MiMo (Mining Module)

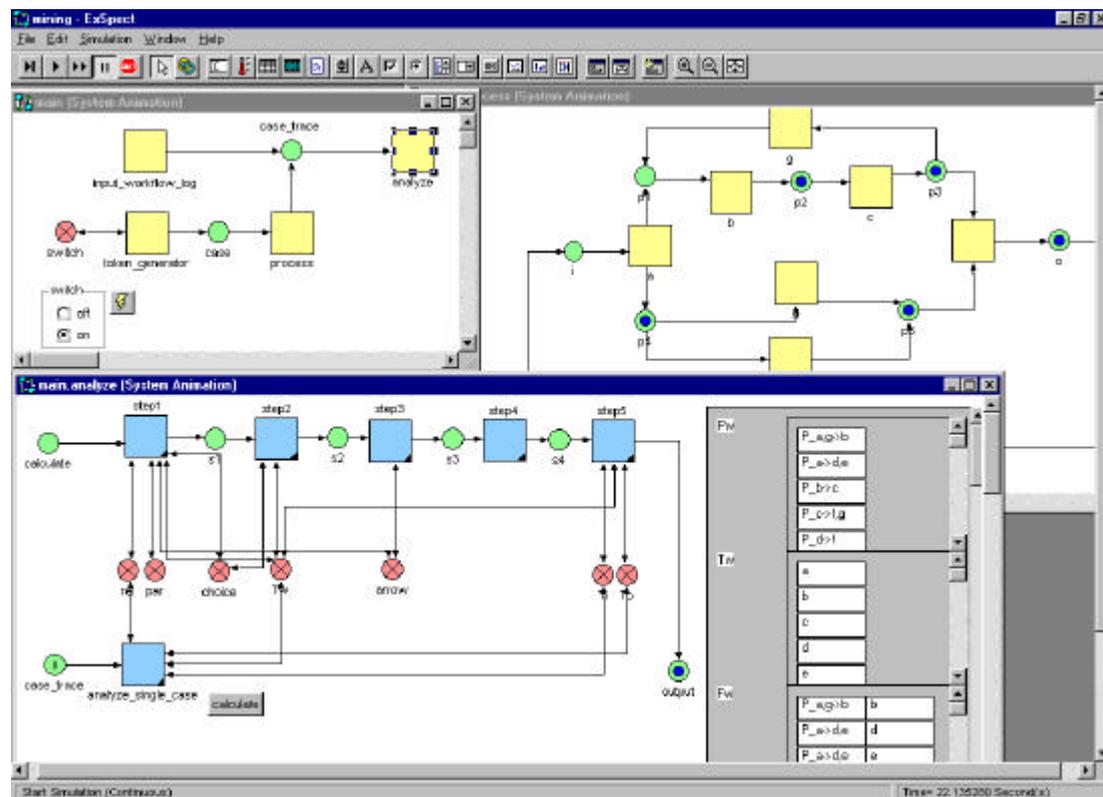**Author:**

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Short description:

The first tool to support the alpha algorithm for process mining was MiMo (Mining Module). MiMo is a tool based on ExSpect (www.exspect.com). ExSpect (EXecutable SPECification Tool) supports high-level Petri-nets. MiMo consists of two parts: (1) a workflow log generator and (2) a workflow log analyzer. The workflow log generator generates workflow traces on the basis of a process model. It is possible to build a graphical model of the workflow process in terms of an hierarchical WF-net. Using the MiMo toolbox a workflow log is generated automatically. The generation process can be controlled (e.g., started and stopped) by the designer. Instead of using the workflow log generator, it is also possible to upload workflow traces from a file.

System requirements:

MiMo will run on any system provided that ExSpect has been installed. For downloading ExSpect we refer to www.exspect.com.

Screenshot:

The workflow log analyzer is the most interesting part of the MiMo toolbox. The analyzer is a straightforward implementation of the mining algorithm presented in the previous section. This part of the MiMo toolbox automatically generates a Petri net on the basis of a workflow log. It is possible to generate a Petri net on-

the-fly and the user can inspect ->, >, #, and || relations at any time. The screenshot shows a the ExSpect module MiMo. Its shows the architecture (upper left window), the workflow log generator (upper right window), and the workflow log analyzer (bottom window).

Relations to other tools:

MiMo has been used as the starting point for the development of two additional process mining tools: EMiT and Little Thumb. Both tools use extended versions of the alpha algorithm, interface with commercial systems, and have been tested on real cases. EMiT deals with short loops effectively and is able to rediscover any SWF-net. EMiT also takes timestamps into account to generate performance information. Little Thumb extends the alpha algorithm with features to be able to deal with noise. Again some preprocessing is used to "massage" the > relation.

Who should use MiMo:

MiMo builds on ExSpect. Therefore, only people experienced with ExSpect should use this tool. People without experience are referred to our tools EMiT and Little Thumb. MiMo is particularly interesting for people already using ExSpect and wanting to experiment with extensions/modifications of the alpha algorithm.

How to use MiMo:

Download ExSpect and the module mimo.ex. The module already contains an example. For people experienced with ExSpect everything should be self-explanatory. Therefore, there is no manual. People without this experience are referred to our tools EMiT and Little Thumb.