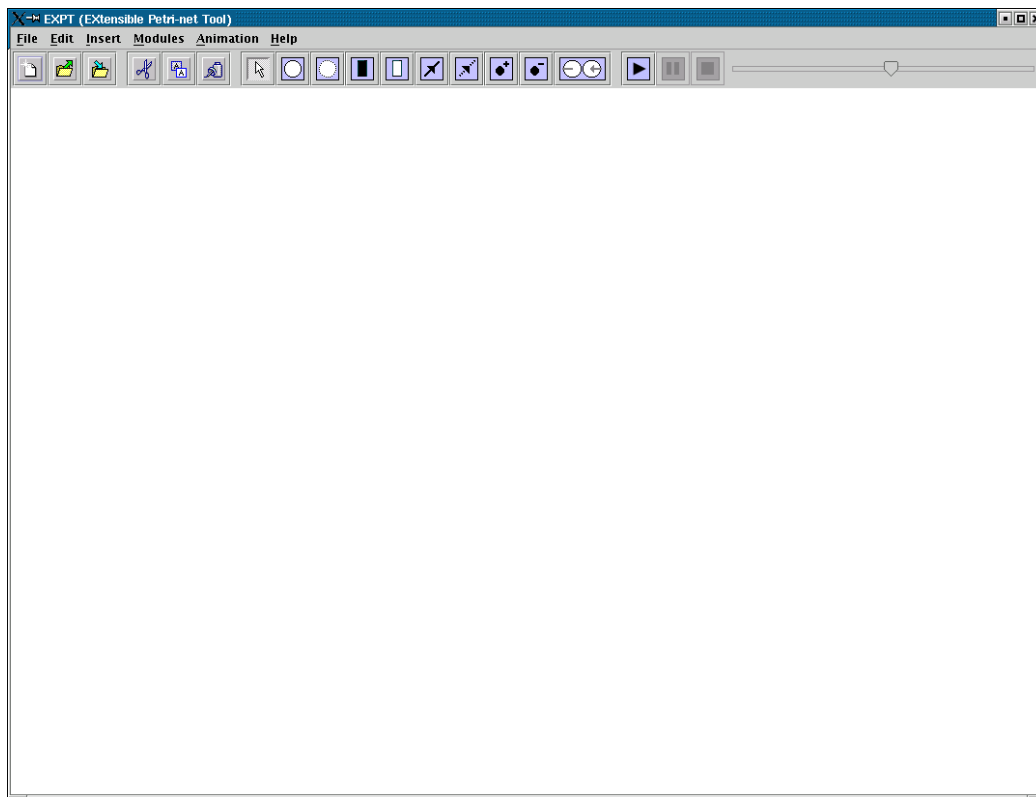


Appendix A: EXPT User Guide

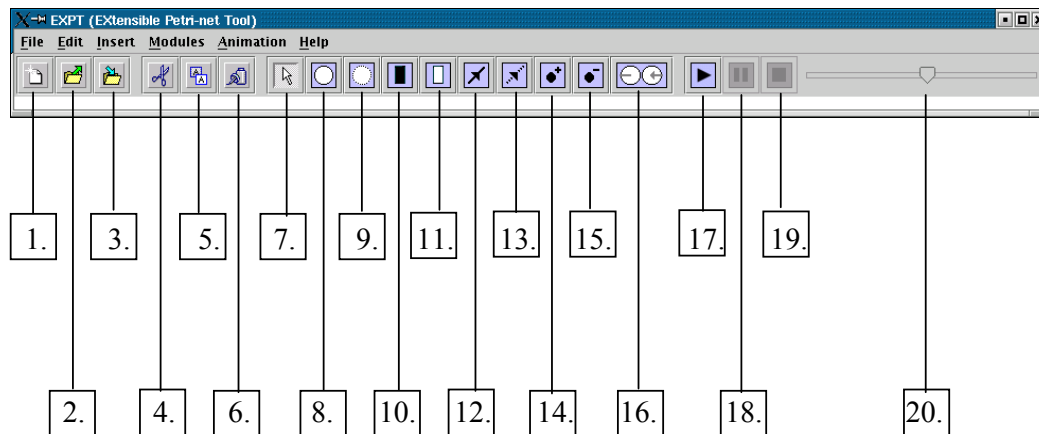
How to get started

1. Unzip the EXPT.zip archive in the directory in which you want to install it. This should create a folder called EXPT containing everything that is necessary to run EXPT. (This includes the necessary JDOM api).
2. Go into the EXPT directory. To run the application under Windows you will need to type EXPT.bat at the command prompt. In Linux you will need to type ./EXPT.csh in a console.

