

Transpath2CPN QVT Transformation

Quick Start

Abel Gómez

1 Getting the example tool

The tool can be downloaded from <ftp://lujuria.dsic.upv.es/transpath2cpn>. The compressed file `eclipse-platform-3.3.2-win32-Transpath2Cpn-Minimal.zip` contains all the needed files to execute the transformation. It also includes some example files.

2 The workspace

The tool provides two example files:

- `example.xml`. Is a XML file extracted from the transpath database. It must contain the information about a pathway.
- `transpath2cpn.qvt`. Contains the QVT transformation to transform from the transpath domain to the CPN Tools domain.

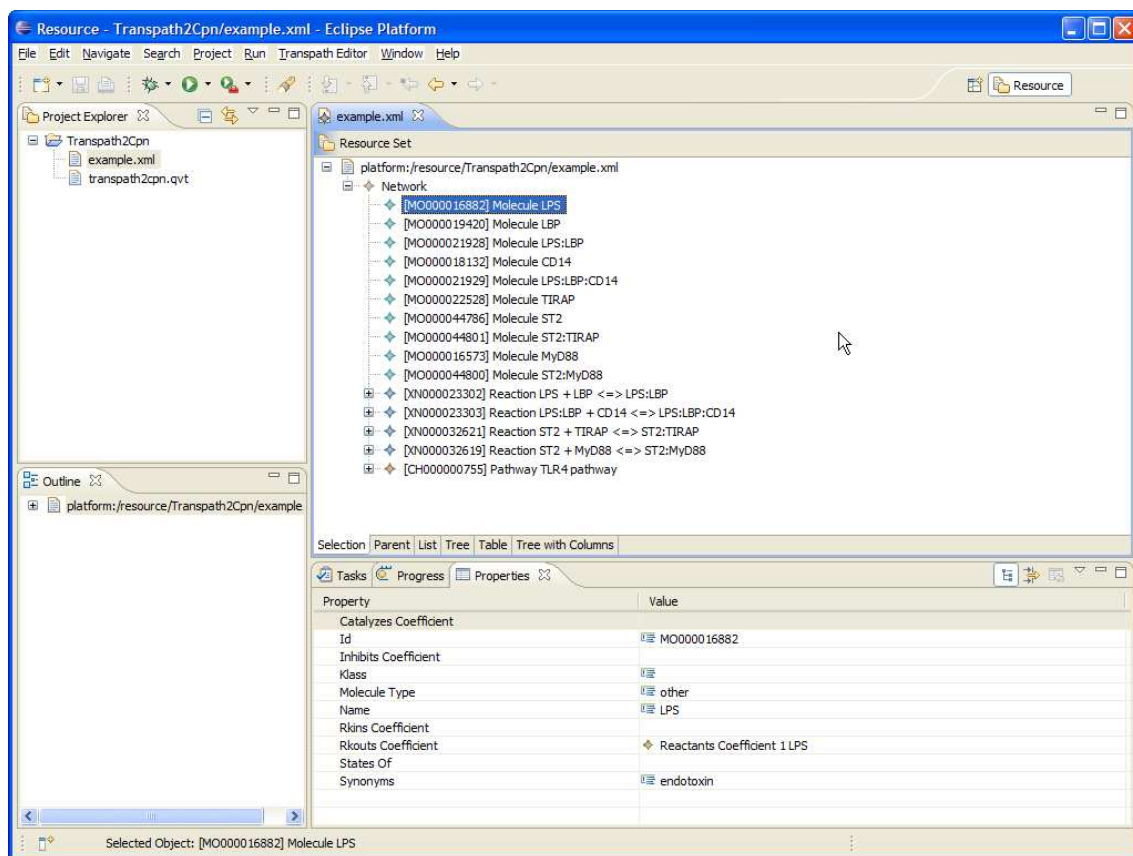


Figure 1: Workspace with the example files.

Figure 1 shows the example workspace when the tool starts. The file `example.xml` is open with its default editor (the transpath model editor). This editor is able to represent the information of the TRANSPATH database as instances of the transpath metamodel.

