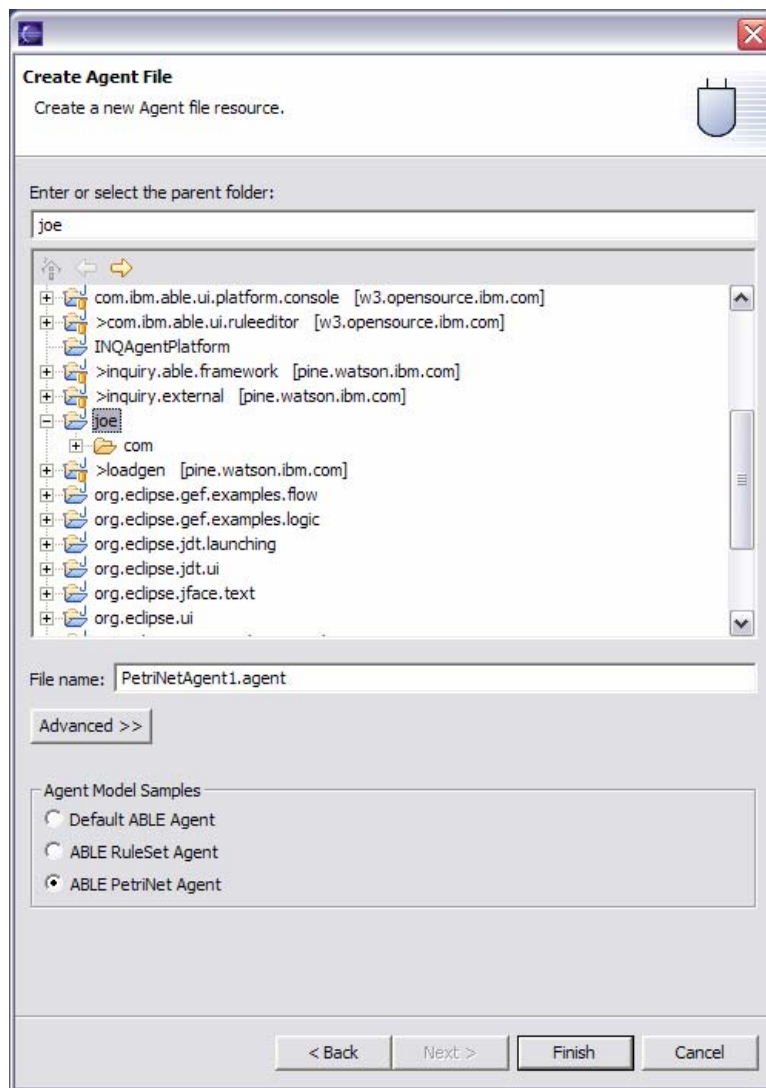


# ABLE Petri Net Tutorial

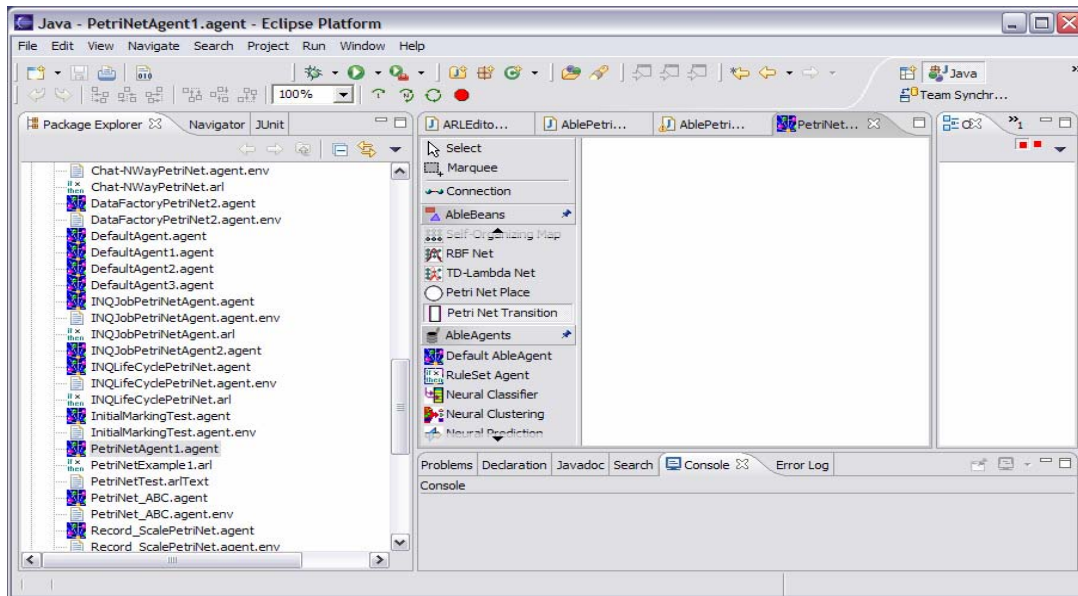
This tutorial describes a step-by-step process for creating and configuring a simple Petri Net model using the ABLE agent editor in Eclipse.