Hopefully EXPT will display a window like the one shown below.



What do the buttons do?



- | | |
|-----------------------------------|------------------------------|
| 1. Create a new net | 11. Add a timed transmission |
| 2. Open a net from file | 12. Add an arc |
| 3. Save the active net to file | 13. Add a reference arc |
| 4. Cut all selected elements | 14. Add a token |
| 5. Copy all selected elements | 15. Remove a token |
| 6. Paste clipboard elements | 16. Add a subnet |
| 7. Pointer tool | 17. Start animating |
| 8. Add a place | 18. Pause animation |
| 9. Add a reference place | 19. Stop animation |
| 10. Add an immediate transmission | 20. Adjust animation speed |

How do I create a new net?

To create a new net, select “new”. You will then be offered the choice of one of the available net templates. Choose one of these and start to create your net.

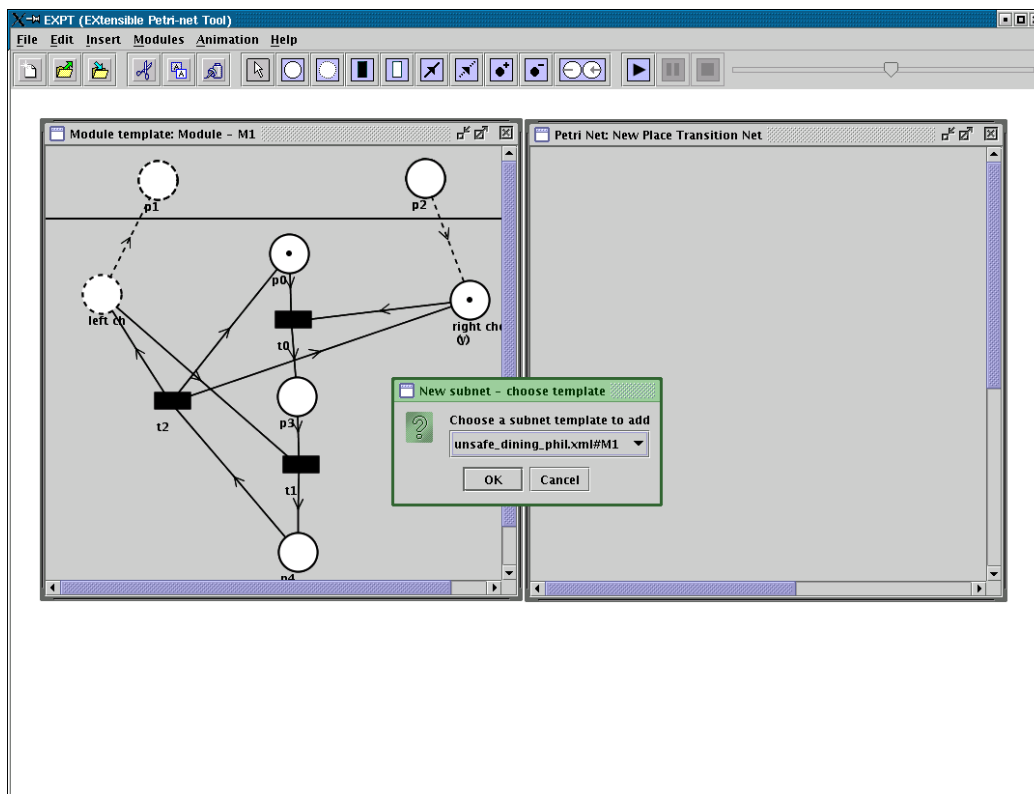
How do I open or save a net?

To open a net either press the open button or select open from the file menu, then choose the file you wish to edit from the file chooser. To save a file follow the same procedure but select “save” instead.

Building a net or subnet

Once a net or a subnet has been created or opened, the user can begin to insert elements. By clicking with the mouse on a button and then clicking on a location within an open petri net, the appropriate action, such as adding a transition, is performed at that location. To insert an arc or reference arc click on the source node and then click on the target node. An arc will be drawn if the arc tool is chosen and its insertion is allowed. Tokens are added and removed by choosing the appropriate tool and then clicking on the appropriate place.

