

TUTORIAL: Estimating Precision with ProMLite

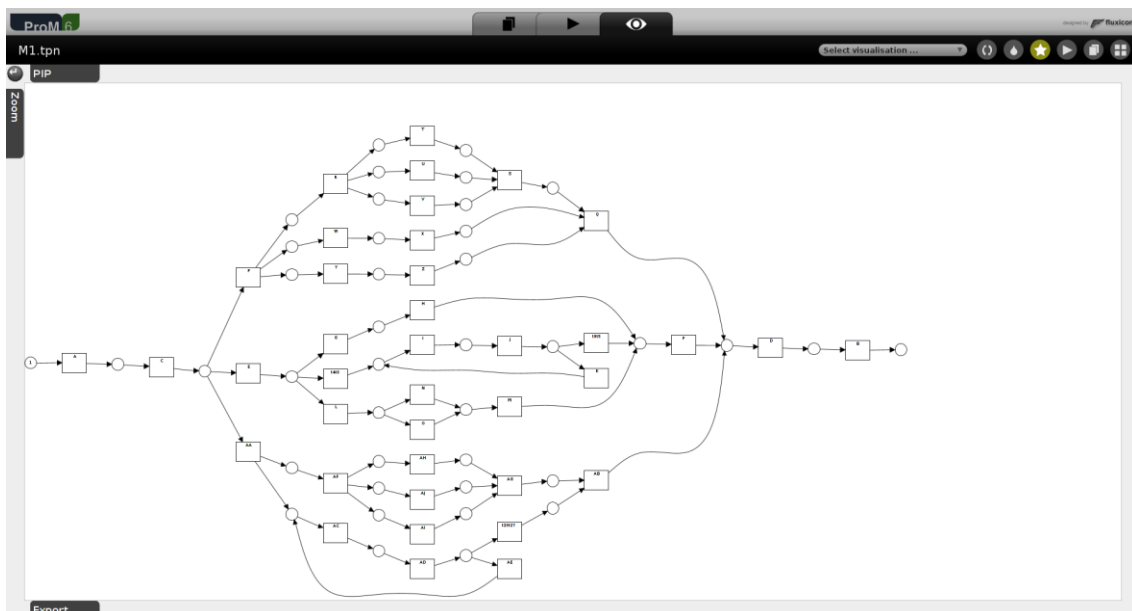
This simple tutorial will provide you the necessary steps to use ProMLite in order to estimate the precision of a process model with respect to a given event log. The underlying theory can be found in Chapter 8 of the book [“Conformance Checking – Relating Processes and Models”](#).

Dataset

Process model associated to the file M1.pnml, and event log associated to the file M1.xes, available at the webpage of the book.

Loading the Model and the Event Log

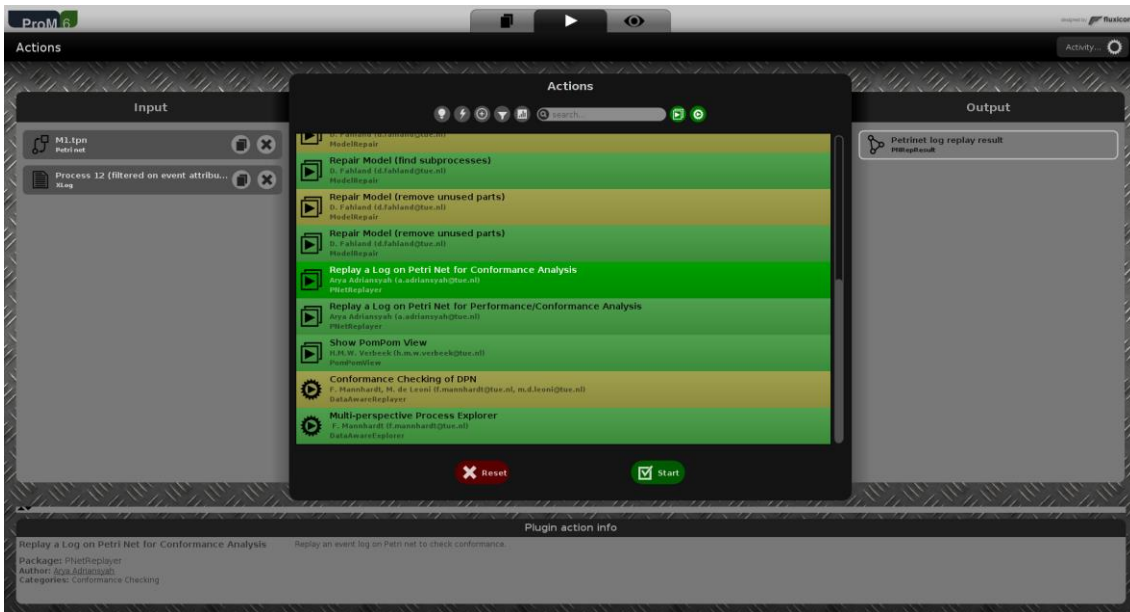
Once you download in your computer the dataset for this tutorial, you should be able to upload them into the ProMLite platform. The process model should look like:



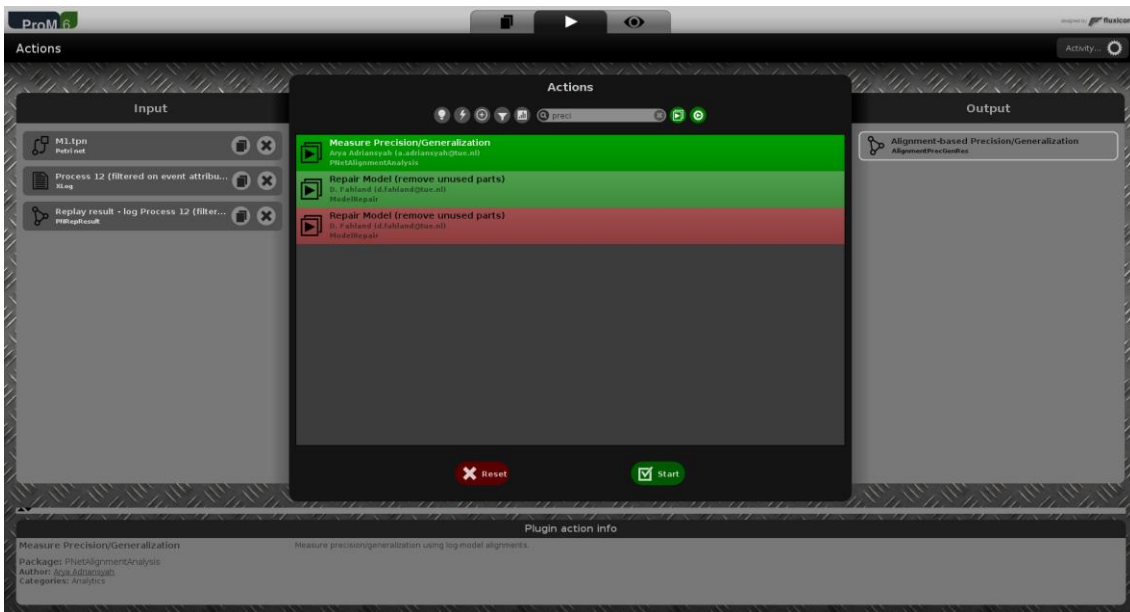
The event log contains 500 traces, and 36 different activities.

Aligning the Event Log and the Process Model

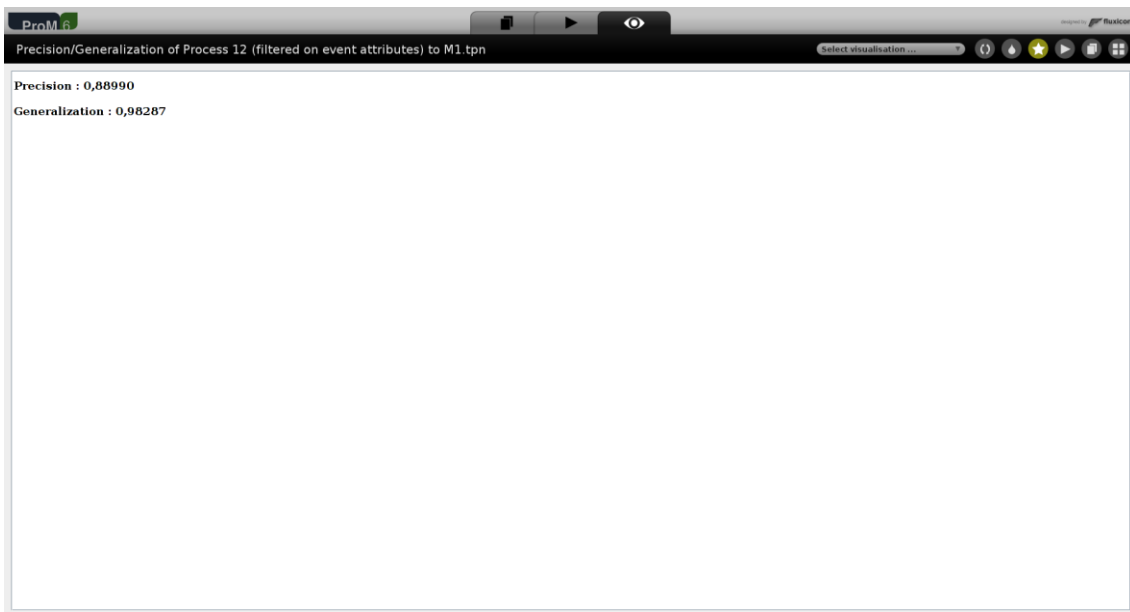
The second step is to compute an alignment of the event log and the process model. This alignment will be then used to obtain a precision metric in the final step. For this, click on the Play button and add both the event log and the process model. Then select as Action the plugin “Replay a Log on Petri Net for Conformance Analysis”. The window should look like the following:



Follow the necessary steps to obtain the alignment (“Petri net log replay result”). These steps are carefully explained in the tutorial “Conformance Checking in ProMLite”, from the In The Lab section of Chapter 7 of the book. Once the alignment is obtained, click again on the Play button and add now the process model, the event log and the alignment. The Play area should look like:



By selecting the plugin “Measure Precision/Generalization”, and clicking on the Start button in the bottom part of the screen, the plugin for estimating precision (and also generalization) is invoked. A configuration screen asks about consider as a single trace all the traces with the same sequence of activities (Accept it as it is). Once this configuration screen is passed, the result of the precision metric is provided:



Therefore, the precision for the process model with respect to the event log is 0,88990.