## Creating a Petri Net Agent

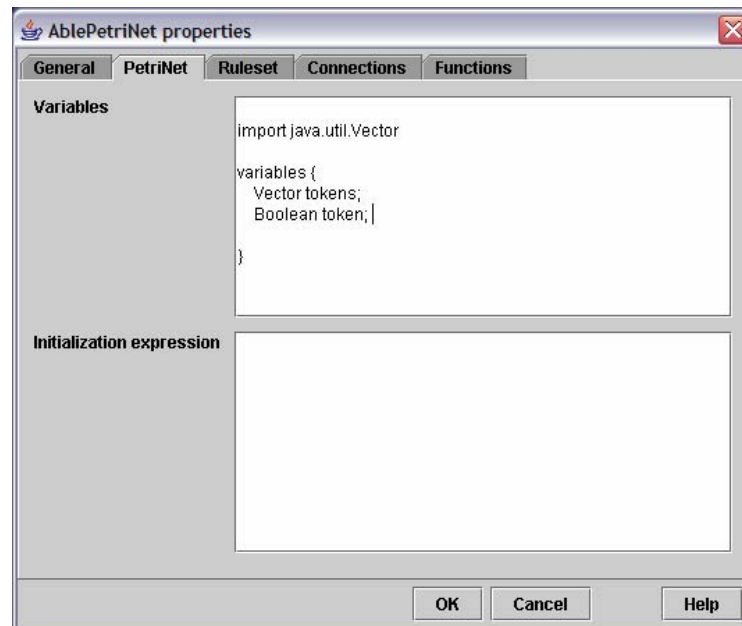
1. The first step is to create a Petri Net agent. Go to File->New->Other->ABLE -> AbleAgent and press Next to bring up the Create Agent File Wizard. Select the parent folder and then select ABLE PetriNet Agent as the agent type and press Finish to create the agent file and open the Agent editor on that file.



2. Agent editor opens on PetriNet agent:

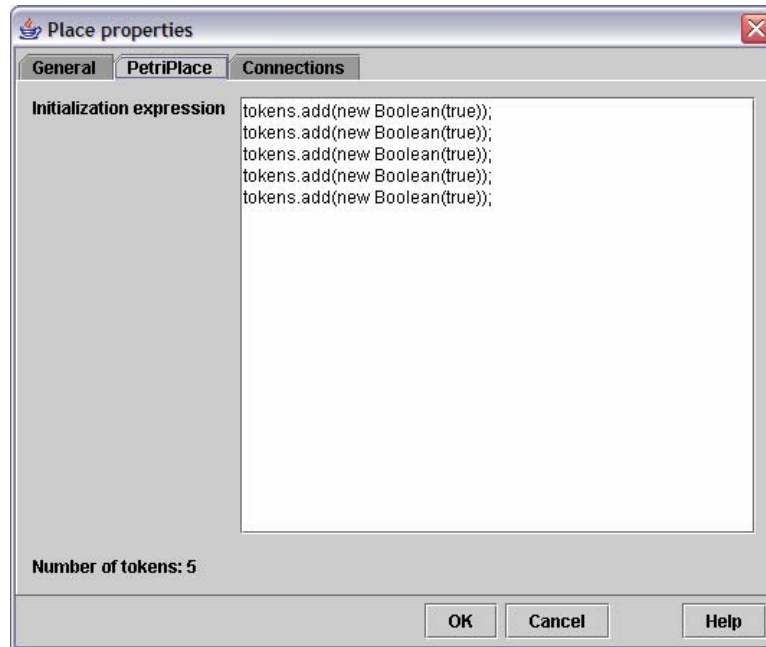


3. Place the cursor on the empty agent canvas and Right click the mouse to bring up the context menu. Select Customizer... This opens the AblePetriNet tabbed notebook Customizer, switch to PetriNet page. Define the variables section as shown below:



Press OK to save the changes and close the Petri Net Customizer.