To insert an instance of a subnet choose “Add a subnet”. You will then be prompted to choose a subnet from those open on the desktop. (If no subnets are open you will not be able to enter a subnet!). With the chosen instance selected the procedure is just the same as with normal elements. The choosing procedure is illustrated below.

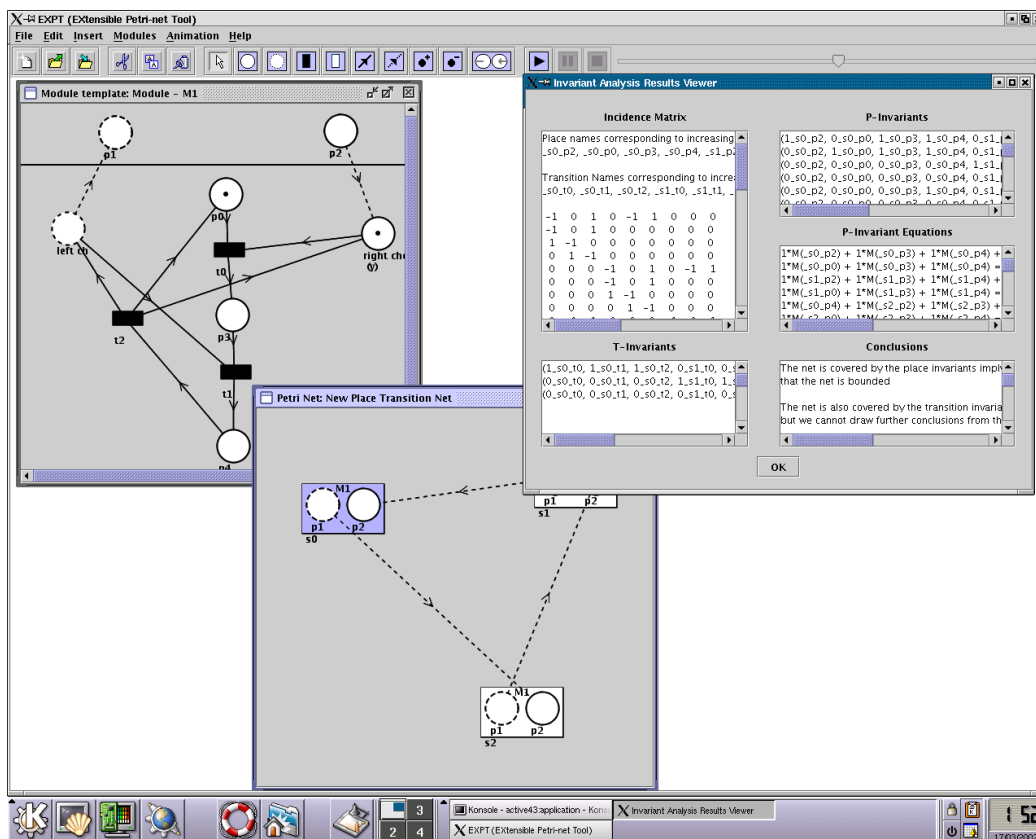


Editing a net

With the “pointer” selected it is possible to select a group of items in a petri-net. These items can then be cut or copied and will be stored on the clipboard. When items from the clipboard are pasted a box will appear in the active net, corresponding to the items that were cut or copied. This box can then be dragged and its items pasted with a double click on the left mouse button.

Can I analyse the net?

Yes. To analyse a net you first need to load an analysis module. This is done with “Load a module” from the Modules menu. The loaded module can then be run and will analyse the active petri-net, hopefully producing the results you expected!



Shown above is the invariant analysis of the three dining philosophers problem.

How do I animate my completed net?

To animate a net click on the “Start animating” button. The net will begin to animate automatically with enabled transitions highlighted blue and firing transitions highlighted red. The speed of the animation can be controlled with the sliding bar, whilst “pause” temporarily stops the animation. If the animation is stopped using “stop” you will be offered the option of returning the net to its state prior to animation.

What if I want more information about the elements in my net?

Simple, a right-click on the mouse button will bring up the option to show a properties box. This box contains all the information regarding the element in question and will allow you to edit the fields that may be changed. An example of what might be expected is shown below:

