TRADES Tool

User Manual

August 17, 2020

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100 Yitzhak Ha'nassi Blvd., POB 330, Ashdod, 77102 Israel https://www.iai.co.il/contact-us

1. Installation and Setup

1.1. Prerequisites

The following are required:

1. Oracle's Java Runtime Environment (JRE), version 8.
   https://www.oracle.com/java/technologies/javase-jre8-downloads.html
2. An Eclipse-Sirius distribution.
   Recommended distributions:
   Eclipse IDE https://www.eclipse.org/downloads/
   Obeo Designer Community https://www.obeodesigner.com/en/download
   Note: *Throughout its development TRADES Tool was verified to be compatible with the following Eclipse distributions:*
   Eclipse IDE 2020-03, Obeo Designer Community 11.3
3. A TRADES Tool Eclipse installation archive ("TRADEStool.zip" or "TRADESpluginSite.zip").
   Latest version can be obtained at https://github.com/IAI-Cyber/TRADES.

1.2. Basic Eclipse-Sirius preparation

This section explains novice users how to open the Eclipse-Sirius modeling platform.

1. Go to the Eclipse distribution directory.
2. Run the distribution's primary executable (e.g., eclipse.exe).
3. Select the directory for your workspace when prompted, and press "Launch".

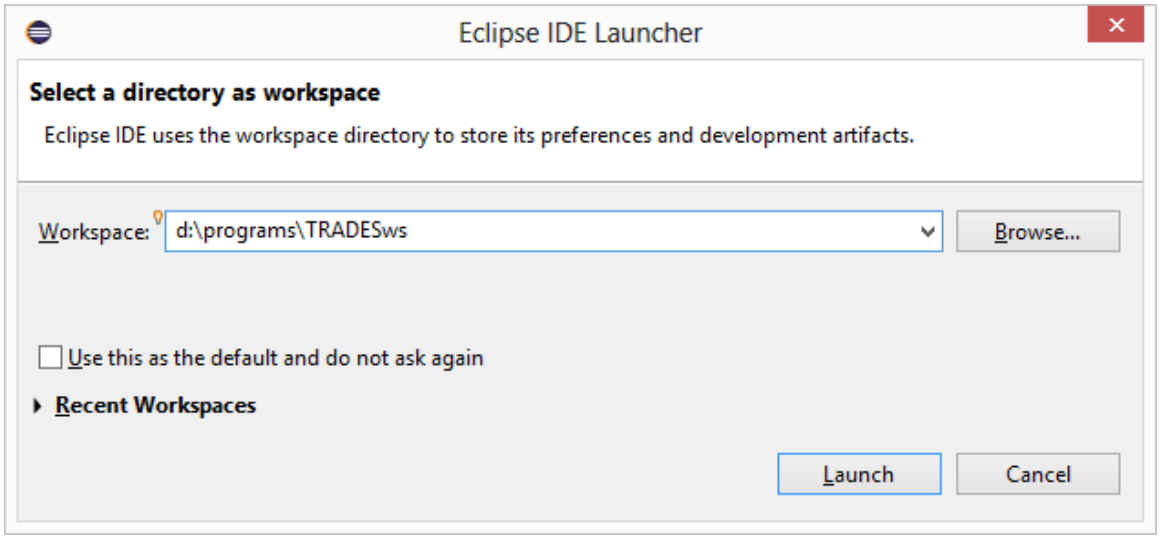

Figure 1: Eclipse workspace selection upon launch

4. Wait until the environment is fully loaded (welcome screen may differ). Close the "Welcome screen (by pressing the "X" of the tab).

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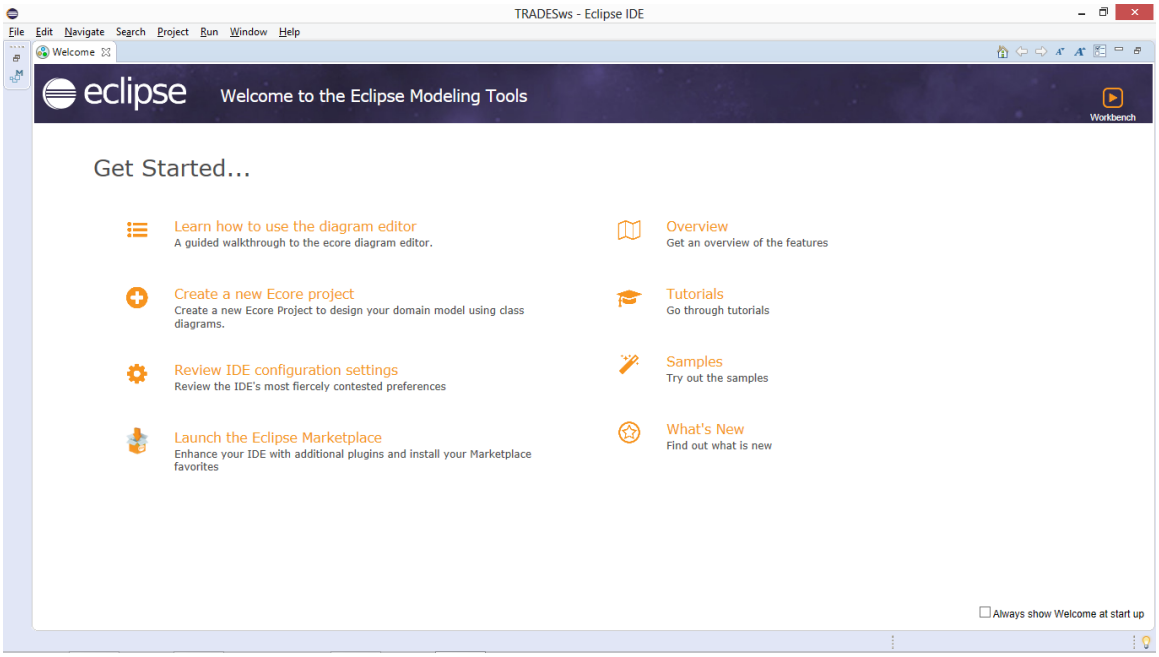

Figure 2: Eclipse welcome screen

5. Your IDE should become visible.

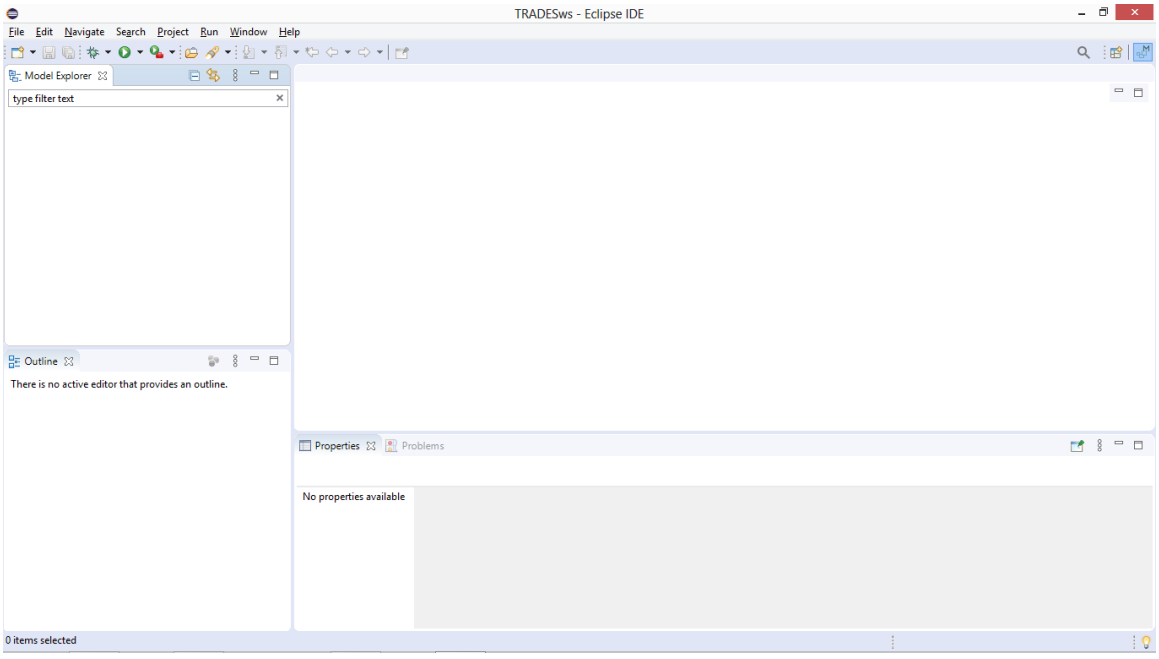

Figure 3: Eclipse IDE

1.3. TRADES Tool Installation

Perform the following:

1. Download the TRADES Tool Archive file **TBD**
2. From “Help” menu, select “Install New Software…” (the notation “Help”->”Install New Software…” is used henceforth).

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3. For first-time installation: in the “Install” dialogue, Select “Add”->”Archive” and select the TRADES Tool Archive file you downloaded. Name the repository (e.g., “TRADES Tool Archive”), and press “Add”.

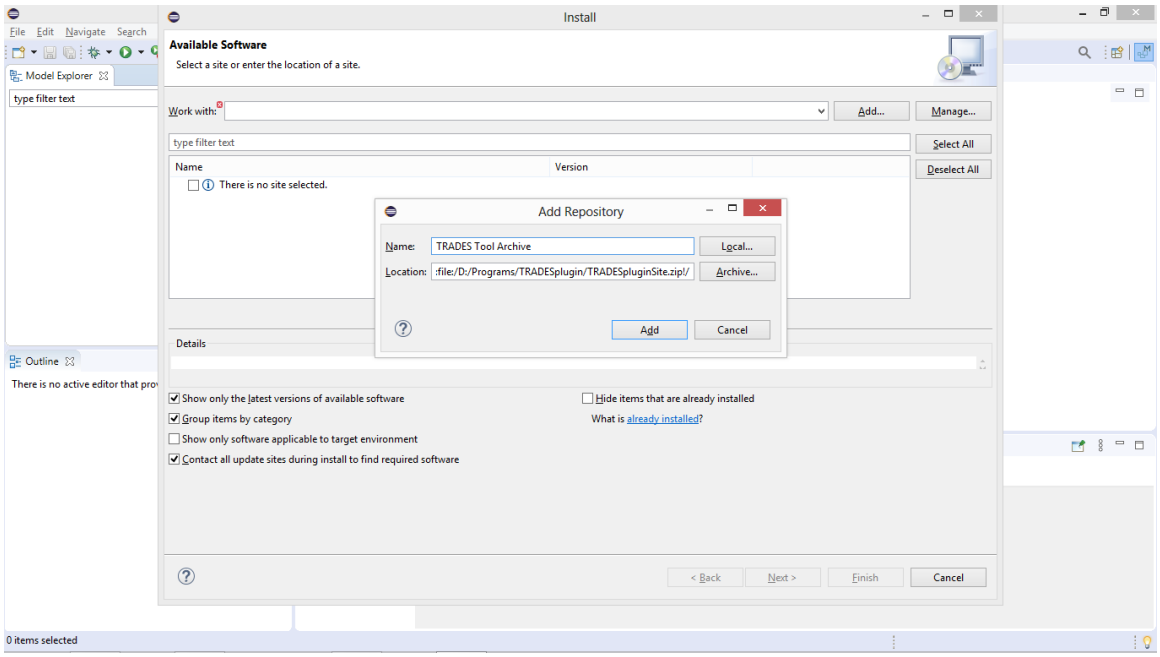

Figure 4: Adding a repository for software updates

4. Select the repository from the “Work with” selection line. The update site’s content should appear:

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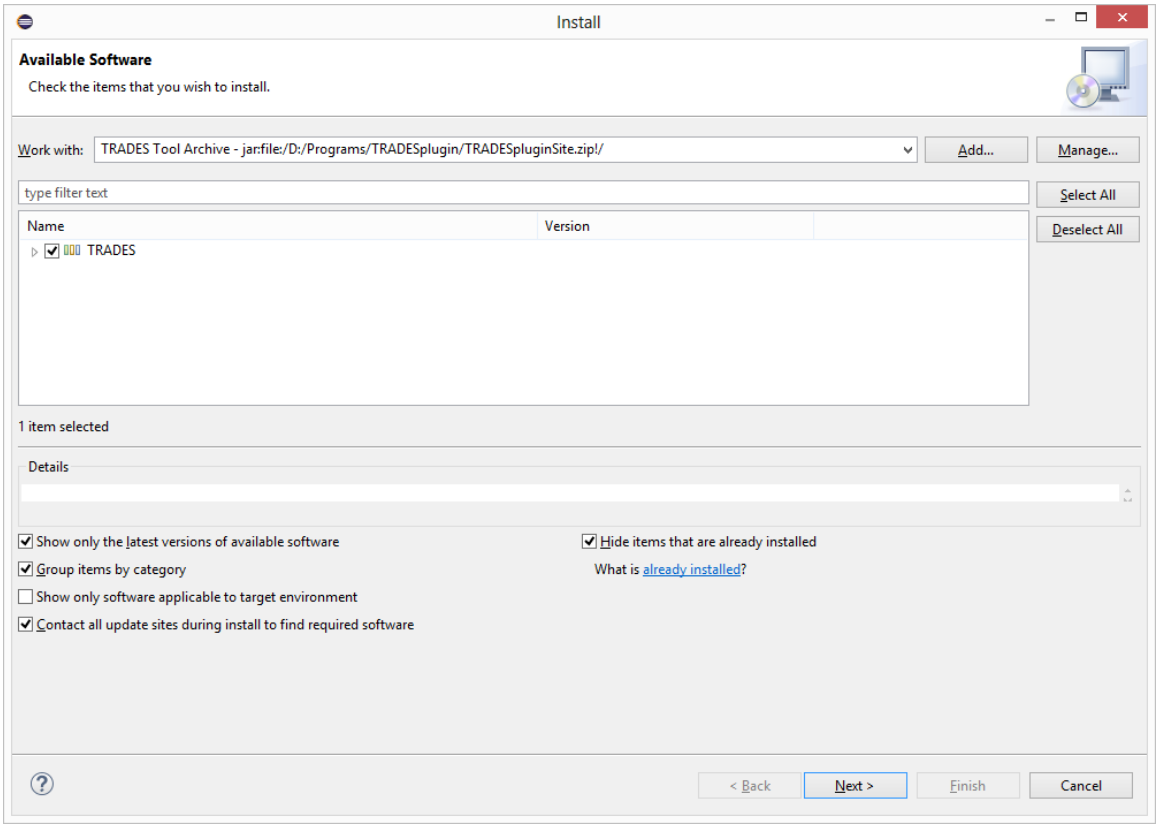

Figure 5: TRADES Tool repository for installing the tool

Make sure “TRADES” is selected and press “Next” to install.

5. Approve the installation if prompted by additional dialogues. Eventually, approve restarting the Eclipse IDE.
6. “Help”->”About”->”Installation Details”

