

- The model and the results are specified through a text description that serves as the input and output of the analysis tools. Two text formats have been defined: a special-purpose format and a special-purpose XML-based format. In addition, it is possible to specify an XMI format that conforms with a MAST-2.ecore metamodel. This XMI format can be used as the output format for a MAST model (using the “-d” option and a “.xmi” filename termination) or for the results of the analysis tools (using a “.xmi” filename termination). However, the XMI file cannot be used as input to the analysis tools, because they are currently only available for MAST-1, and the.ecore metamodel is specified for the future MAST-2 version.
- Graphical editors and other tools generate the system using one of these text descriptions. They can then invoke the analysis tools.
- A parser converts any of the text descriptions of the system into an Ada data structure that is used by the tools. A module is offered to convert the Ada data structure back into the chosen text description.
- The XML format provides the designer with capabilities to use free standard XML tools to validate, parse, analyse, and display the model files.
- A module to generate the models from an Eclipse Ecore model is available, with tools to transform the real-time system model into the MAST text or XML formats, and the results of the analysis tools back into an.ecore model.
- A results viewer is available to view the analysis results in a convenient way.

The MAST environment will integrate the following tools described in Figure 1:

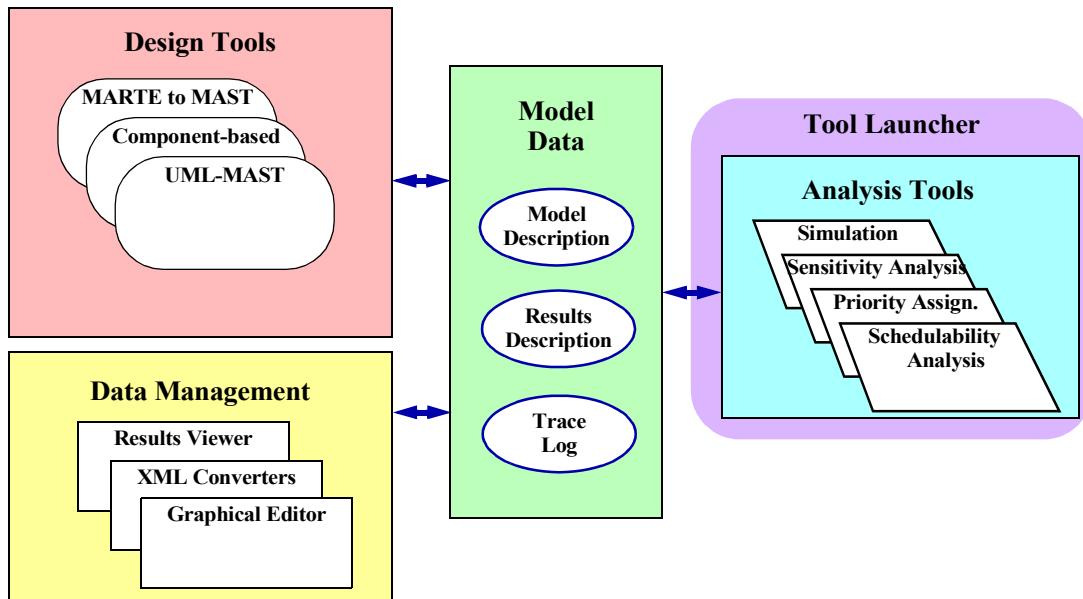


Figure 1. MAST toolset environment

- The schedulability analysis tools perform different kinds of worst-case analysis to determine the schedulability of the system. Blocking times relative to the use of shared resources are calculated automatically.