4. Under AbleBeans .. scroll down palette and drag/drop a Place (circle icon) on PetriNet agent canvas
5. Right click and select Customizer from the context menu .. to open the Place tabbed notebook Customizer ... Switch to the PetriPlace page and enter the text as shown below:

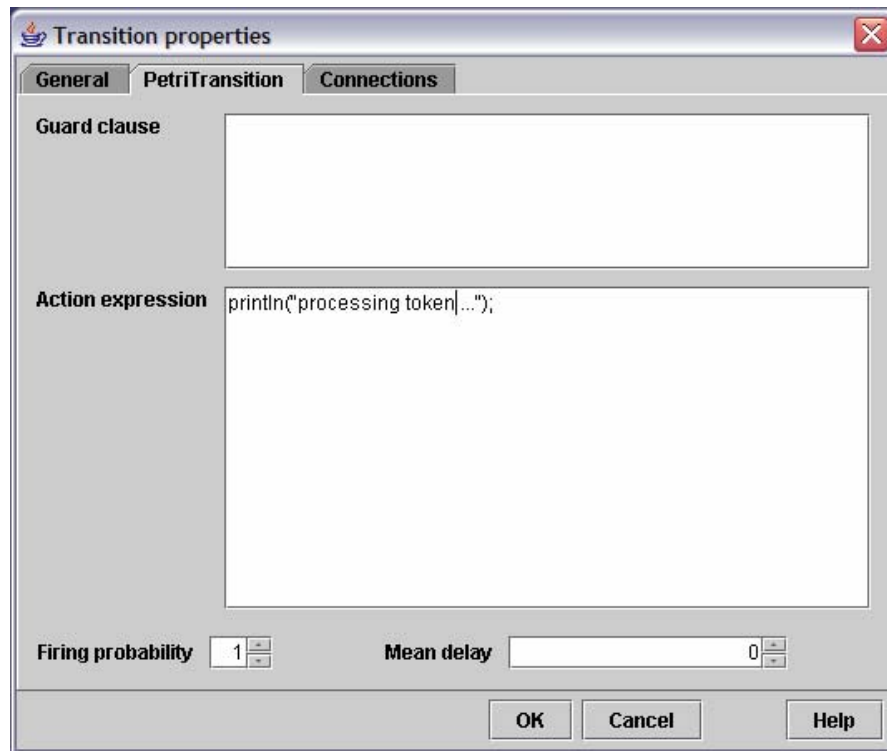


This will initialize the Place with five Boolean tokens.

6. Under AbleBeans... drag/drop a Transition (vertical rectangle icon) on PetriNet agent canvas to right of the Place.
7. Select Connection tool on palette ... click on Place ... move cursor to Transition and click .. will draw a connection with arrow from Place to Transition.

NOTE : Icons have 3 inputs and 3 output anchors to help in laying out the graphs  
left input .. right output ..  
top input .. bottom output ...  
upper right input .. upper left output