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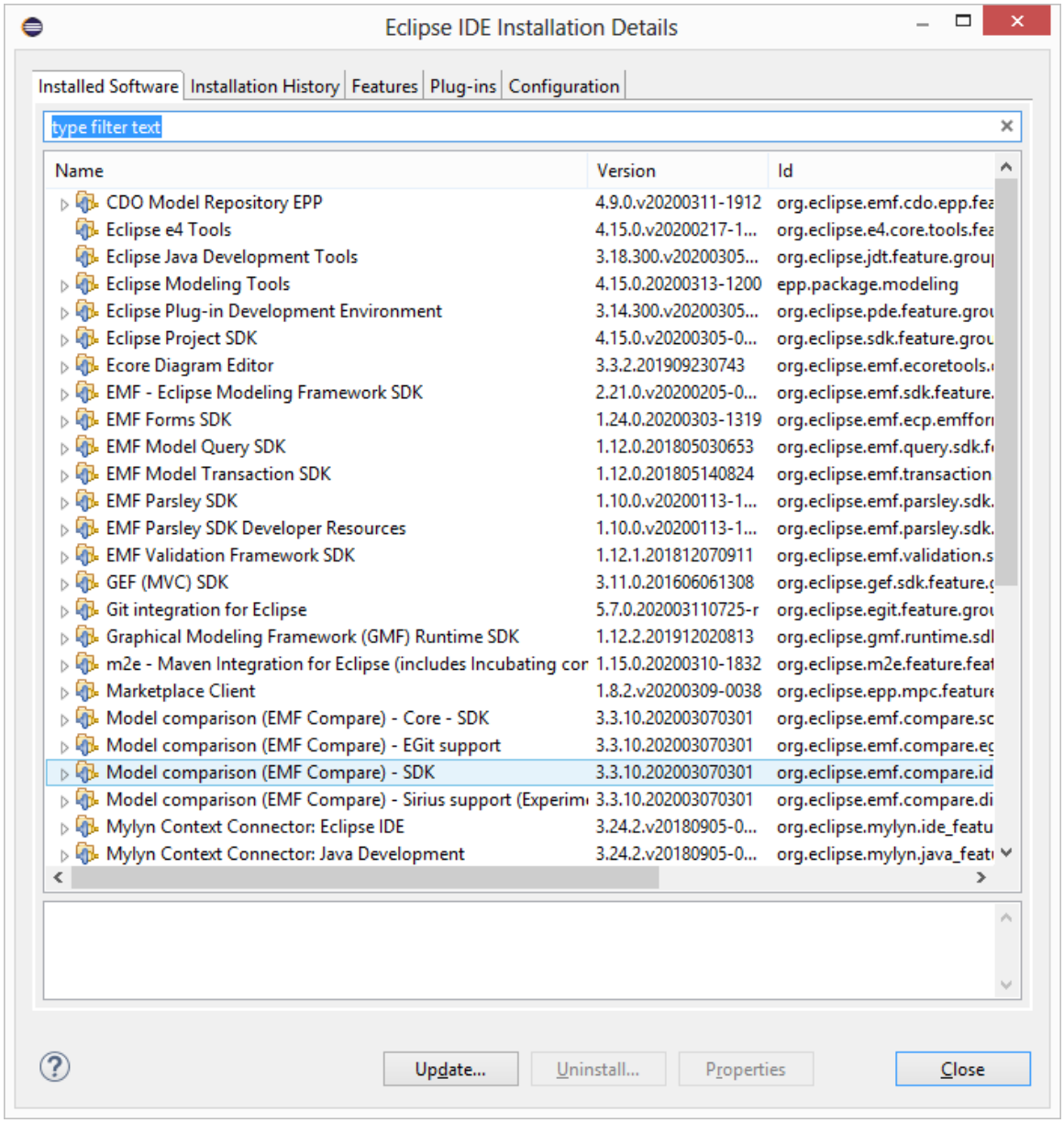

Figure 6: Eclipse installation details illustration

7. Type “TRADES” and verify the TRADES extension was successfully installed.

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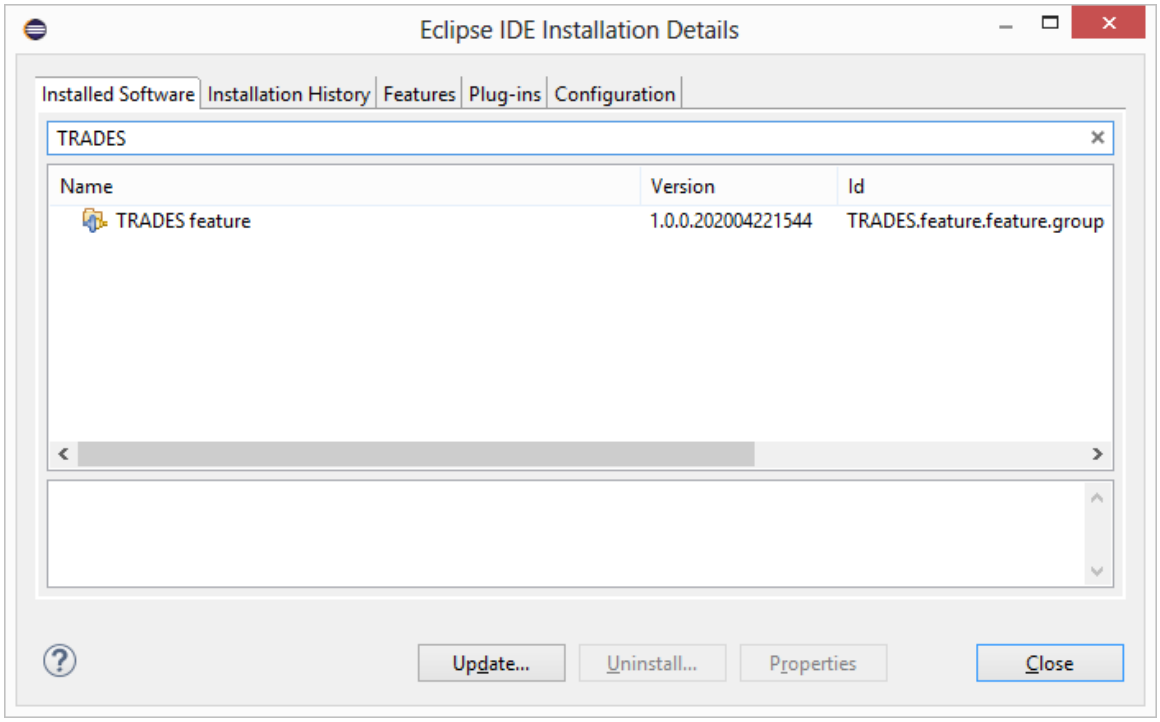

Figure 7: TRADES Tool related feature in Eclipse installation details, showing the tool was installed

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2. Creating a new TRADES model

