

A Transformation of YAWL to AToMPPM Modeling Language

Srinivasan Balakrishnan



AToMPPM

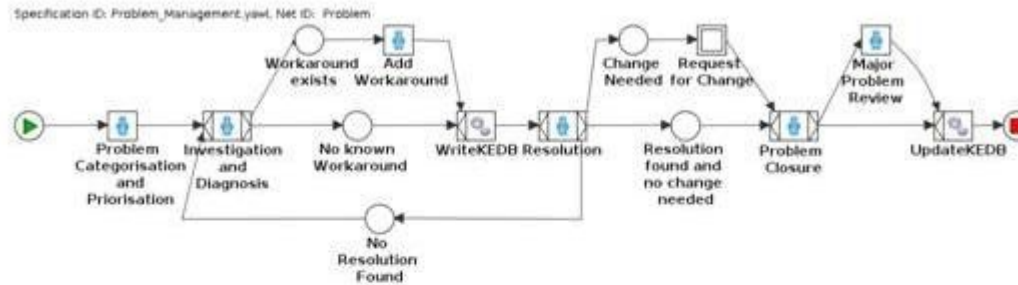
YAWL

Definition: YAWL (Yet Another Workflow Language) is a workflow language based on workflow patterns. The language is supported by a software system that includes an execution engine, a graphical editor and a worklist handler.

- Control flow
- Data
- Resources

Example:

Control Flow



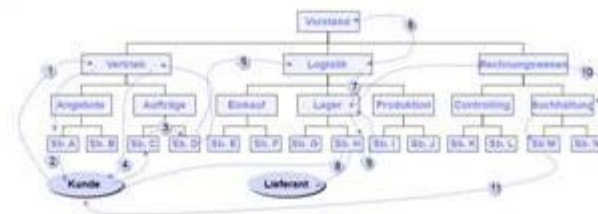
Data

Task Decomposition Variables

Name	Type	Usage
Description	Description	Input Only
Category	Inc_Category	Input Only
Priority	Inc_Priority	Input Only
Workaround	Worknotes	Output Only

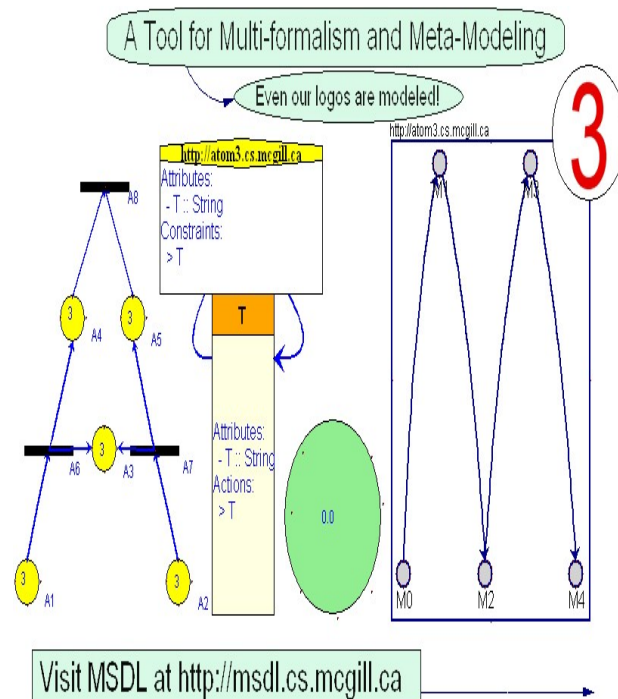
Buttons: Create..., Update..., Remove...