Figure 2 shows the actual contents of the `example.xml` file. As can be seen, `example.xml` is a XML directly obtained from the TRANSPATH database.

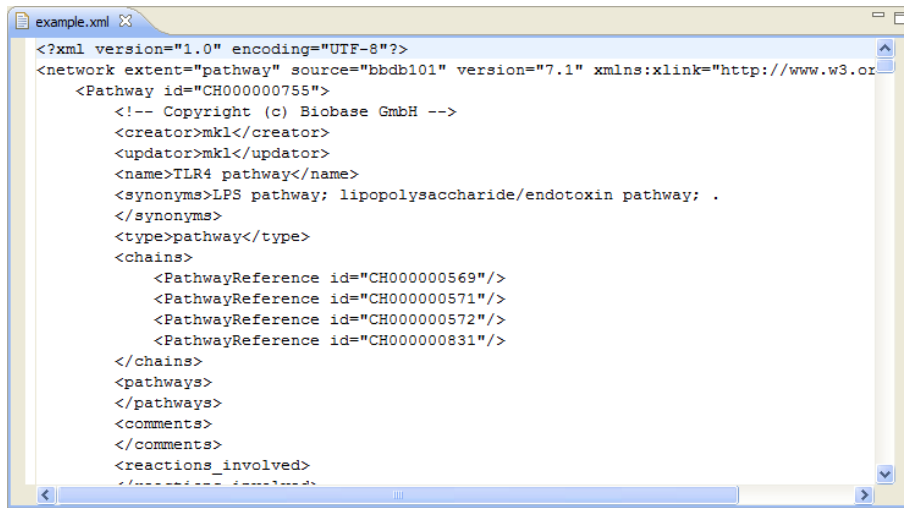


Figure 2: Actual contents of the `example.xml` file.

3 Running the example

In order to execute the transformation, the user must select Run as $\rightarrow$ 1 QVT Transformation as the figure 3 shows.

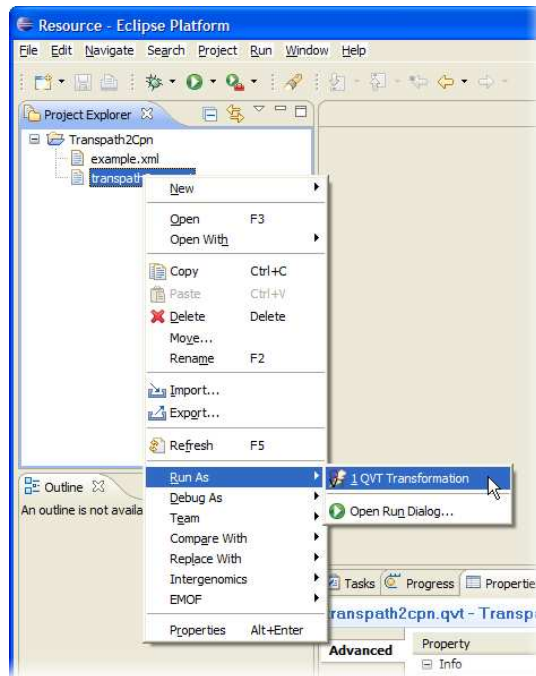


Figure 3: Running the QVT transformation.

Figure 4 shows the dialog used to configure the transformations. The upper editable field contains the name that identifies the selected transformation. This name is initialized to the transformation name. The second field (which has the **Browse...** button on the right) indicates the path of the file that contains the transformation. The **Browse...** button is used to specify the transformation file to be executed (***.qvt**). When the **Run as** dialog is opened by selecting a QVT file from the context menu, this value is established automatically to the selected file.