1. File->New->Project…
2. Type “Modeling Project” and select “Modeling Project” under the Sirius folder. Press “Next”.

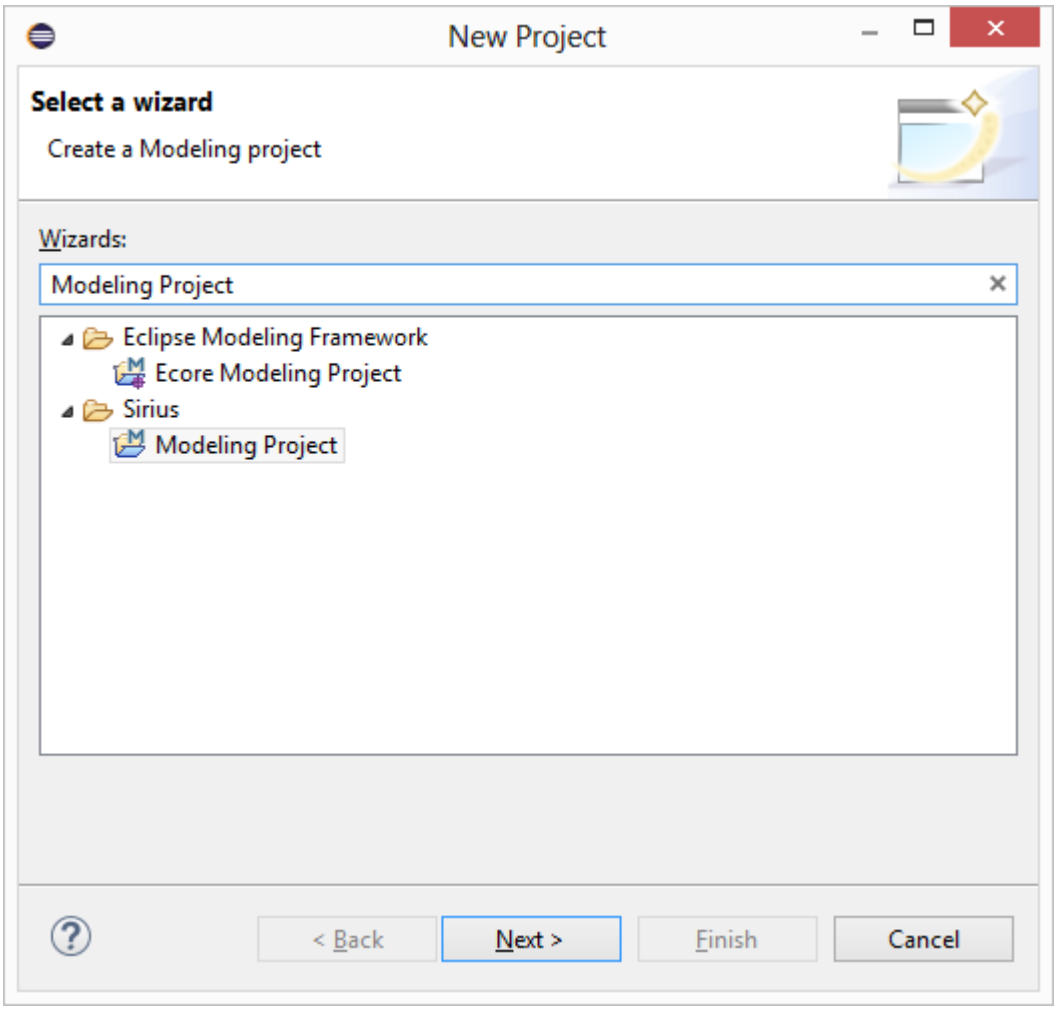

Figure 8: Creation of a new modeling project

3. Name the project and press “Finish”.

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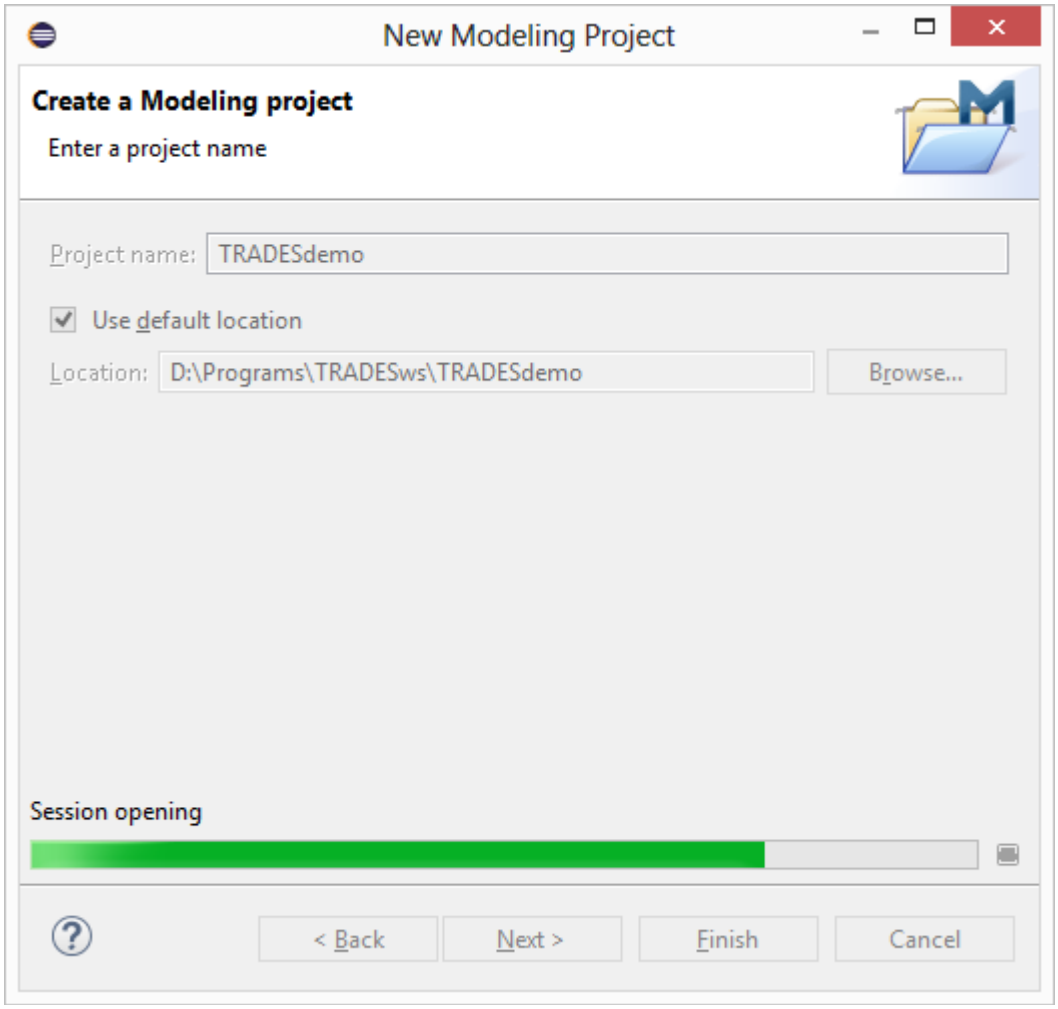