Resources



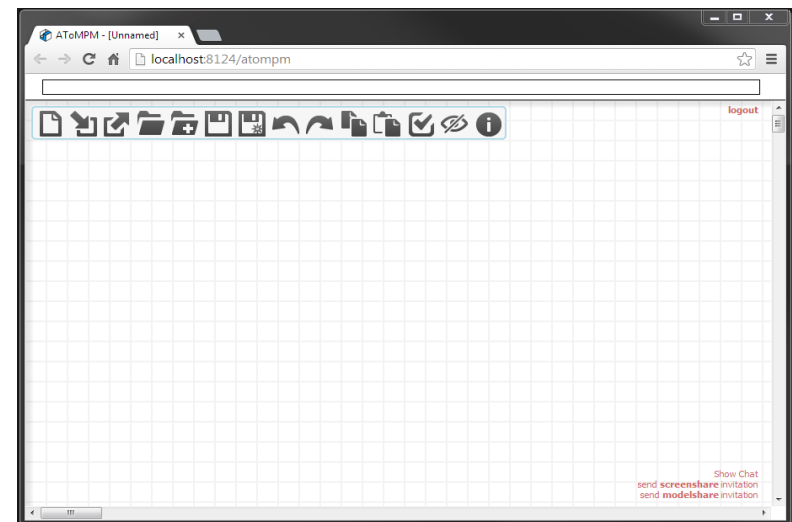
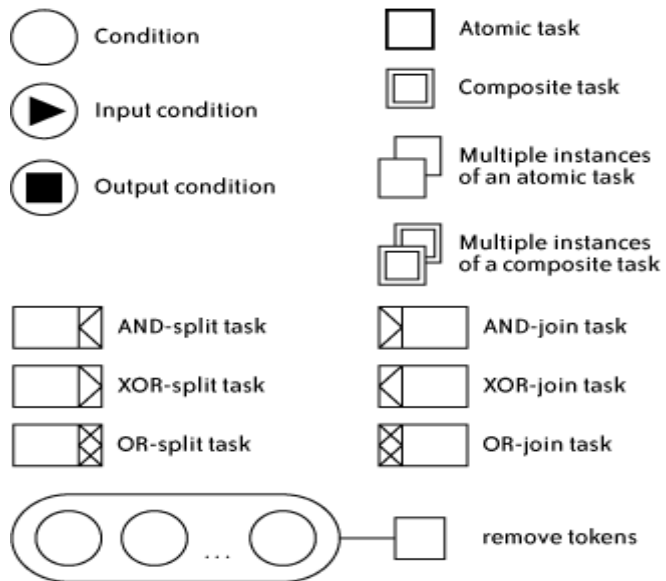
AToMPM

Definition: AToMPM is an open-source framework for designing domain-specific modeling environments, performing model transformations, manipulating and managing models. It runs completely over the web, making it independent from any operating system, platform, or device it may execute on. AToMPM offers an online collaborative experience for modeling.



Project Objective

- Control flow of YAWL will be modeled to AToMPM.

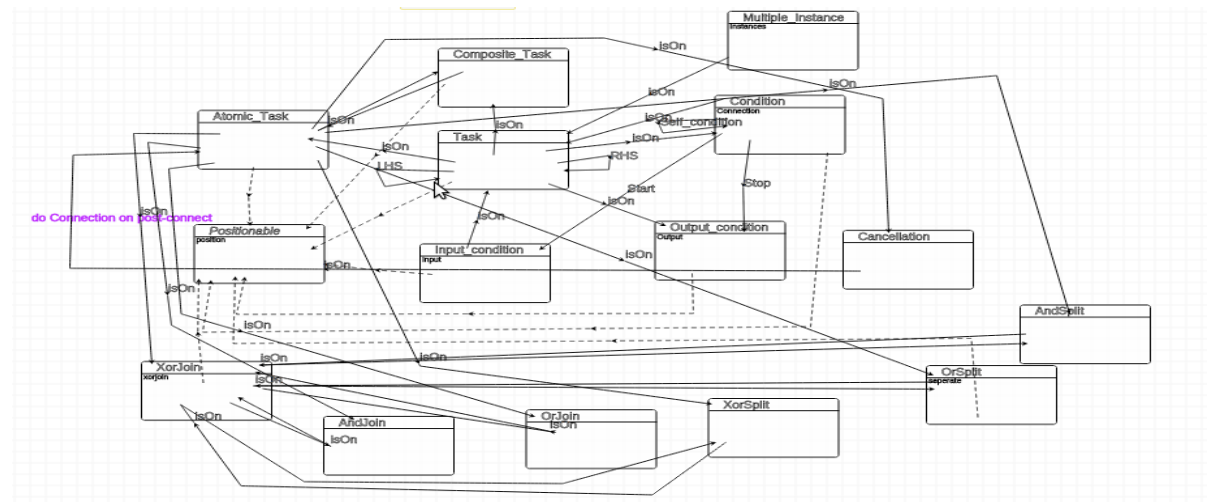


Abstract Syntax

Class diagram of YAWL control flow in the AToMPM editor.

