

MARTE TO CHEDDAR

Install procedure of the MARTE to Cheddar feature

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1. PURPOSE

This document details the installation procedure and gives an overview of the available features of MARTE to Cheddar.

2. DOCUMENTS

2.1. MANDATORY

[N/A] Not applicable

2.2. REFERENCE

[OMG MARTE] OMG MARTE official web site (<http://www.omgarte.org/>)

[MARTE] UML profile for MARTE, Beta 1 (<http://www.omg.org/cgi-bin/doc?ptc/2007-08-04>)

[MARTE4RSA] MARTE UML Profile implementation for Rational Software Architect 7.0 (http://www.omgarte.org/Documents/MARTE4RSA/MARTE_RSA_1.0.0.zip)

[CHEDDAR] Scheduling Analysis tool (<http://beru.univ-brest.fr/~singhoff/cheddar/Cheddar-2.0-win32-bin.zip>)

[CHEDDAR INFO] Cheddar web site (<http://beru.univ-brest.fr/~singhoff/cheddar/index-fr.html>)

[ATL] Model transformation tool (http://www.sciences.univ-nantes.fr/lina/atl/www/atldemo/adt_am3.zip)

[ATL INFO] ATL web site (<http://www.eclipse.org/m2m/atl/>)

3. ACKNOWLEDGMENT

Thales Research and Technology STI/LSE has implemented the MARTE2Cheddar feature.

The following persons have contributed to the software development and documentation : Nicolas VIENNE, Eric MAES.

4. CONTENT OF THIS DISTRIBUTION

This software is delivered as an Eclipse that contains Eclipse features and plug-ins that allow one to transform a UML-MARTE model (in a Rational Software Architect format using the MARTE implementation for RSA [MARTE4RSA]) into an XML file readable by the scheduling analysis tool cheddar:

- *MARTE2Cheddar* directory
 - *eclipse* directory

-
- *features* directory
 - *com.thalesgroup.marte.cheddar*: Top-level feature with documentation and an example
 - *plugins* directory
 - *com.thalesgroup.atl*: Functions for using ATL with MARTE
 - *com.thalesgroup.atl.marte.rsa*: Specific functions for using ATL with MARTE for transformation of a model using [MARTE4RSA].
 - *com.thalesgroup.cheddar*: Cheddar metamodel + EMF generated code
 - *com.thalesgroup.cheddar.edit*: Cheddar edit + EMF generated code
 - *com.thalesgroup.cheddar.editor*: Cheddar editor + EMF generated code
 - *com.thalesgroup.java.log*: Functions for displaying messages configuration
 - *com.thalesgroup.marte.menu*: Menu extension for MARTE use
 - *com.thalesgroup.cheddar.MARTE2cheddar*: Transformation of a UML-MARTE model to a XML file readable by cheddar.
 - *.eclipseextension* file

Note: source code and related documentation are located in the plug-in archive files, along with the binaries and resource files.

5. INSTALLATION PROCEDURE

The software included in this distribution has been developed and tested with IBM Rational Software Architect version 7.0.0. It can also be installed on Eclipse 3.2.1 version.

The installation procedure is the following:

- Unzip the archive and copy the *MARTE2Cheddar* directory in your file system
- Start Rational Software Architect or Eclipse 3.2.1
- In the Help menu, go to *Software Updates > Manage Configuration*
- Right-click on *Rational Software Architect*
- Select *Add > Extension Location...*
- Browse your file system and select the *MARTE2Cheddar /eclipse* directory you just unzipped
- Restart Rational Software Architect or Eclipse 3.2.1

6. FEATURE OVERVIEW ¹

A UML-MARTE Model may contain several analysis context elements. Each of the analysis context elements will be transformed to a different XML file to be read by the Cheddar tool.

The features are :

¹ An example is provided in this distribution : *JosefilCheddar.emx*

- Checking a UML-MARTE Model that will be exported for a Cheddar use.
- Exporting a UML-MARTE Model to a Cheddar file.

Those features can be realized on a RSA UML Element on which the stereotype <<SaAnalysisContext>> is applied if Rational Software Architect platform is used. In that case, an export will create a corresponding XML file and the cheddar tool can be automatically launched opening that file.