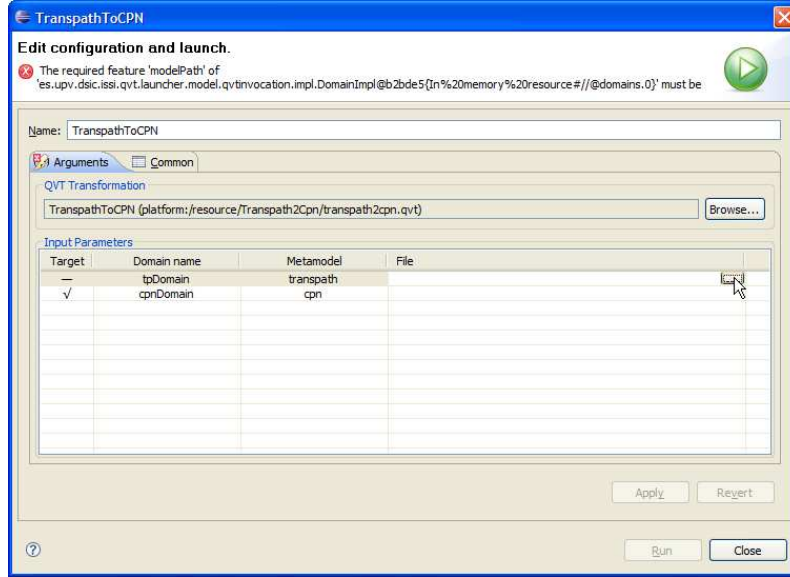
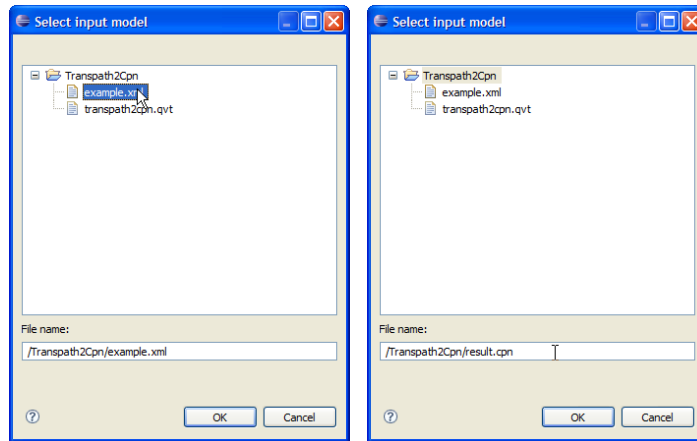


Figure 4: Configuring the transformation.

Once a QVT file has been selected, the central table can be used to specify which files correspond to each one of the domains of the transformation, as the figure 4 shows. Figures 5a and 5b show the dialogs to specify the transpath and the cpn domains respectively.



(a) Input file of the transformation (b) Output file of the transformation

Figure 5: Arguments of the transformation.

Figure 6 shows the dialog with all the information needed to execute the transformation. The direction of the transformation is specified by clicking in the target cell of the target domain. By default, the target domain will be the last domain of the transformation.

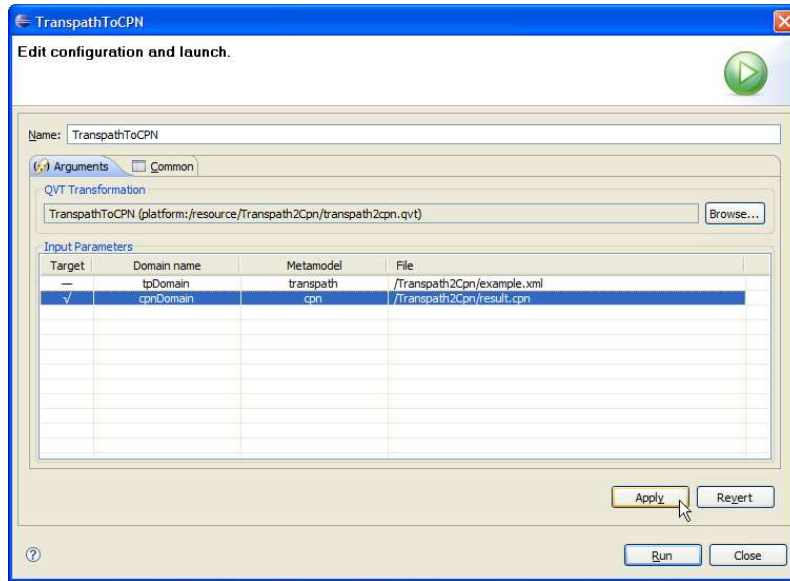


Figure 6: The transformation and its arguments.

