UML-MAST version 0.9

(This file is just a preliminar version and is equivalent to the README.txt file)

This is the UML Modeling and Analisis Suit for Real Time Systems (UML-MAST) tools and analysis environment for Rational Rose 2000 enterprise edition.

Quick Reference of UML-MAST

UML-MAST offers the following options :

<<>> Mast_RT_View "Create New Model" framework

If the Framework Wizard Add-In is installed and activated, the File > New command opens the Create New Model dialog box. This dialog box displays a number of frameworks that can be used when creating a new model.

UML-MAST adds a framework for starting editing a blank Mast_RT_View model from the scratch. This framework includes the basic packages necessary to incorporate the UML-Mast components and building the UML-MAST model of the real-time application.

If the File > New command just opens a new empty model, the Framework Wizard Add-In is not active. Note, however, that this add-in is only available on Windows, and only in some Rational Rose editions.

To activate the Framework Wizard Add-In:

1.Click Add-Ins > Add-In Manager in Rational Rose.

2.Select the Framework Wizard option and click OK. If the Framework Wizard option is not present, the Framework Wizard Add-In is not installed.

To install the Framework Wizard Add-In:

1.Run the Rational Rose setup program.

2.Perform a custom install, and select the Rose Framework Addin feature. If that feature is not present, the add-in is not available in your Rational Rose edition.

<<>> Add UML-Mast Components Wizard

When the active diagram is a class diagram, the menu "Query" is shown and it includes the options "Add UML-Mast Component" and "Add UML-Mast Wizard" these two option let you

introduce in the selected class diagram any of the static uml-mast stereotyped class components. The wizard has a number of options and let you change the apperance and initial contents of the class. Changes made in the wizard are keept and the classified menu options for adding a particular component which appears in the "Add UML-Mast Component" entry follow the last selected options in the wizard.

This Helps minimizing the typing from the user to the absolutely necessary information to build the model and avoid the having to remember all attributes names, types, class stereotypes, etc.

<<>> Pre loaded UML-MAST Stereotypes.

When adding any UML-MAST component into the model, the key is assigning the proper stereotype to it, this is easier if the stereotype is already in the list of stereotypes to chose. This has been done by UML-MAST. This is specially helpful to introduce Activity_Model components which in this version are not incorporated to the Add UML-Mast Components Wizard.

<<>> Check UML-MAST Components Tool

This tool helps checking the spelling of attributes names and other possible errors quickly before running the compiler. It is also called from inside the compiler for the same purpose. This and the following options are in the Tools rose menu.

<<>> Mast_RT_View to Mast_File Compiler

This is the main tool of the toolset, it checks and analizes the complete Mast_RT-View model and for each scenario in the RT-Scenarios_Model builds a Mast_file ready to be analized by Mast analysis tools. It creates the files inside a directory with the name of the rose model followed by the postfix "_Mast_Files", if this directory does not exist it is created as a subdirectory of the directory where the rose model is. Even thought it closes and reopens the rose model it does not change it in any way. It shows coments and errors and in a log window and at the end of each scenario Mast_file generation shows also the name of the file and the directory where it is created. The name of these files has the extension ".txt" just for being shown easily with the text editor.

<<>> Mast Analysis Tools

The complete set of analysis tools that are available from the Mast Team, can be called directly from the rose menu. All you need is giving the name of the Mast_file you want to analise (one of those created with the compiler), chose the analysis tool and select the output results of the tool to be sent to the default file.The default file is located in the same directory and use the same name of the input file chaging the extension to ".out". This ".out" extension is useful to automate the recovery and viewing of results.

<<>> View Mast_File and Analisys Results

This is just a file selector tool for text editing. First this script ask for the scenario of interest and the kind of file to be viewed. It opens the Mast_file compiled (my_scenaio.txt) or the results of the analysis tools (my_scenario.out) in the windows text editor, in this later case it opens also the mast parser intermediate results.

<<>> Inserts Analysis Results into Scenario Model

What this tool does is looking for the analysis results file of the selected scenario (scenario.out) and analize it searching for the timing results of each transaction in the scenario. Then it inserts with appropiate attributes this data into the Timing_Requirements of the transaction. The Slacks of each transaction are inserted also as attributes, and the system slack is added to the scenario package documentation.

<<>> Uninstall UML-MAST for Rose

It just uninstall the new model framework, the menus and stereotype extensions and the mast analysis tools.

<<>> UML-MAST Documentation

In the Help menu there is also a group of UML-MAST links. The documents directly available are the UML-MAST especification, and the Mast_File description. These are in PDF format so they can be viewed with Adobe Acrobat reader (A version of it is included in the CD). Also the UML-MAST web page can be accesed from this menu. There you can find some more information like a complete example and the formal Metamodel. If some more documents should be sent with any distribution that could be found in the rose\mast\docs directory.

Thanks for using UML-MAST !!

If you have any comment or suggestion about this tool, please feel free of getting in contact with us.

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Installation and unistallation instructions.

UML-MAST for Rose is distributed in any of two ways, in a CD or in a zip file downloaded from the UML-MAST home page.

The CD has an autorun configured to automatically call the setup.bat script which installs the product. If autorun is disable in your platform, just execute setup.bat from the CD root directory.

- For installation run setup.bat (CD autorun program) and

- For uninstallation you have an option in the Mast section of
  the Tools Rose menu, and could do also be done by running usetup.bat
  from directory rose\mast\install on this CD.

If you download the umlmast-rose-win-09.zip file, simply uncompress it in a temporary directory and from that directory execute the script setup.bat, double-click on it or call it from an MS-DOS command interpreter window.

Setup.bat will try to chose another script adapted to be executed on two diferent platforms: Windows_NT or Windows 95. This is done by checking the value of the environment variable "OS".

The actual setup is a compiled BasicScript small program interpreted by RationalRose, for this reason the command script will execute rose with the setup.ebx file as input argument.

If you are working with any version of Windows_NT things should go fine.
If you use Windows 95 there is a limitations in the number of blank spaces that may appear in the path of your working rose.exe file. It must not be grater than 7 and can not be two or more blank spaces contiguous.
If you are in this (let's say not very frequent) case you should call your install rose.exe file with setup.ebx as input parameter from the rose\mast\install directory of the distribution CD or your temporary extraction folder writing its complete path-name from a MS-DOS command interpreter window, you will maybe have to double-quote the rose.exe path-name.

The installation program procedure is simple, it just copies the mast directory tree in the rose.exe installation directory, adds some lines to the rose.mnu file and inserts a key-value pair in the registry.

To uninstall UML-MAST extensions from your Rose working version, you can use the "Uninstall UML-MAST for Rose" entry in the Tools/UML_MAST_Tools menu option or execute the usetup.bat command script from the mast\install subdirectory in the rose.exe installation directory.
(for example c:\Program Files\Rational\Rose\mast\install)

Usetup.bat also calls diferent scripts for windows NT an windows 95 so if you are in the case described above you will have to call your install rose.exe file with usetup.ebx as input parameter from the mast\install subdirectory in the rose.exe installation directory writing the rose.exe complete path-name followed by usetup.ebx in a MS-DOS command interpreter window, (you will maybe have to use double quotation marks).

Usetup.ebx just uninstall the new model framework, the menus and stereotype extensions and the mast analysis tools.

<End of installation instructions>

If you have any comment or suggestion about this tool, please feel free of getting in contact with us.

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