It also can be realized on .emx files. In that case, an export will create as many corresponding XML file as there are analysis context in the model.

6.1. Check a UML-MARTE model

This feature allows one to check a UML-MARTE model developed using [MARTE4RSA].

To do so, select the desired file and select the MARTE Models Check/Check Model for Cheddar Export action. (See Figure 1.)

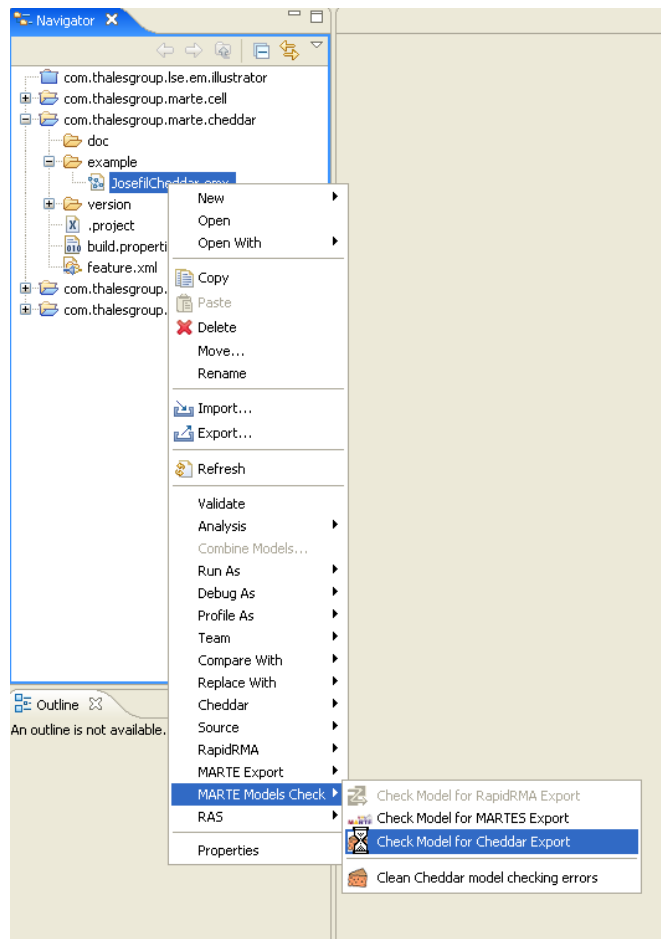


Figure 1: Check Model for Cheddar Export

The potential model errors will be displayed in the Problems Eclipse View.

6.2. Export a UML-MARTE Model for a Cheddar use

This feature allows one to export a UML-MARTE model developed using [MARTE4RSA] to an XML files that can be read by [CHEDDAR].

To do so, select the desired file and select the MARTE Export/Export to Cheddar action. (See Figure 2.)