4 Result files

Once the transformation has been configured, the Run button can be pressed, and the execution of the transformation begins. When the transformation ends, two new files appear in the workspace. The first one is the result model (**result.cpn** for this example) and the second one is the traces model (**result.traces**, which filename is built from the result model). Figure 7 shows the Project Explorer view with the result files.

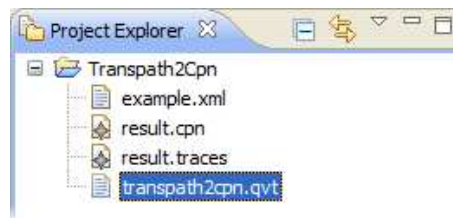


Figure 7: Result files.

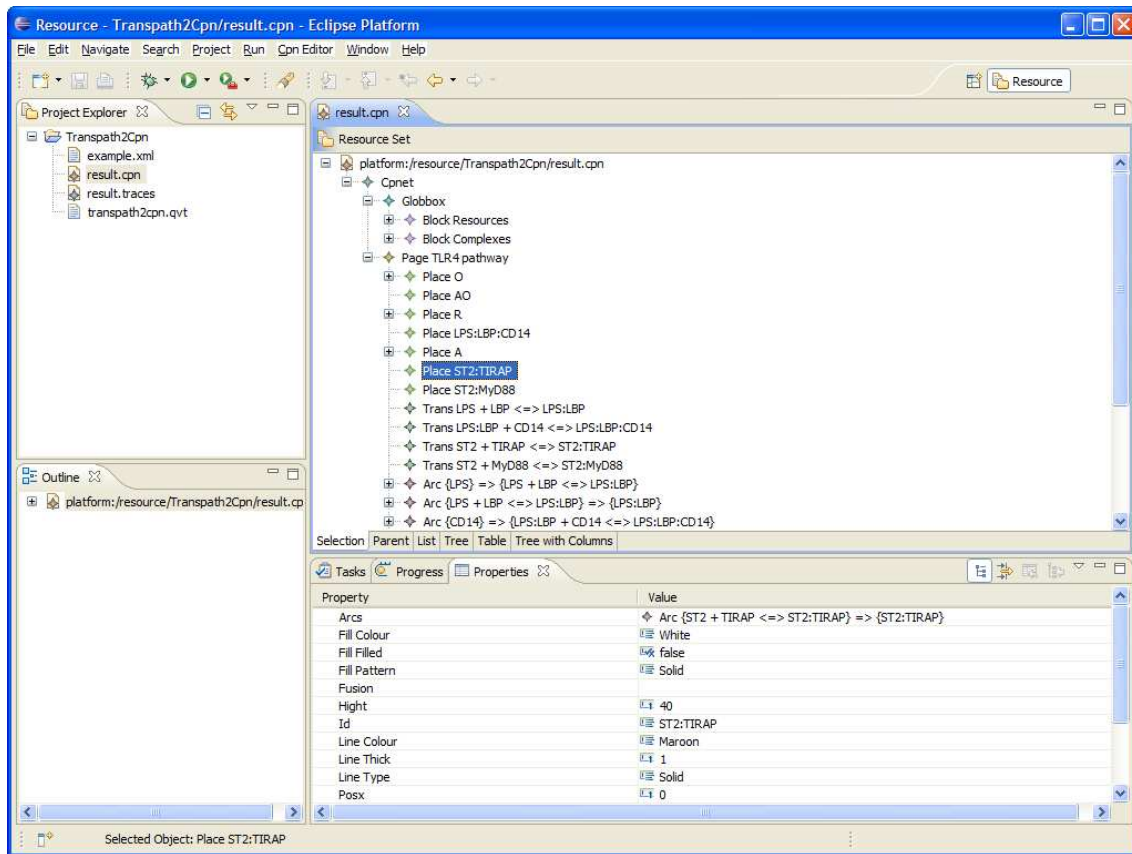
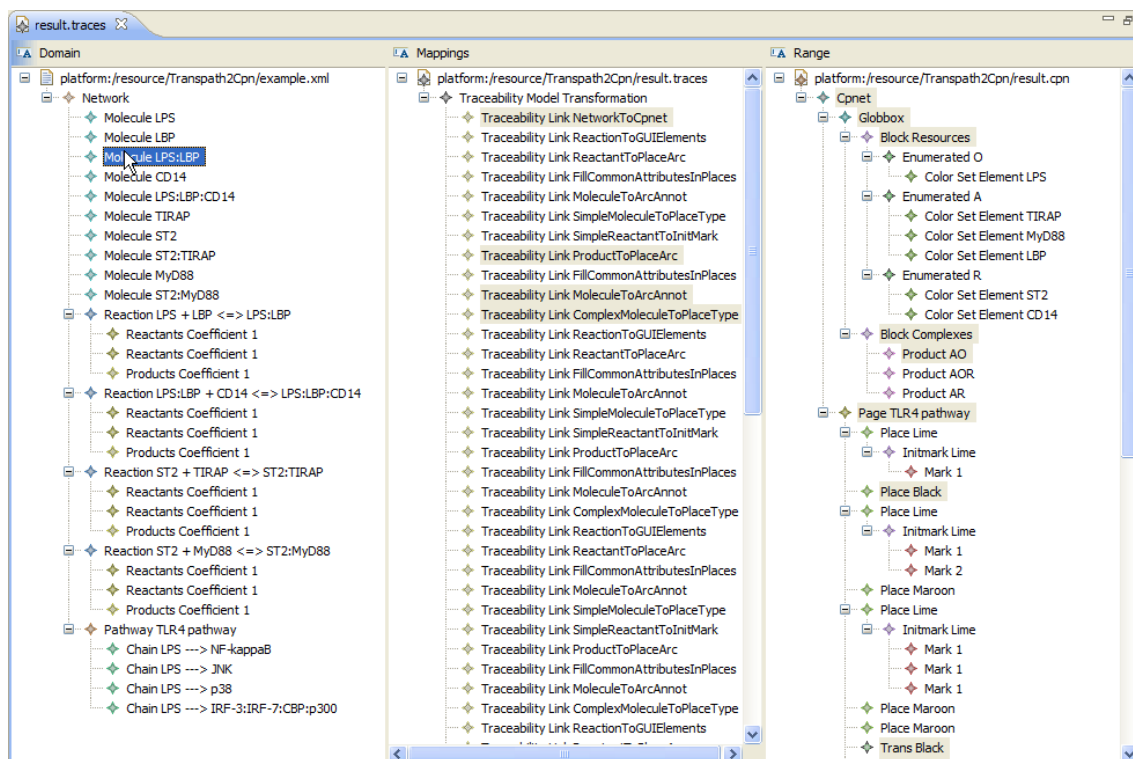