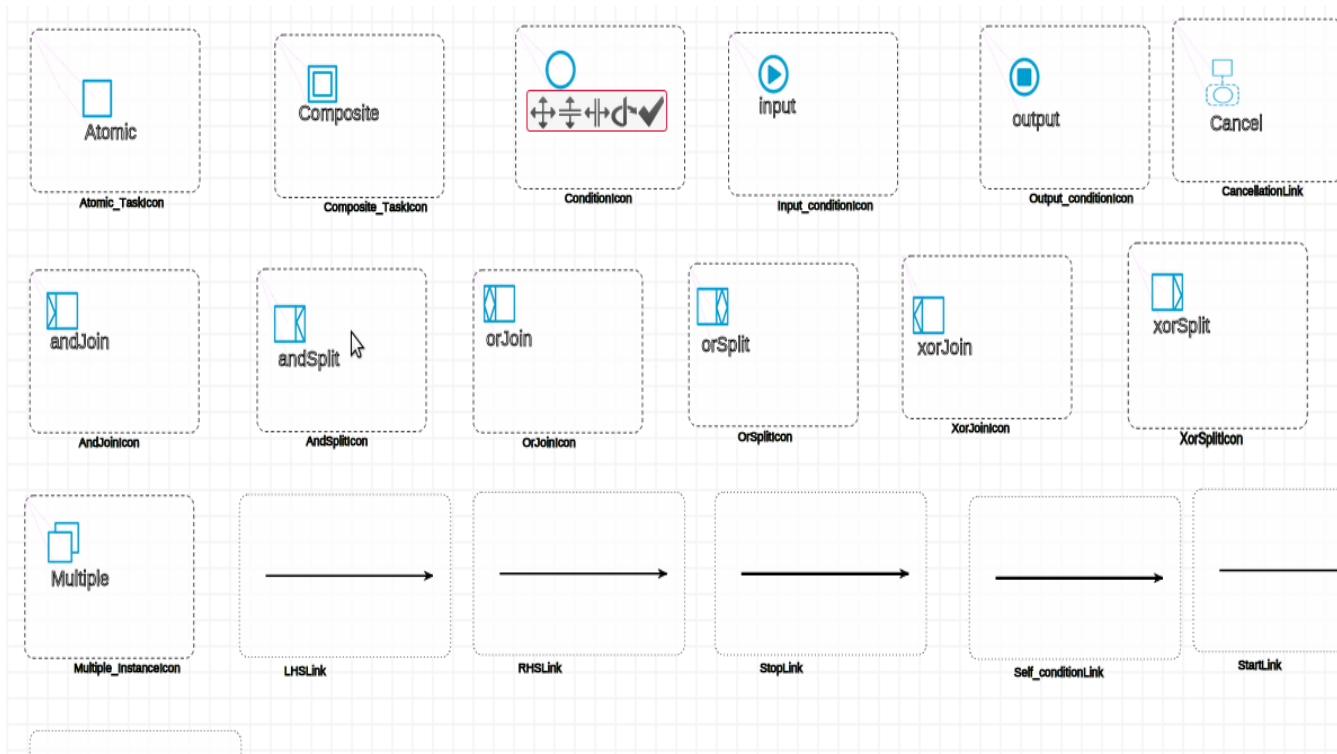
Nodes and the links were created for the each control flow tool.

Links are visually connecting.



Operational Semantics: Concrete Syntax

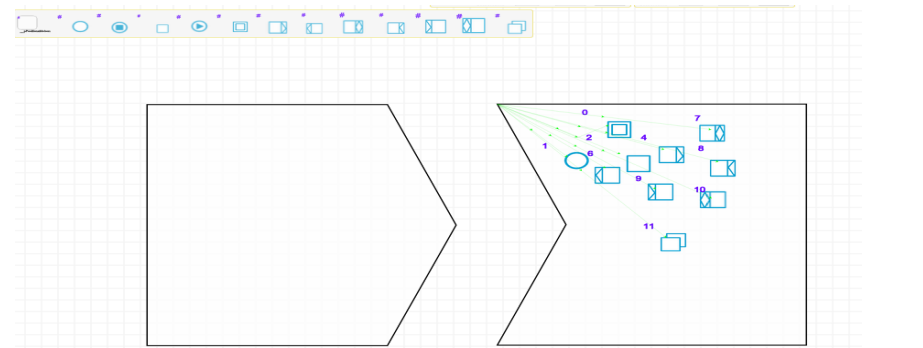
Creating and Specifying control flow symbols and links with Icons model. Giving a shape for the tool.



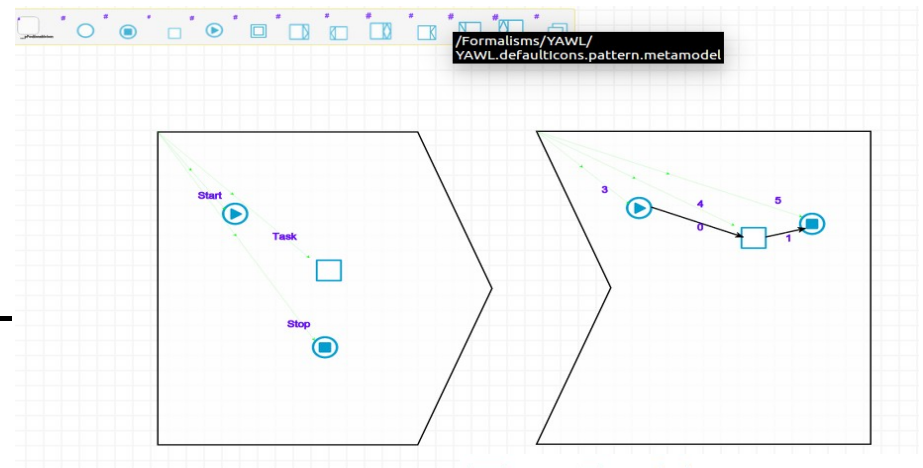
Transformation

- Perform actions and transitions using the created concrete syntax.
- Perform the same action of YAWL in AToMPM editor