Figure 9: Creation of a new modeling project (2)

The new project should be available in the “Model explorer” window section.

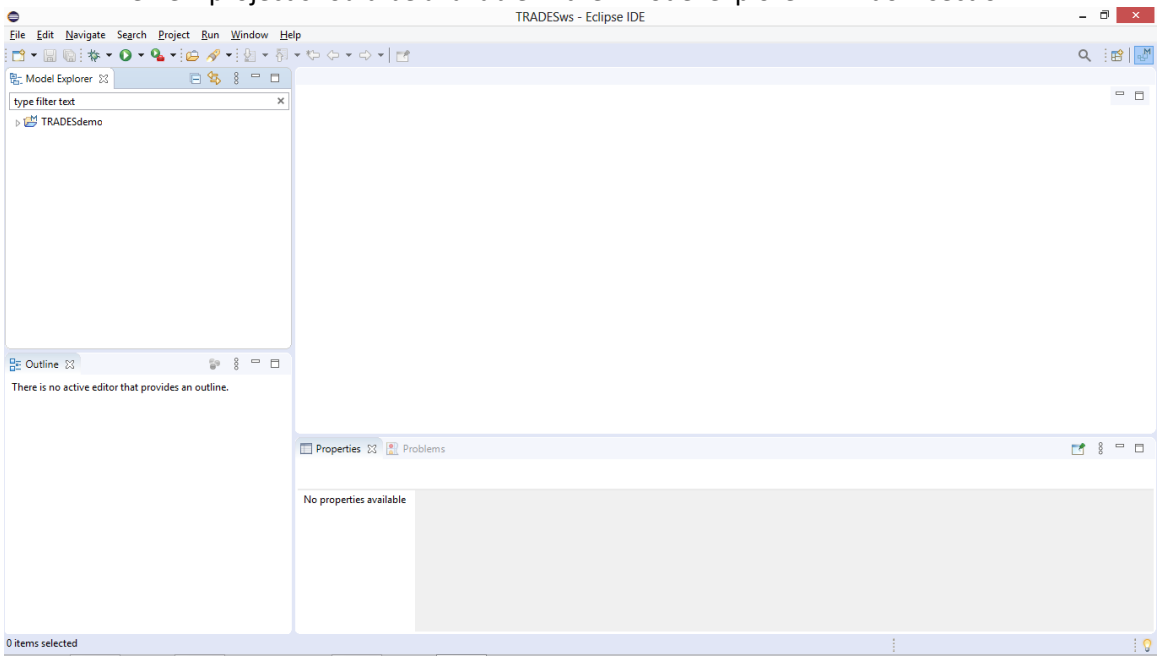

Figure 10: New modeling project in Eclipse IDE

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4. To create a TRADES model, right click on the new project and select New->Other…
5. Type “TRADES”, select “TRADES Model” and press “Next”.