Figure 8: Cpn model editor.

The result file is an XMI file which is instance of the CPN Tools metamodel. Figure 8 shows the **result.cpn** file in the Cpn model editor, and figure 9 shows the traces model with the default traces editor. This traces editor shows the correspondences between the source and the target domains.



In order to be able to open the result file in the CPN Tools application, this file must be converted to a valid CPN Tools XML file. This step is done by using the context menu (see figure 10). In this step, also a layout algorithm can be applied if the layout step is not performed in the previous transformation step.

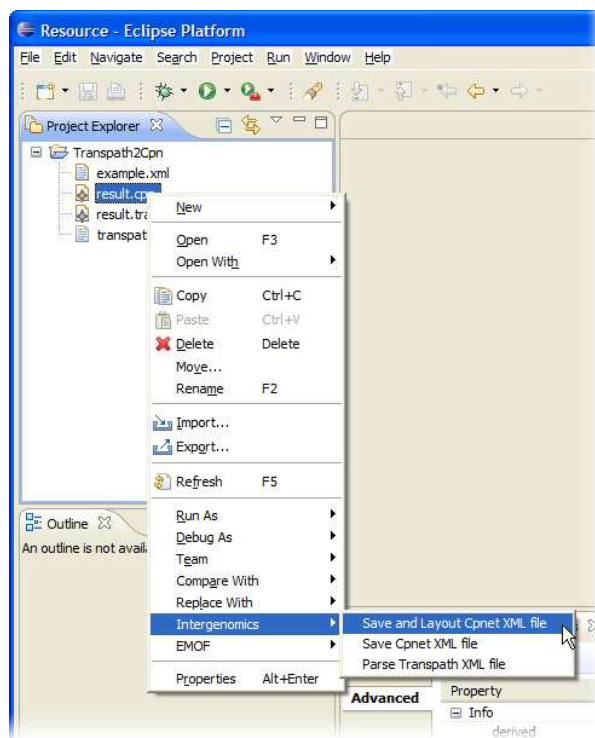


Figure 10: Save to CPN Tools.

In figure 11 the dialog to set the XML file name is shown.

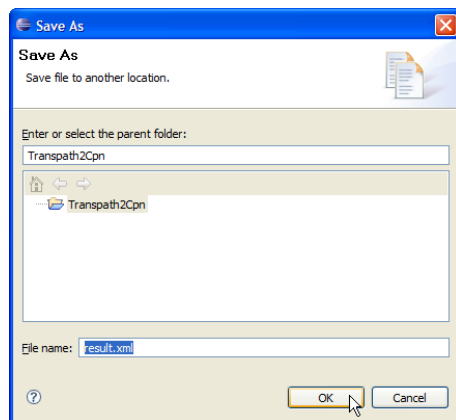


Figure 11: Save file as...

Figure 12 shows the final XML file in the Project Explorer view. The file can be opened in a text editor, and, as can be seen on the right part of the figure, it contains a valid XML file that can be directly opened in CPN Tools.

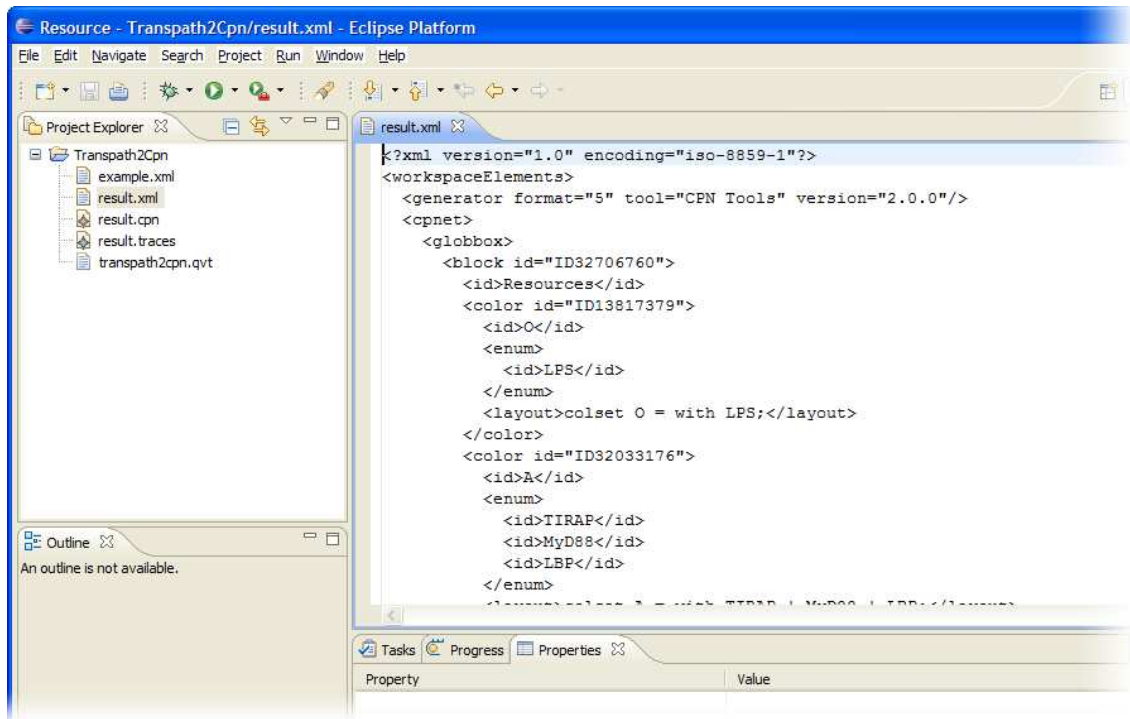


Figure 12: Contents of the final XML file.