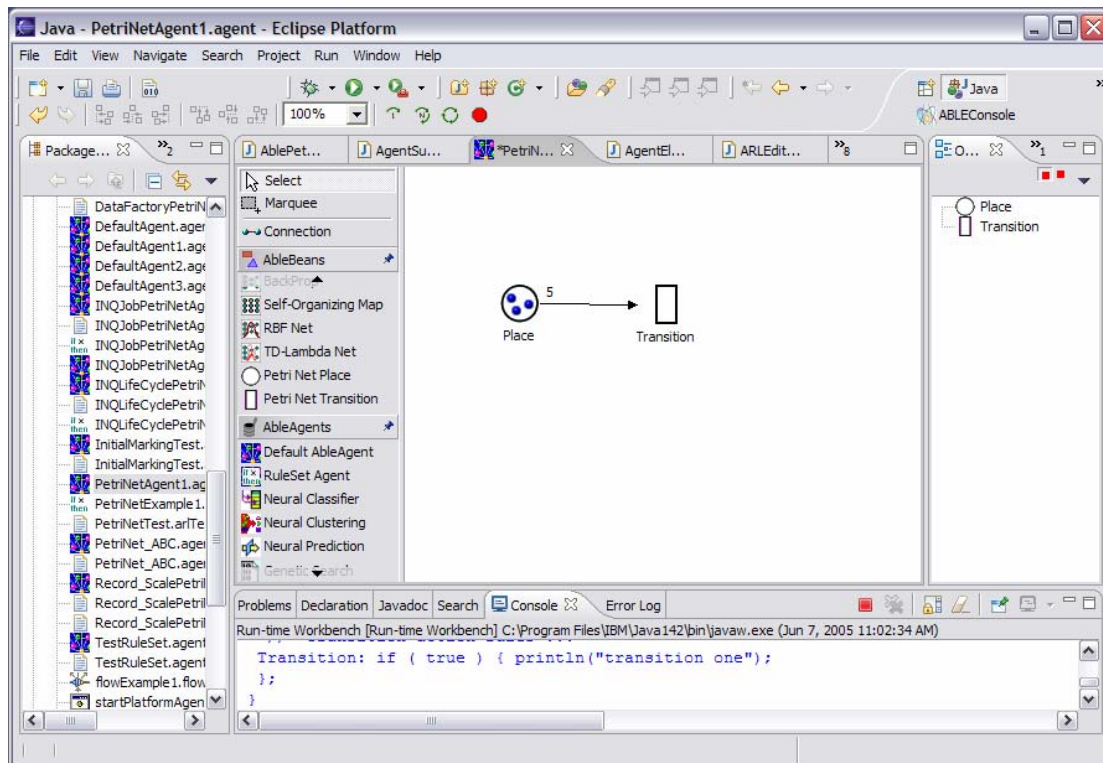
8. Right click on Transition and select Customizer from context menu .. opens the Transition tabbed notebook Customizer .. switch to PetriTransition page



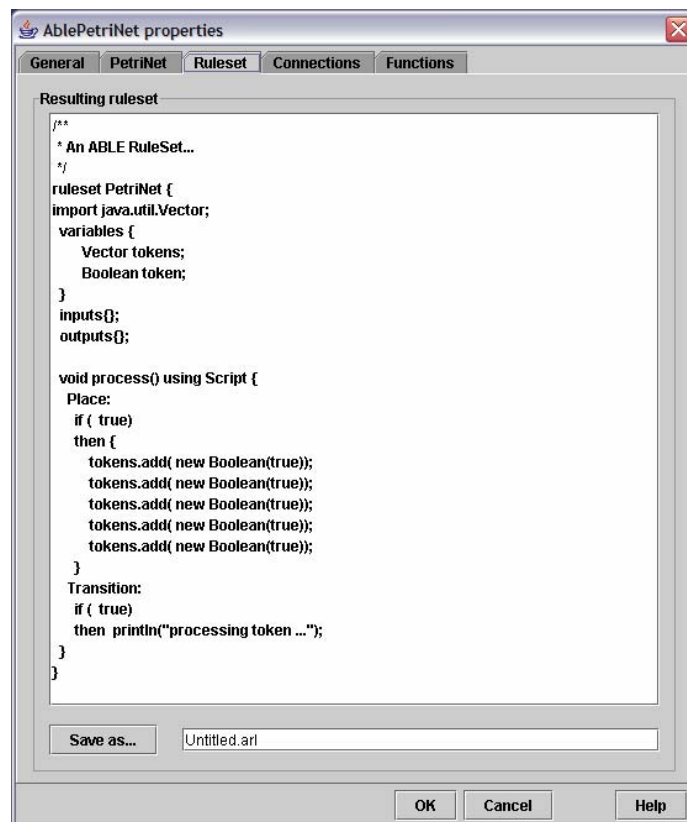
9. Now with no icons selected, right click on white space in agent canvas. The agent context menu will appear. Select Init ... item.

This will take all of the pieces of text from the Petri Net variables/init blocks, and Places/Transitions, concatenate the text into a ruleset and compile it. If you have ill-formed text, you'll get an error dialog with a compile error message. You have to track down where that text is and go to the correct Customizer and fix it. Then do Init again.

If it inits cleanly, you can run the Petri Net by pressing the Step button (left most green button labeled '1') on the editor icon palette.



You can view the resulting ABLE ruleset text by opening the PetriNet agent customizer and going to the RuleSet tab, shown below:



### Example Petri Net

You can construct complex state machine models using the ABLE PetriNet agent. Here is an example of a Petri Net that simulates a process or job running in a computer system.