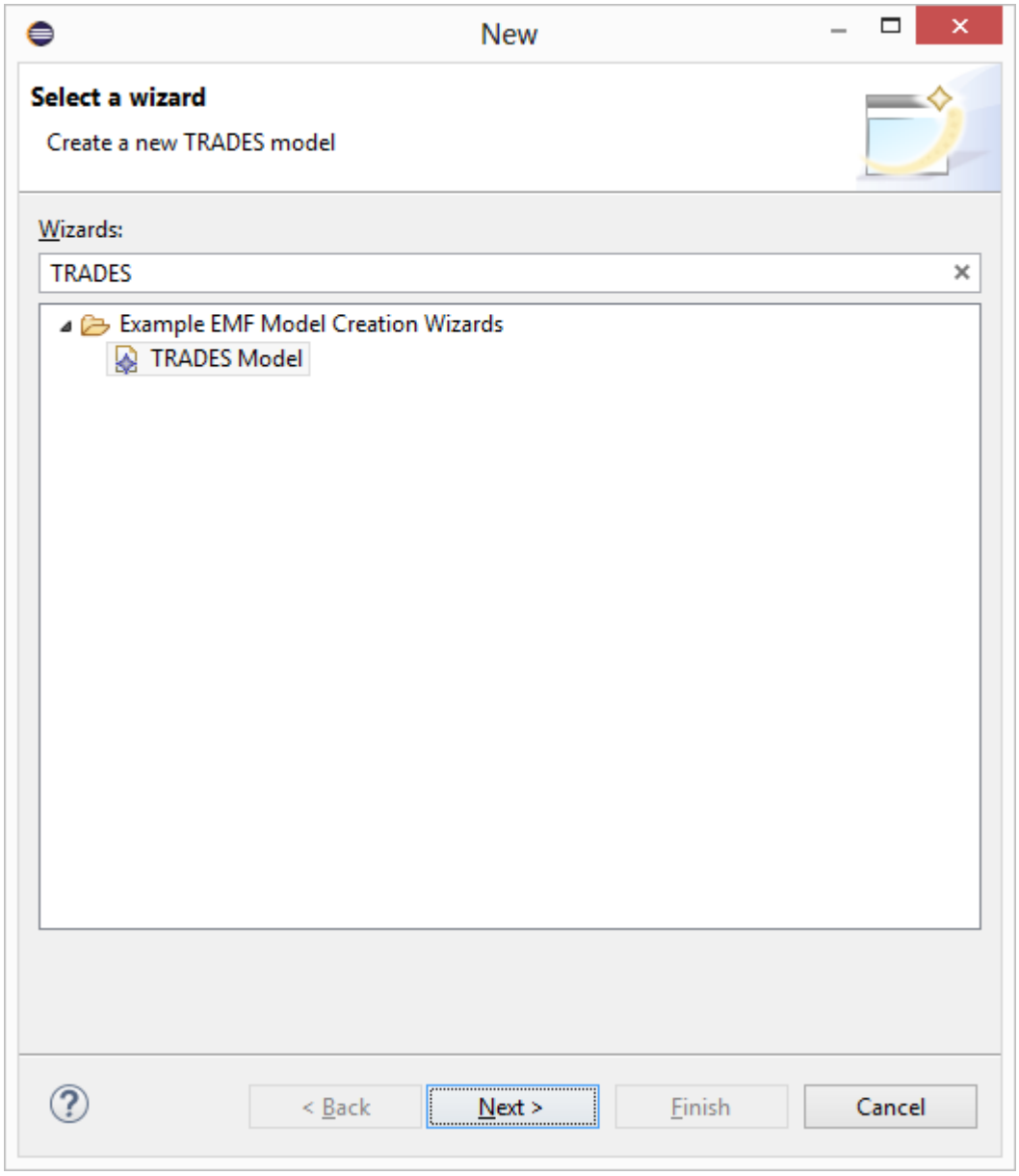

Figure 11: Adding a new TRADES Model

6. Name the new model (or leave the default name) and press “Finish”.
7. The new model (with a seed element “Analysis”) should be visible in the model explorer section.
8. Right click on the project (not the model), and select “Viewpoints Selection”.

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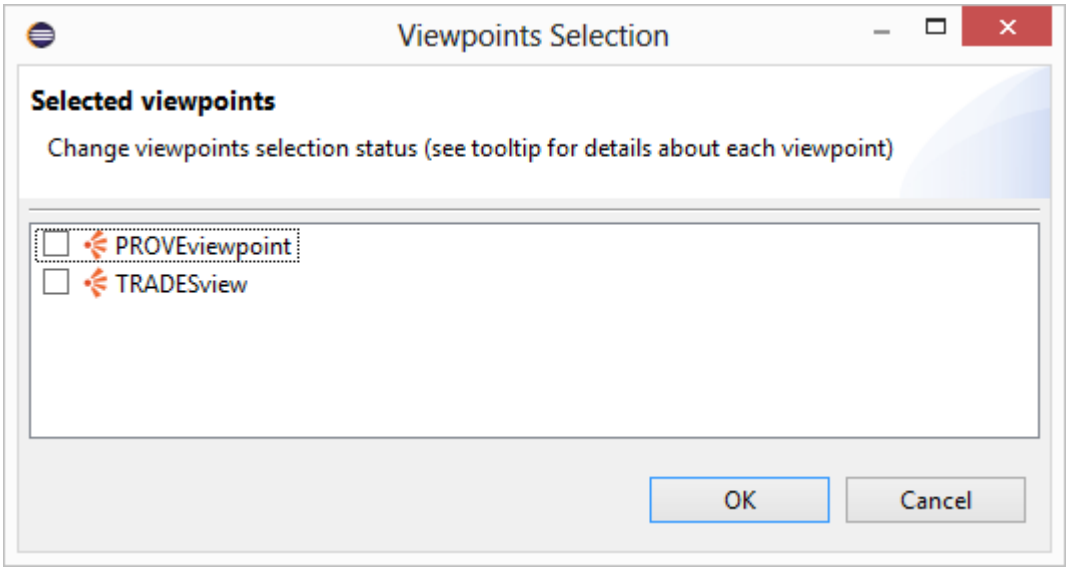

Figure 12: Viewpoint selection for the project

9. Select the "TRADESview" and press OK. This activates the TRADES viewpoint for the entire project. The TRADES viewpoint may be activated alongside other Sirius views (in the image above, another viewpoint – PROVEviewpoint – exists).
10. If you expand the TRADES model in the Model Explorer, you should be able to see a new representation as created ("TRADES diagram"). You may double click on it to open the main TRADES modeling diagram.

