WP4 Current Status

GF Eclipse Plugin: Ontology Grammar Wizard

MOLTO 5th Project Meeting
20th September, Utrecht
Maria Mateva

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Ontotext's team - updates

- Borislav Popov (borislav.popov@ontotext.com)
  - Site Leader
- Dr. Georgi Georgiev (georgi.georgiev@ontotext.com)
  - Manager/Technologies Expert
- Laura Tolosi, PhD candidate (laura.tolosi@ontotext.com)
  - Currently contributing to WP-7
- Maria Mateva (maria.mateva@ontotext.com)
  - Currently contributing to WP-7
- Dr. Mariana Damova (mariana.damova@ontotext.com)
  - Currently contributing to WP-8
- Stefan Enev (stefan.enev@ontotext.com)
  - Integration Expert

WP4 Deliverables

- D4.1 Knowledge Representation Infrasructure
  - Was approved
- D4.2 Data Models, Alignment Methodology, Tools and Documentation
  - Pending final review
- D4.3 Grammar-Ontology Interoperability
  - Pending final review

Reviewers notes

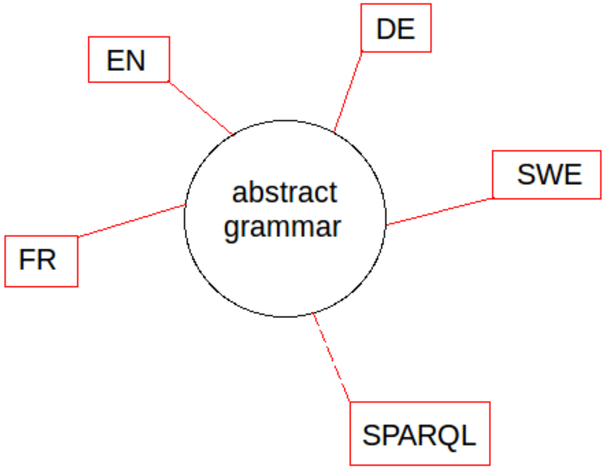
- D4.2 Data Models, Alignment Methodology, Tools and Documentation
  - *Why wasn't UHEL more involved?*
- D4.3 Grammar-Ontology Interoperability
  - *Why wasn't UGOT more involved?*
  - *To what extent can automation be achieved? Discussion.*

Automation Challenges

- D4.3 Grammar-Ontology Interoperability
  - Automation insures faster adaptations to new use cases and applications
  - We would like to encourage further discussions with GF experts in order to find better solutions.
- Fields of improvements of the automation
  - GF abstract representation to SPARQL
  - RDF(SPARQL results) to NL
- Query Language

Concrete tasks on WP4

- Fixing minor problems on the Molto-KRI prototype (http://molto.ontotext.com)
  - e.g. “Missing error message for wrong NL queries”
- Improvements to Grammar Query Builder Helper (GQBH) - implementation of direct mapping from GF Abstract Grammar to SPARQL syntax.



