1. "Eclipse/BIRT Project Sample Database" Use Case: Install & Execute

"Eclipse/BIRT Project Sample Database" is a complete use case, part of the MoDisco component use cases [1] [2], which has been designed and developed in order to build models from the concrete Eclipse/BIRT project sample "Classic Models" database [3].

The development of this use case, realized by INRIA ATLAS [4], has been supported by the IST European MODELPLEX project (MODELing solution for comPLEX software systems, FP6-IP 34081) [5].

Within this document, we will present how to install and execute the "Eclipse/BIRT Project Sample Database" use case in order to produce a model that conforms to the ClassicModels metamodel from the concrete "Classic Models" database.

1.1. Get & Install the Use Case

The complete use case is directly downloadable from [6]. The provided Zip file contains all the required material to launch its execution. Nevertheless, you have to follow the two next steps before effectively executing the use case.

1.1.1. Install Eclipse with EMF + the ATL and AM3 plugins

If you already have Eclipse with EMF and the ATL & AM3 plugins last version installed onto your computer, please directly go the next step (see section 1.1.2).

If not, you have to follow the instructions described below:

- To install ATL, follow the instructions of the "installation of ADT from source" Eclipse Wiki page which is available from [7].
- To install AM3, simply follow the same process (except that the repository path is "*/cvsroot/technology*"). You just have to select the "*org.eclipse.gmt/AM3*" folder and to checkout the following plugins:
    - org.eclipse.am3.core
    - org.eclipse.am3.tools.tge
    - org.eclipse.am3.ui
    - org.eclipse.gmt.am3.dsls.km3
    - org.eclipse.gmt.am3.tools.ant

Now that you have checked out all the required plugins onto your workspace, you can launch another Eclipse in order to load the newly imported plugins and to open your development workspace.

1.1.2. Import the "BIRTSampleDB_MoDisco-UseCase" project

This subsection is about describing how to import, within your development workspace, the project that implements the "Eclipse/BIRT Project Sample Database" use case:

- Right-click anywhere on the "Navigator" view and choose "Import...": the "Import" wizard is now opened.
- Select "General/Existing Projects into Workspace" and click on "Next" button.
- Click on "Select archive file" and "Browse..." to open the "BIRTSampleDB_MoDisco-UseCase_vX-X.zip" archive file.
- Check that the "BIRTSampleDB_MoDisco-UseCase" project is selected and click on the "Finish" button.

The ***BIRTSampleDB_MoDisco-UseCase*** project is opened into your development workspace.

1.2. Execute the Use Case

Now that you have installed all the required items, you are ready to launch the execution of the "Eclipse/BIRT Project Sample Database" use case. Note that the complete execution of the use case requires the "ATL" perspective and the "AM3 Resource Navigator" view to be opened. The "AM3 Resource Navigator" view must be used instead of the standard "Navigator" view.

1.2.1. Check the Content of the "BIRTSampleDB_MoDisco-UseCase" project

Just before performing the execution, take a look at the content of the imported project and its different folders and files:

- ***Input***: The given *RelationalDBContent* input model has been produced, from the "Classic Models" BIRT sample database, by using the "Relational Database Information" discovery tool provided within the MoDisco tool box:
  - The "Classic Models" BIRT Sample database: http://www.eclipse.org/birt/phoenix/db/
  - The "Relational Database Information" discovery tool (the install and use instructions are available there): http://www.eclipse.org/gmt/modisco/toolBox/RelationalDBInformation/
- ***Metamodels***: The metamodels, used within this use case, expressed in two different formats (the KM3 language and the Ecore XMI format).
- ***Output***: The *ClassicModels* generated output model (an Ecore file). You can delete this file for regenerating it.
- ***Transformation***: The ATL transformation developed in order to implement the mapping from the generic *RelationalDBContent* metamodel to the specific *ClassicModels* metamodel.

The ANT script (i.e. the build.xml file with its build.xml.launch configuration file), which allows executing the transformation, is stored in the root of the project.

1.2.2. Perform the Use Case

The use case has to be performed by running the provided ANT script (it launches the transformation by calling AM3-specific ANT tasks [9]).

The next items specify the different simple steps to be followed:

1) Right-click on the "build.xml" file and "Run As" -> "Ant Build". Note that the execution of the transformation takes quite a long time (approximately 1minute and a half) since the input

model represents a large amount of tuples and thus many cross references between the output model elements have to be created.

2) Right-click on the "Metamodels/ClassicModels.ecore" file and "Register metamodel".

3) Now, you can open the "Output/BIRTSampleDB-classicModels.ecore" generated model.

For getting more details about the effectively performed operations, you can read the content of the provided ANT script.

IMPORTANT NOTE: It is possible to produce other *RelationalDBContent* input models from other instances of the "Classic Models" BIRT Sample database by using the "Relational Database Information" discovery tool [10]...

References

[1] The Eclipse/GMT **MoDisco** Component: http://www.eclipse.org/gmt/modisco/

[2] **MoDisco** Use Cases: http://www.eclipse.org/gmt/modisco/useCases/

[3] **Eclipse/BIRT** project sample database: http://www.eclipse.org/birt/phoenix/

[4] **INRIA ATLAS** Team: http://www.inria.fr/recherche/equipes/atlas.en.html

[5] The **MODELPLEX** IST European Project: http://www.modelplex-ist.org

[6] Download the **Eclipse/BIRT Project Sample Database** Use Case: http://www.eclipse.org/gmt/modisco/useCases/BIRTSampleDB/#download

[7] Eclipse/M2M **ATL** "Installation of ADT from source" Eclipse Wiki page: http://wiki.eclipse.org/index.php/ATL/How_Install_ATL_From_CVS/

[8] The **ATL 2006** Wiki page: http://wiki.eclipse.org/index.php/ATL_2006

[9] The **AM3 ANT Tasks** Wiki page: http://wiki.eclipse.org/index.php/AM3_Ant_Tasks

[10] The **Relational Database Information** discovery tool, **MoDisco Toolbox**: http://www.eclipse.org/gmt/modisco/toolBox/RelationalDBInformation/