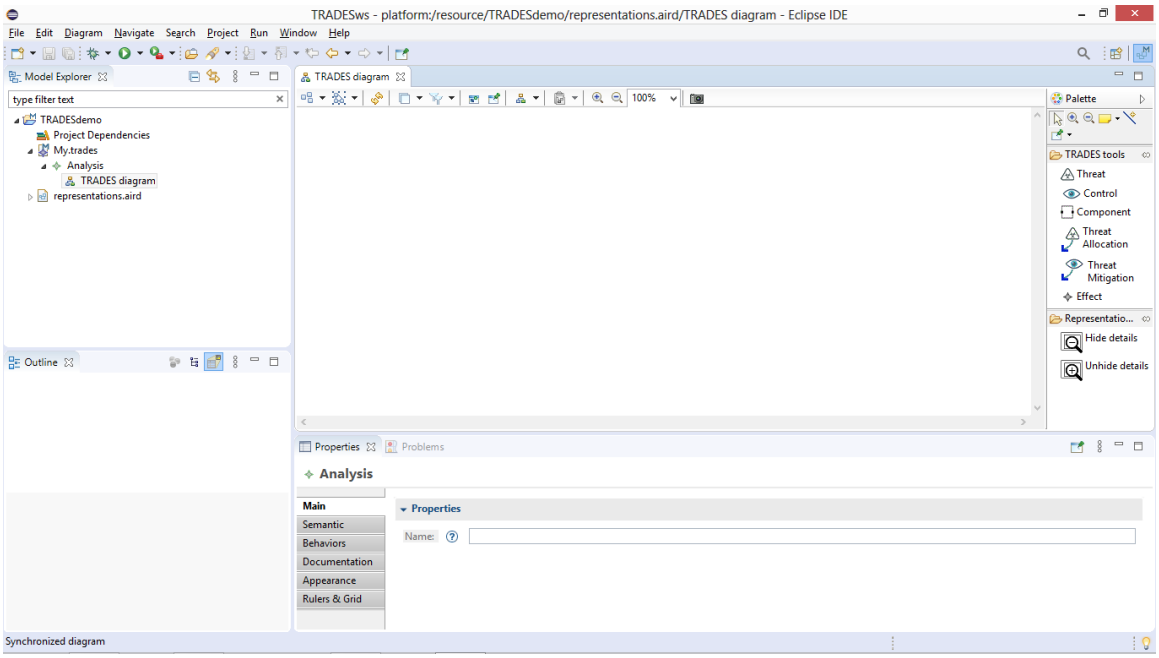

Figure 13: TRADES model ready for modeling

You are now ready to use TRADES.

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3. Modeling with TRADES Tool

Please see the presentation available in the TRADES Tool repository for a detailed, step by step introduction to modeling with TRADES Tool.

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4. Adding an external threats database

Perform the following:

1. Copy the external database to your TRADES project. Database should be formatted as a TRADES Ecore model (with ".trades" file extension).
2. You are ready to go. You should now be able to see external elements (to your model) included in your TRADES representations (wherever applicable), and use them according to TRADES.

An example is shown in the Figure 14, with a representation associated with my.trades showing threats from ATTACKdb.trades.

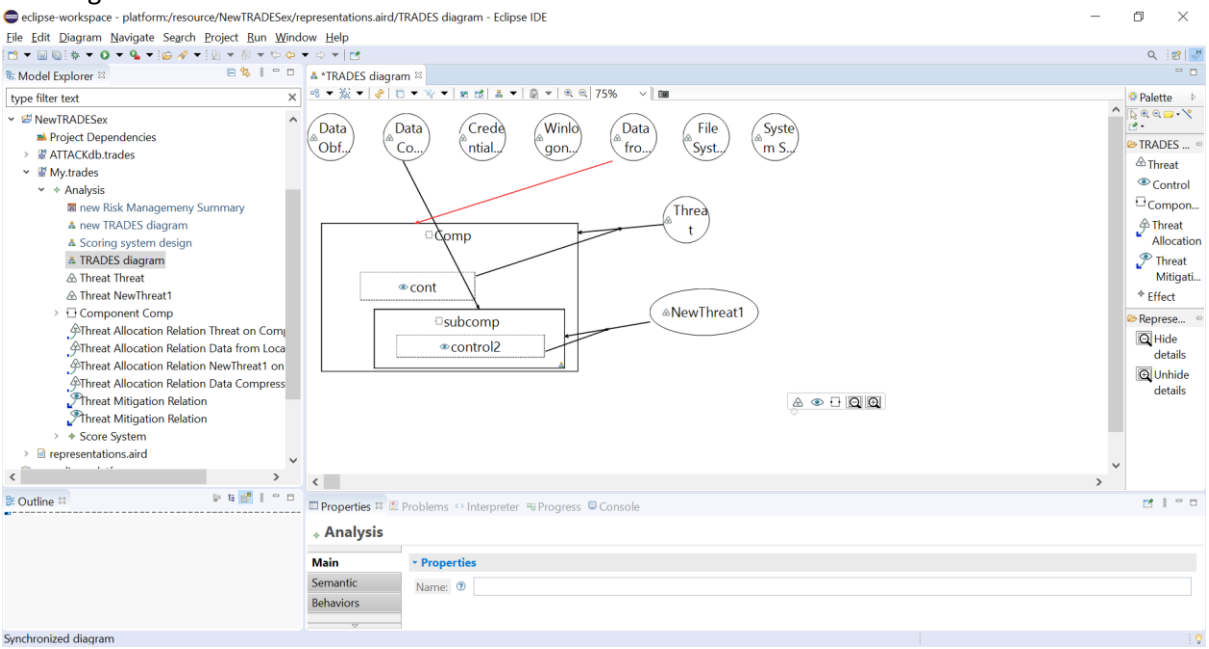

Figure 14: TRADES model using threat elements from external TRADES database

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