CSWRL & StreamJess Stream Reasoning systems

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C-SWRL & StreamJess are Stream Reasoning systems, extending [C-SPARQL](http://streamreasoning.org/resources/c-sparql) with non-monotonic capabilities. C-SWRL is a unique Semantic Web system for reasoning over stream data, while StreamJess is a [Jess](http://www.jessrules.com/) system capable of expressive reasoning over stream data.

**Downloads**

Systems are written in Java 1.8. The "ready to go packs" are NetBeans projects.

C-SWRL can be downloaded [here](file:///D:\Studime\SEEU-PhD\APLIKACIONET\CSWRL\StreamReasoning\apps\CSWRLPROD.rar), while StreamJess [here](file:///D:\Studime\SEEU-PhD\APLIKACIONET\CSWRL\StreamReasoning\apps\StreamJessPROD.rar).

**Using C-SWRL**

To start using C-SWRL the following steps need to be performed:

1. Download and unzip files into your local folder
2. Import the project into your NetBeans
3. Download the InWaterSense ontologies: [core](http://inwatersense.uni-pr.edu/ontologies/inws-core.owl), [regulations](http://inwatersense.uni-pr.edu/ontologies/inws-regulations.owl) and [pollutants](http://inwatersense.uni-pr.edu/ontologies/inws-pollutants.owl)
4. Open main\CSWRL.java and replace the InWaterSense ontologies path with your local copies ones
5. Download and import the jar libraries into your project:
   * [C-SPARQL](http://streamreasoning.org/resources/c-sparql) v0.9.6
   * [OWL API](http://owlapi.sourceforge.net/) v4.0.2
   * [SWRLTab](https://github.com/protegeproject/swrltab) v1.0
   * [SWRL API Drools Engine](https://github.com/protegeproject/swrlapi-drools-engine) v1.0 and
   * [JUnit](http://junit.org/junit4/)v4.10
6. Run the application

  Follow [this](file:///D:\Studime\SEEU-PhD\APLIKACIONET\CSWRL\StreamReasoning\tutorials\CSWRL-guide.pdf) tutorial to get started with C-SWRL.

**Using StreamJess**

To start using StreamJess the following steps need to be performed:

1. Download and unzip the files into your local folder
2. Import the project into your NetBeans
3. Download the InWaterSense ontology Protege project file [Link](http://inwatersense.uni-pr.edu/ontologies/inws-all.pprj)
4. Open main\StreamJess.java and replace the InWaterSense ontology Protege project file path with your local copy of it
5. Download and import the necessary jar libraries into your project:
   * [C-SPARQL](http://streamreasoning.org/resources/c-sparql) v0.9.6
   * [Jess](http://www.jessrules.com/) v7.1p2
   * [Jess Tab](http://www.jessrules.com/jesswiki/view?JessTab) v1.7 and
   * [Protege](http://protege.stanford.edu/) v3.5
6. Run the application

A short video demonstration about the usage of StreamJess can be found [here](http://inwatersense.uni-pr.edu/streamjess/demo.html).

Follow [this](file:///D:\Studime\SEEU-PhD\APLIKACIONET\CSWRL\StreamReasoning\tutorials\StreamJess-guide.pdf) tutorial to get started with StreamJess.

**Getting support**

For more information on C-SWRL and StreamJess contact e.jajaga at seeu dot edu dot mk

**Literature**

1. Jajaga, E., Ahmedi, L. and Ahmedi, F. **StreamJess: Stream Data Reasoning System for Water Quality Monitoring**. International Journal of Metadata, Semantics and Ontologies (In press) [Download](http://www.inderscience.com/info/ingeneral/forthcoming.php?jcode=ijmso)
2. Jajaga, E., Ahmedi, L. and Ahmedi, F. **StreamJess: Enabling Jess for Stream Data Reasoning and the Water Domain Case** (Demo paper) 20th International Conference on Knowledge Engineering and Knowledge Management (EKAW2016), Bologna, 2016. [Download](http://luleahmedi.uni-pr.edu/docs/pubs/StreamJessDemoPaper2016.pdf)
3. Jajaga, E., Ahmedi, L. and Ahmedi, F. **An Expert System for Water Quality Monitoring Based on Ontology**, in Proc. of the 9th Metadata and Semantics Research Conference (MTSR2015), Manchester, 2015. [Download](http://luleahmedi.uni-pr.edu/docs/pubs/ExpertSys2015.pdf)
4. Ahmedi, L., Jajaga, E. and Ahmedi, F. **An Ontology Framework for Water Quality Management**, in Proc. of the 6th International Conference on Semantic Sensor Networks, Sydney, 2013.[Download](file:///D:\Studime\SEEU-PhD\APLIKACIONET\CSWRL\StreamReasoning\ceur-ws.org\Vol-1063\paper3.pdf)
5. Jajaga, E., Ahmedi, L. and Abazi-Bexheti, L. **Semantic Web Trends on Reasoning Over Sensor Data**, in Proc. of the 8th South East European Doctoral Student Conference, Thessaloniki, 2013.[Download](https://www.researchgate.net/publication/255719059_Semantic_Web_Trends_on_Reasoning_Over_Sensor_Data)