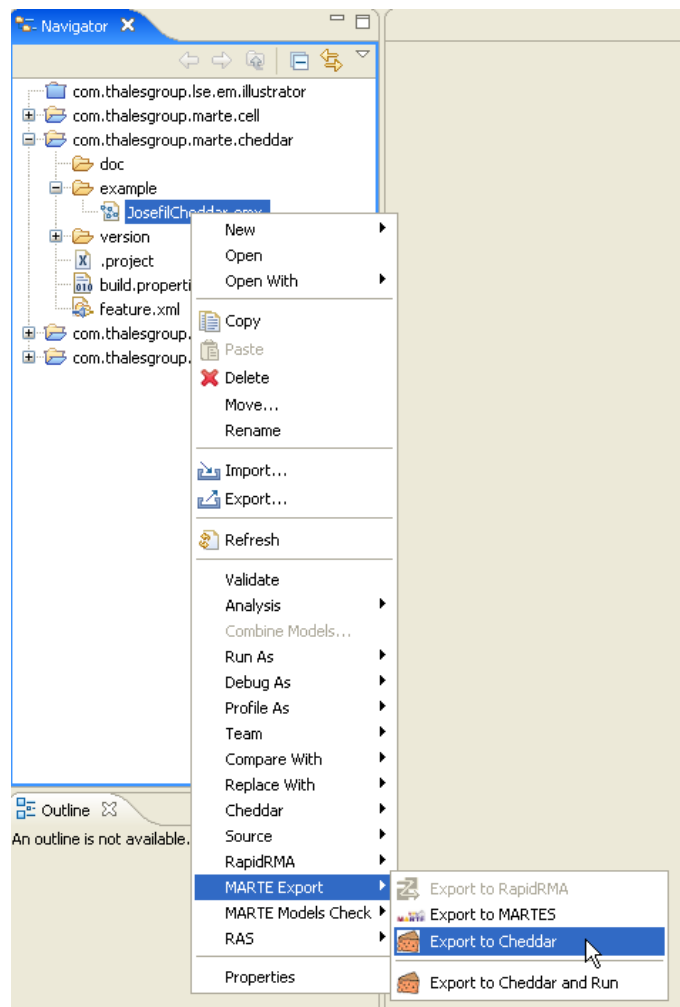


Figure 2: Export to Cheddar

XML files will be generated in the file directory.

It is possible to run cheddar from the Eclipse platform. For that, you have to complete Cheddar preference page informations. (See Figure 3.)

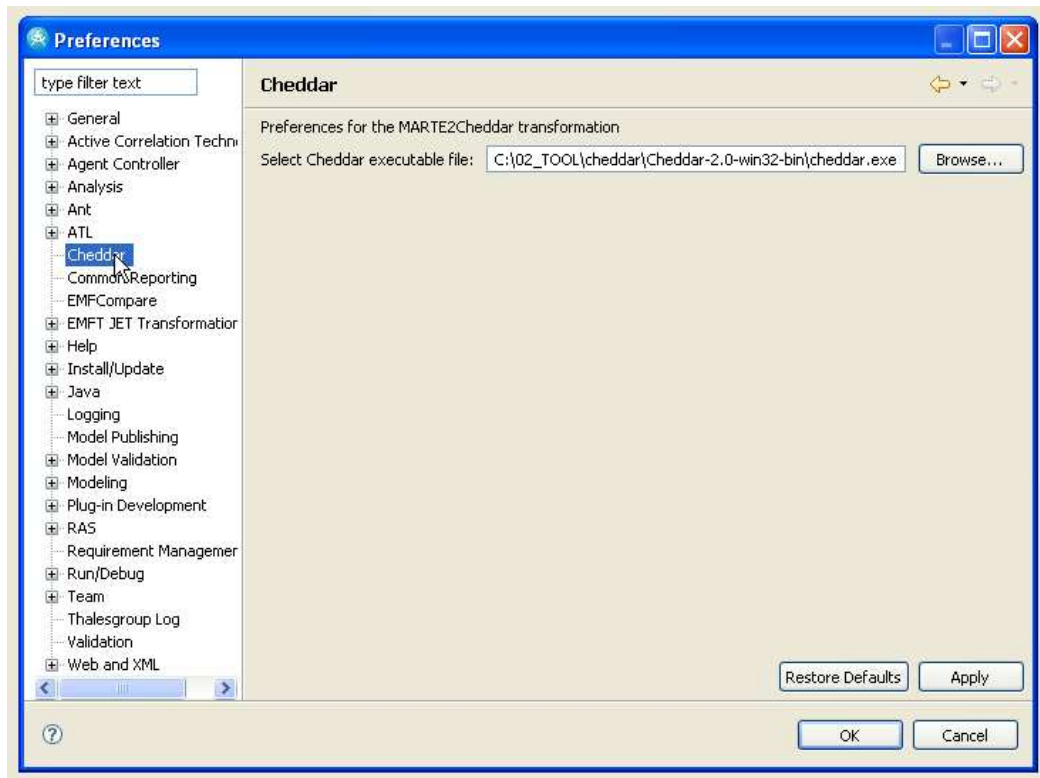


Figure 3: Cheddar Preference Page

7. CONTACT INFORMATION

If you want more information about this software, or if you want to provide feedback, please contact:

- Eric MAES (eric.maes@thalesgroup.com)
- Laurent RIOUX (laurent.rioux@thalesgroup.com)