Creating Nodes --->

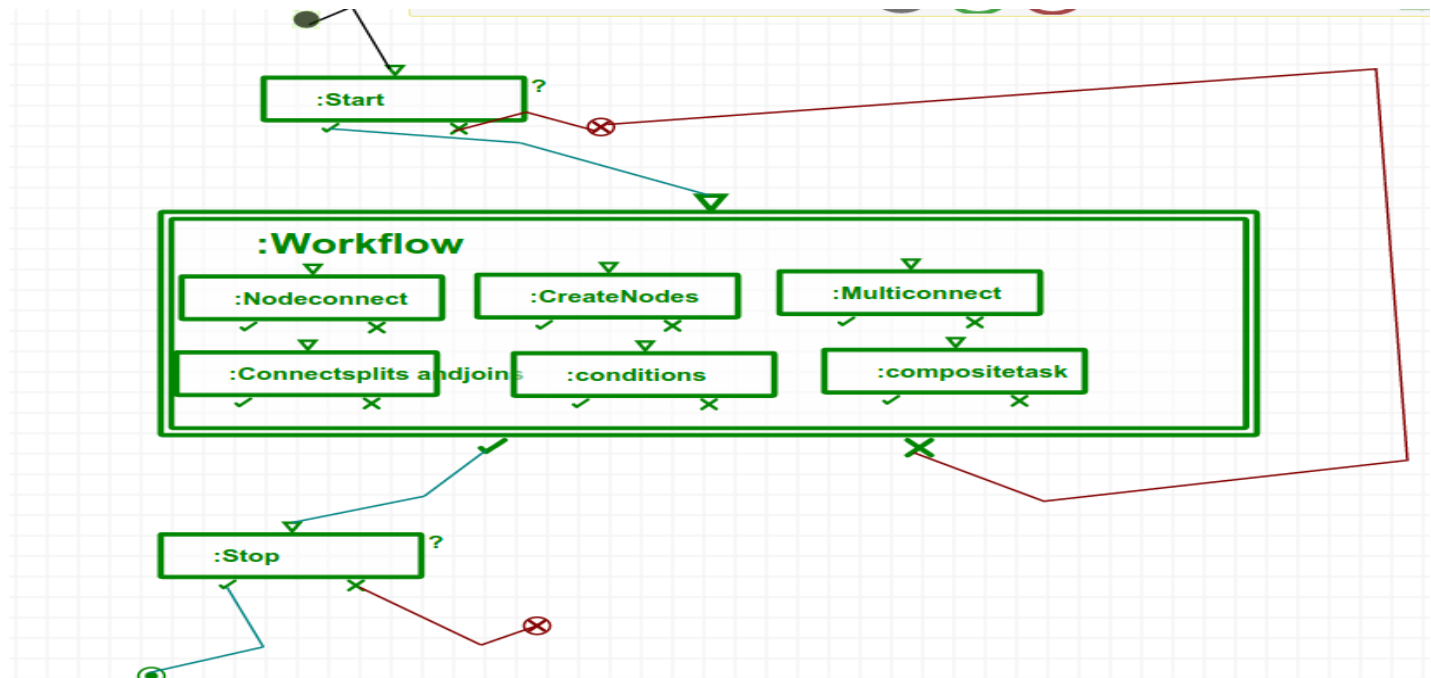


Transition between tokens-----



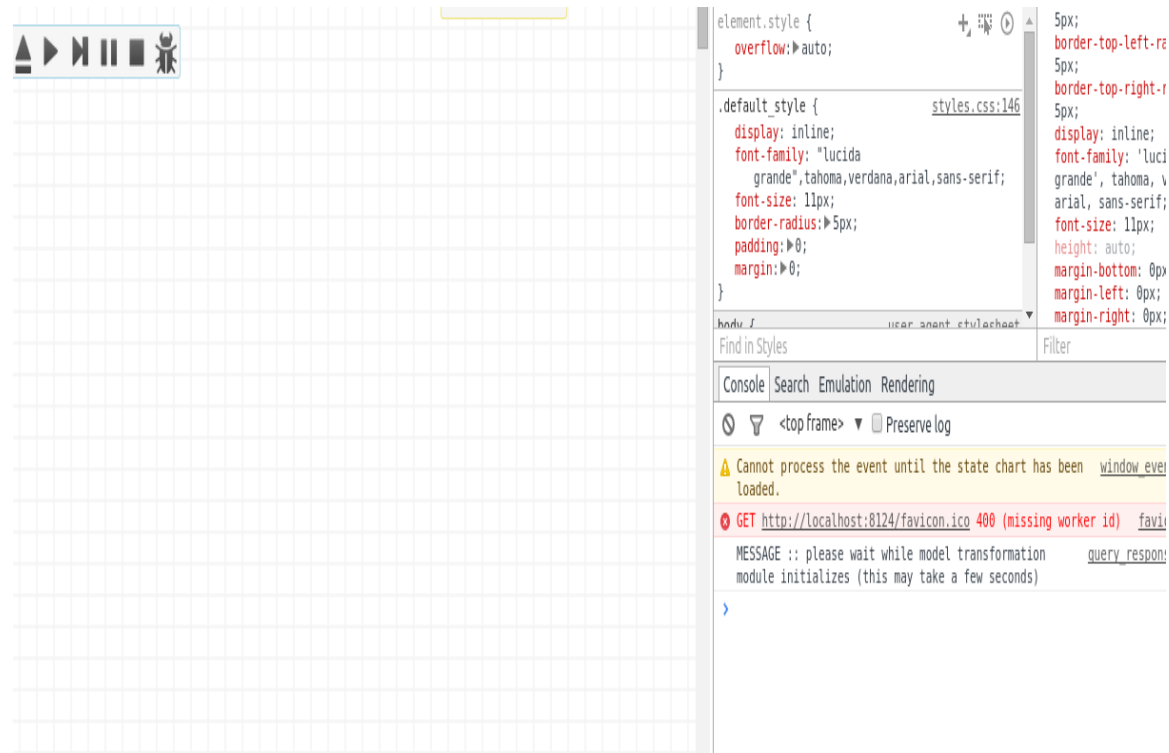
Simulation

Use transformation to simulate the created rules to perform actions.



Run Transformation

Using the transformation controller button to run the target model.



Summary:

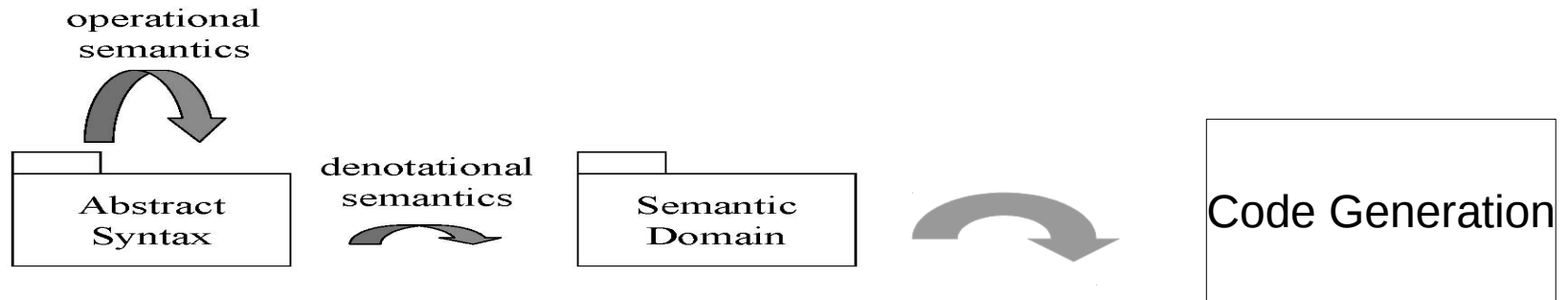
YAWL business analysis tool.

Control flow transformed to AToMPM
operational semantics

- abstract syntax
- concrete syntax
- Transformation creation
- Simulation and Rules creation

Conclusion and Future work

Designing two different modeling languages in to another by using its operational semantics. This can be a step for YAWL can be designed with denotational semantics and generating a python and PNML code.



Depends on the future needs this work can be extended to any form. We began to develop one business tool(YAWL) in other visual modeling language(AToMPM).

**Thank
you!**

