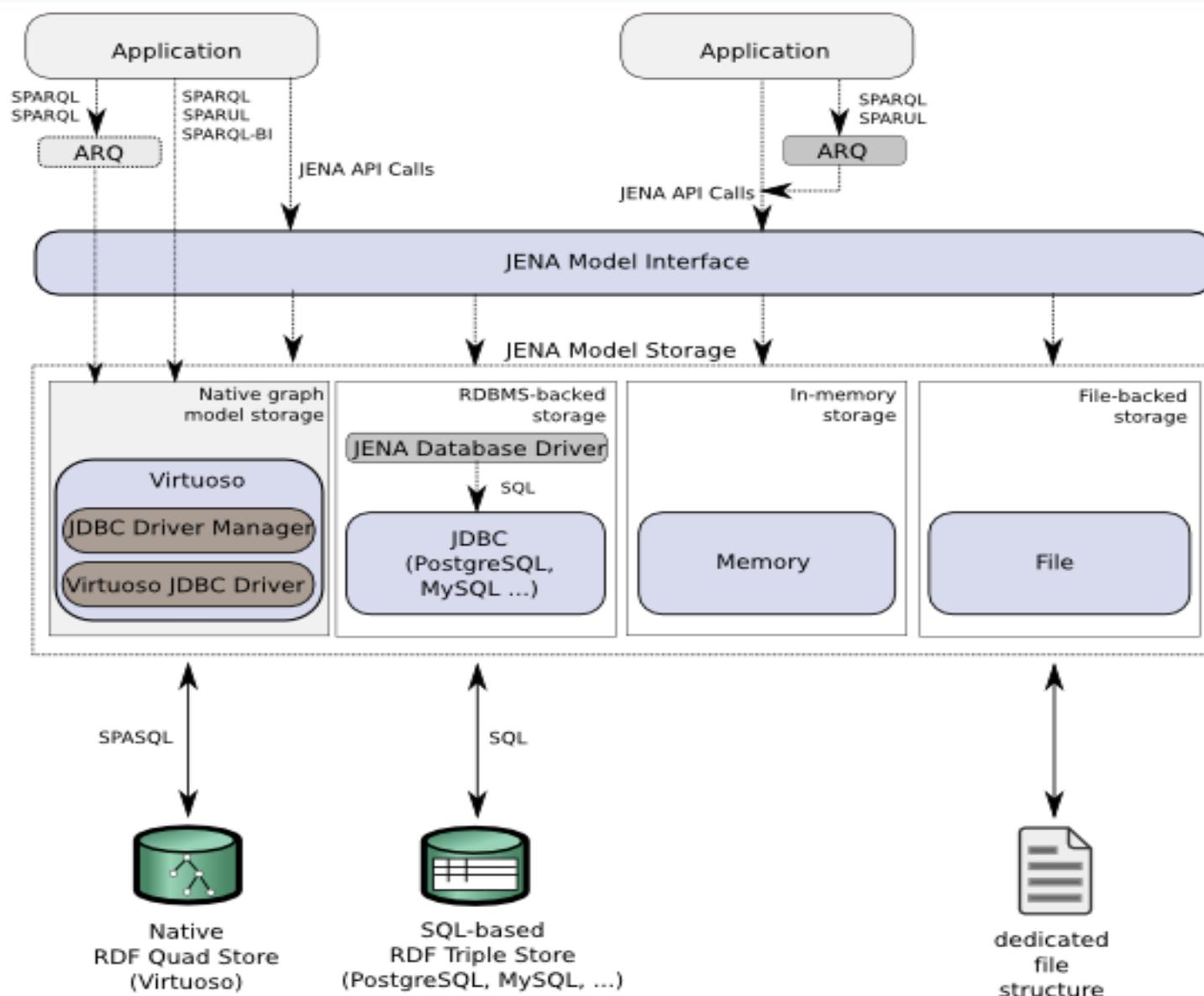
Protégé + JENA API (3)

MIT CSAIL Tabulator

- Tabulator is a generic data browser and editor
- Provides a way to browse RDF data on the web
- Also a toolkit
  - JavaScript
  - Provides modules for
    - Loading RDF models
    - Querying RDF using SPARQL
    - Displaying tabulated and other views of query results
- http://www.w3.org/2005/ajar/tab