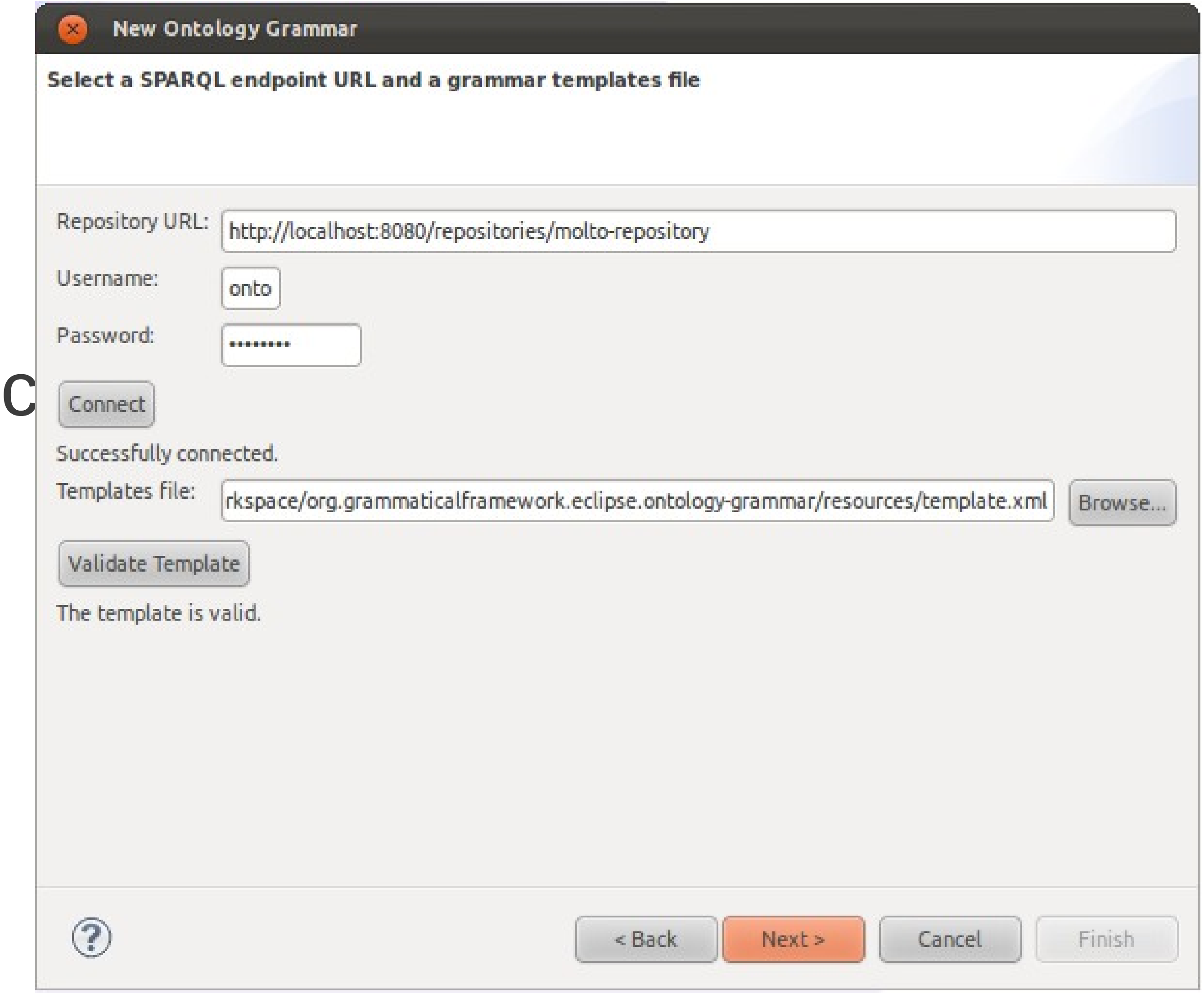
  - More involvement of UGOT
- Updates of GF-Eclipse Plugin Ontology Grammar Wizard

GF-Eclipse Plugin Ontology Grammar Wizard(1)

- Extension of the GF-Eclipse Plugin
- Based on GQBH
- Leads a user to create abstract, concrete(English) and concrete SPARQL gf grammar, based on user-friendly templates that are filled in with repository entities by the user
- The wizard connects to a SPARQL endpoint and uses the ontology provided by it.
- Then the user has to provide a specific templates file.
- Next, pages for filling the templates are available.
- Finally, the user is prompted to export the grammars created from the templates.
- The exported grammars can then be edited by the GF Eclipse plugin.