5 Result file in CPN Tools

Finally, figure 13 shows how the final petri net looks like. The position of the places and transitions can vary depending on how the layout algorithm is applied. The obtained net can be directly simulated by CPN Tools.

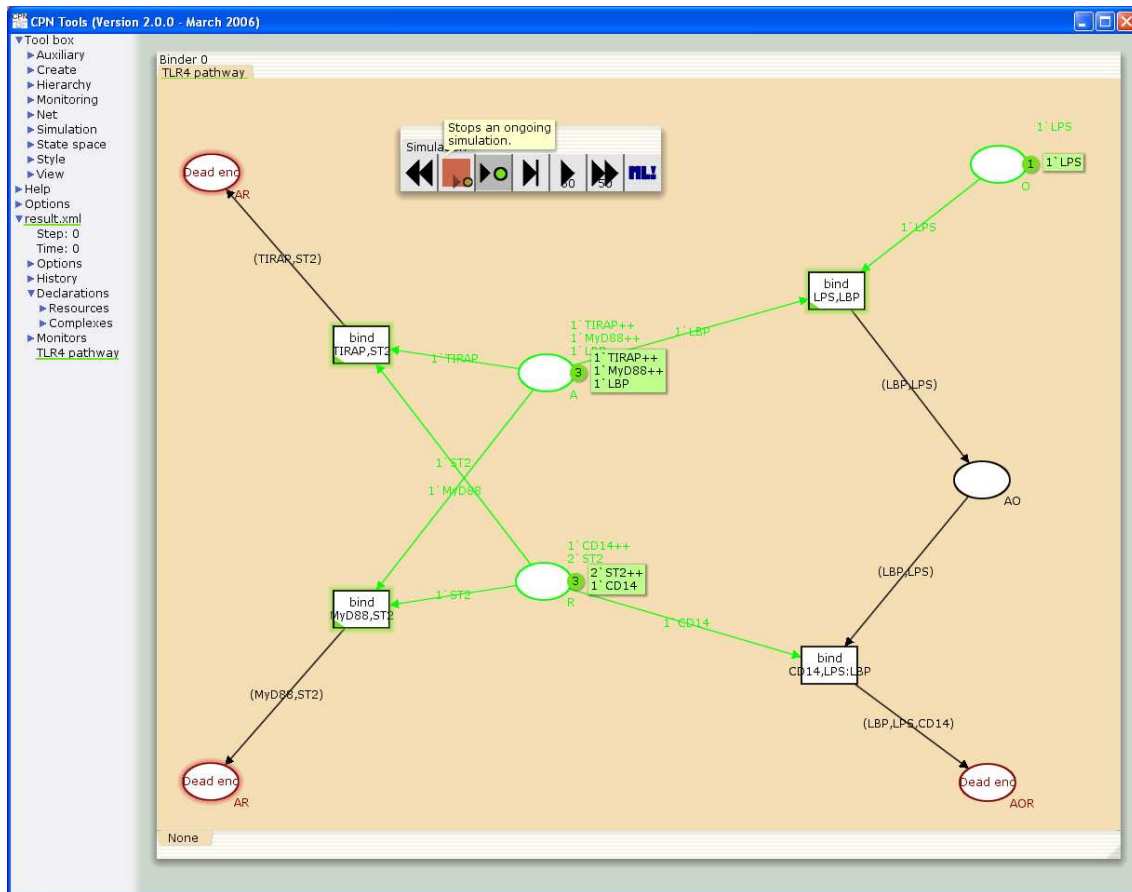


Figure 13: Final result in CPN Tools.