GF-Eclipse Plugin Ontology Grammar Wizard(2)

- User selects a SPARQL endpoint and a specific template



Select a SPARQL endpoint URL and a grammar templates file

Repository URL: http://localhost:8080/repositories/molto-repository

Username: onto

Password: •••••••••

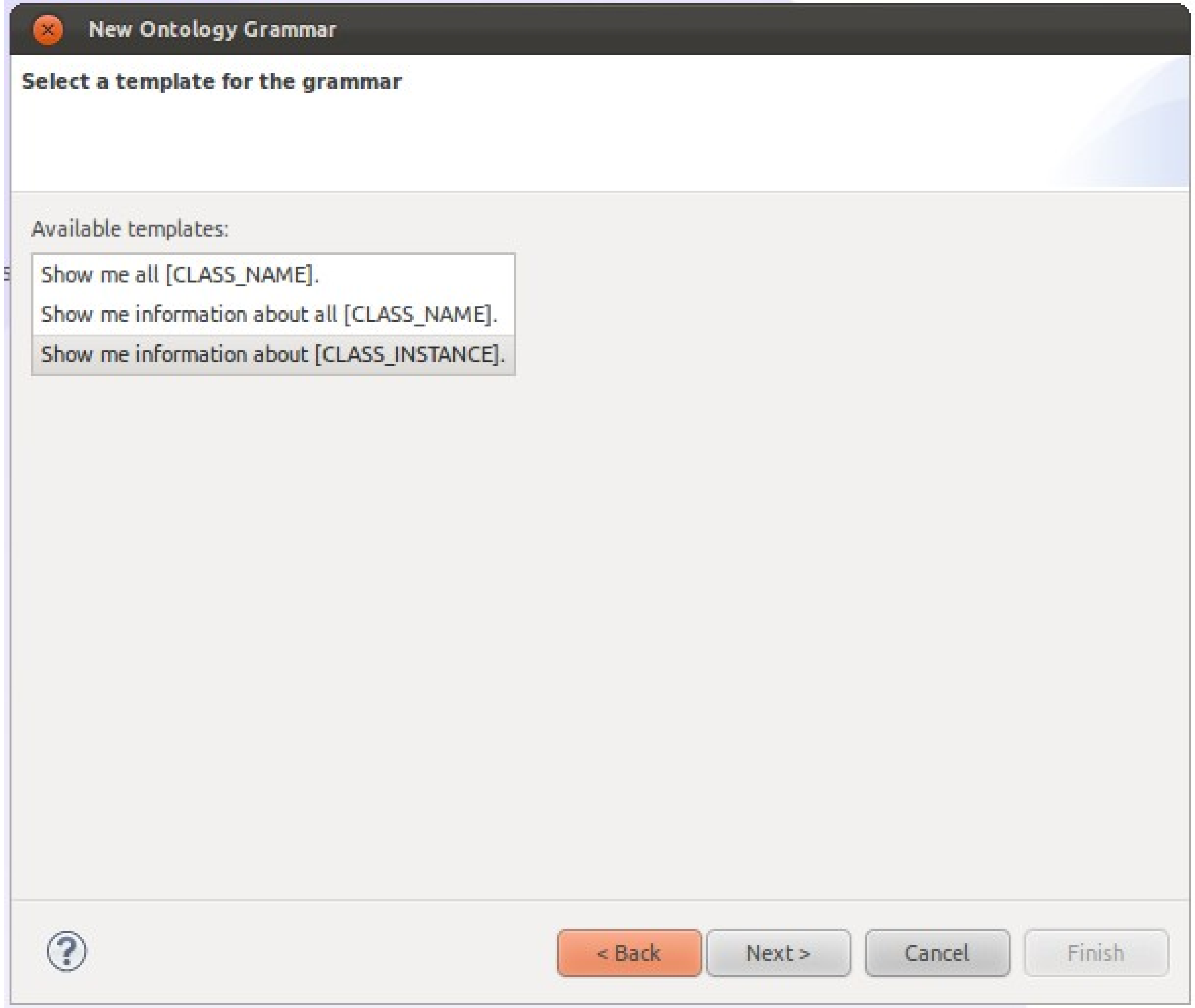
Successfully connected.

Templates file: rkspace/org.grammaticalframework.eclipse.ontology-grammar/resources/template.xml

The template is valid.

GF-Eclipse Plugin Ontology Grammar Wizard(3)

- User selects a pattern from the template



New Ontology Grammar

Select a template for the grammar

Available templates:

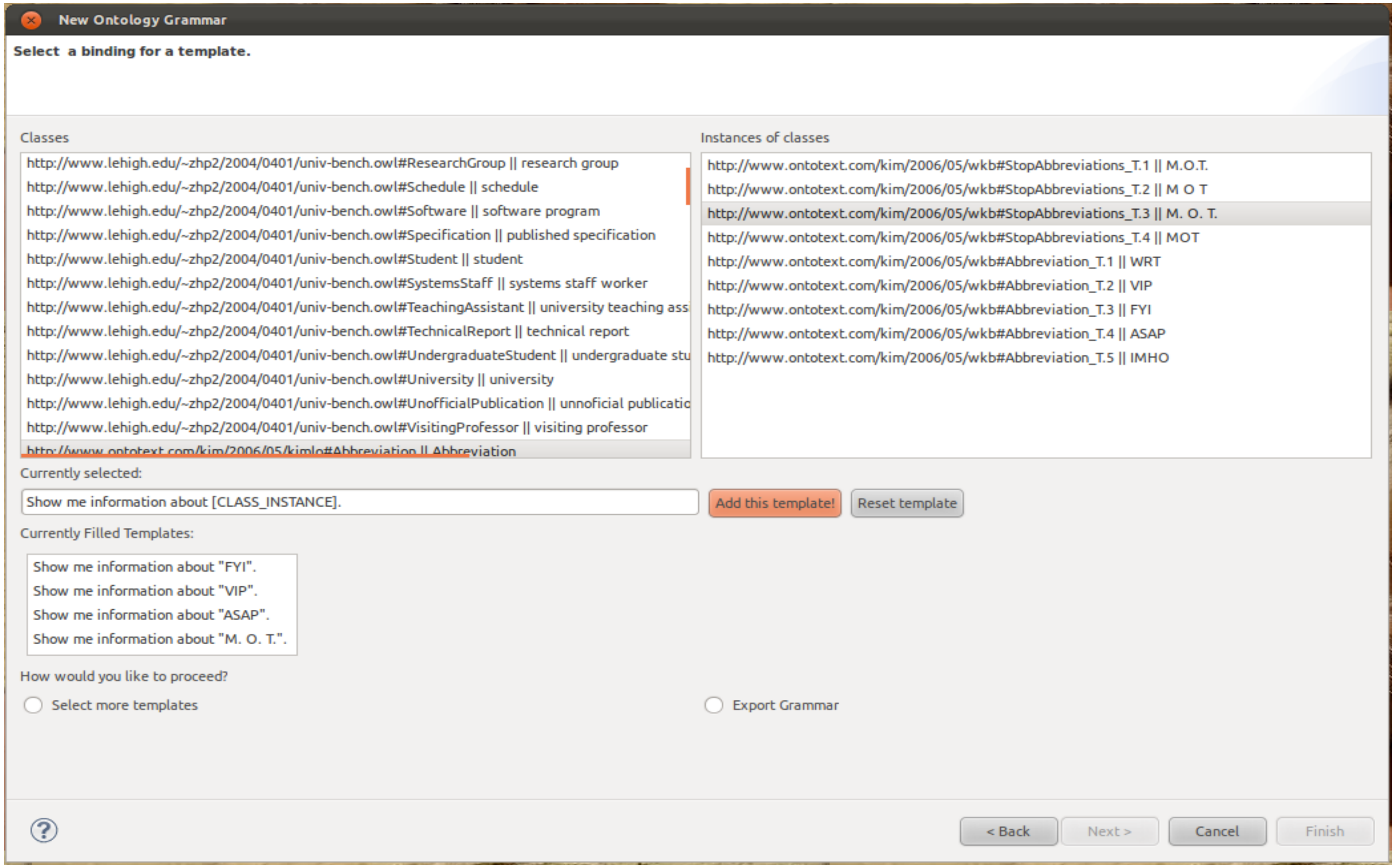
Show me all [CLASS_NAME].

Show me information about all [CLASS_NAME].

Show me information about [CLASS_INSTANCE].

GF-Eclipse Plugin Ontology Grammar Wizard(4)

- User selects bindings to complete the grammar needed.



Select a binding for a template.

Classes

http://www.lehigh.edu/~zhp2/2004/0401/univ-bench.owl#ResearchGroup || research group
http://www.lehigh.edu/~zhp2/2004/0401/univ-bench.owl#Schedule || schedule
http://www.lehigh.edu/~zhp2/2004/0401/univ-bench.owl#Software || software program
http://www.lehigh.edu/~zhp2/2004/0401/univ-bench.owl#Specification || published specification
http://www.lehigh.edu/~zhp2/2004/0401/univ-bench.owl#Student || student
http://www.lehigh.edu/~zhp2/2004/0401/univ-bench.owl#SystemsStaff || systems staff worker
http://www.lehigh.edu/~zhp2/2004/0401/univ-bench.owl#TeachingAssistant || university teaching ass
http://www.lehigh.edu/~zhp2/2004/0401/univ-bench.owl#TechnicalReport || technical report
http://www.lehigh.edu/~zhp2/2004/0401/univ-bench.owl#UndergraduateStudent || undergraduate stu
http://www.lehigh.edu/~zhp2/2004/0401/univ-bench.owl#University || university
http://www.lehigh.edu/~zhp2/2004/0401/univ-bench.owl#UnofficialPublication || unnoficial publicatio
http://www.lehigh.edu/~zhp2/2004/0401/univ-bench.owl#VisitingProfessor || visiting professor
http://www.ontotext.com/kim/2006/05/kimlo#Abbreviation || Abbreviation

Instances of classes

http://www.ontotext.com/kim/2006/05/wkb#StopAbbreviations_T.1 || M.O.T.
http://www.ontotext.com/kim/2006/05/wkb#StopAbbreviations_T.2 || M O T
http://www.ontotext.com/kim/2006/05/wkb#StopAbbreviations_T.3 || M. O. T.
http://www.ontotext.com/kim/2006/05/wkb#StopAbbreviations_T.4 || MOT
http://www.ontotext.com/kim/2006/05/wkb#Abbreviation_T.1 || WRT
http://www.ontotext.com/kim/2006/05/wkb#Abbreviation_T.2 || VIP
http://www.ontotext.com/kim/2006/05/wkb#Abbreviation_T.3 || FYI
http://www.ontotext.com/kim/2006/05/wkb#Abbreviation_T.4 || ASAP
http://www.ontotext.com/kim/2006/05/wkb#Abbreviation_T.5 || IMHO

Currently selected:

Show me information about [CLASS_INSTANCE].

Currently Filled Templates:

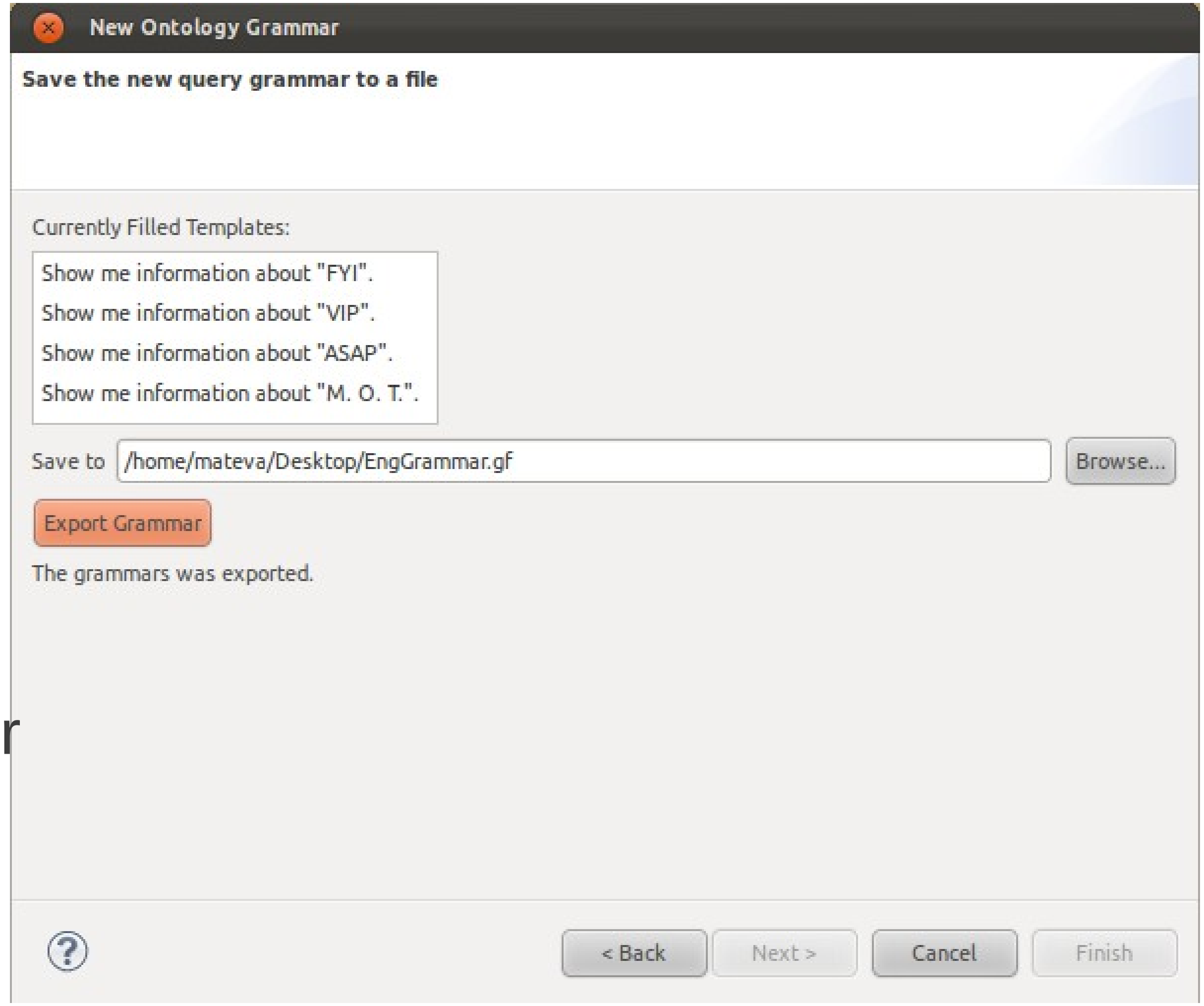
Show me information about "FYI".
Show me information about "VIP".
Show me information about "ASAP".
Show me information about "M. O. T.".

How would you like to proceed?

○ Select more templates ○ Export Grammar

GF-Eclipse Plugin Ontology Grammar Wizard(5)

- User completes the wizard by pointing where the grammars can be stored
- The result are three GF grammars:
  - Abstract Grammar
  - Concrete English Grammar
  - Concrete SPARQL Grammar



Save the new query grammar to a file

Currently Filled Templates:

Show me information about "FYI".
Show me information about "VIP".
Show me information about "ASAP".
Show me information about "M. O. T.".

Save to /home/mateva/Desktop/EngGrammar.gf

The grammars was exported.

Questions

Thank you for your attention!