



Manual for Transformation Tool

Status: draft

Version: 0.2

Revision: -

Date: February, 2011

CONTENT

0.	About this document.....	4
0.1.	Comments to the manual.....	4
0.2.	Main changes since last version	4
1.	Introduction.....	5
1.1.	UN/Cefact Modeling Methodology	5
1.2.	About the ebIX® Model.....	5
1.2.1.	Business requirements	5
1.2.2.	Modeled processes.....	5
1.2.3.	Modeled information	5
1.2.4.	ebIX® model and MDA	6
1.3.	Syntax dependent formats	6
1.4.	National requirements	6
2.	Generation of XML Schema's	6
3.	Prepare for the use of the transformation tool	7
3.1.	Installing the framework for the ebIX® transformation tool	7
3.2.	Adding the initial update to the ebIX® transformation tool	7
4.	How to use the ebIX® Transformation Tool?	10
4.0.	Note regarding export project EEM from MagicDraw to XMI-file	10
4.1.	Step 1: export project EEM from MagicDraw to XMI-file	10
4.2.	Step 2: start Eclipse	12
4.3.	Step 3: select & prepare exported XMI-file.....	13
4.4.	Optional extra step: edit Eclipse file.....	14
4.4.1.	Start a second instance of Eclipse and check prepared file	15
4.4.2.	Move corrected file for the creation of XML Schema's to the first instance of Eclipse	18
4.5.	Step 4: generate XML Schema's	19
4.6.	Step 6: open generated XML Schema's.....	20

5.	How to update the ebIX® Transformation Tool?	22
5.1.	Download update	22
5.2.	Open Eclipse	22
5.3.	Delete outdated files in Eclipse	23
5.4.	Adding the update to the ebIX® transformation tool	24

0. About this document

This document is a manual for the use of the ebIX® Transformation Tool.

This tool derives XML Schema's from the ebIX® model for the European Energy Market (EEM).

0.1. Comments to the manual

If you have comments or suggestions to this manual please contact Kees Sparreboom, kees.sparreboom@capgemini.com.

0.2. Main changes since last version

		Old	New	Clarification	Date
Version 0.0.-					
1.	Added a forgotten step			The selection of the source file for the XML Schema's in the 2 nd instance of Eclipse and the copying of this source file in the 1 st instance of Eclipse was omitted and is now added.	
Version 0.0.A					
2.					
Simplified version 0.1.-					
3.					
4.					
version 0.2.-					

1. Introduction

1.1. UN/Cefact Modeling Methodology

ebIX® models are created in line with the UN/Cefact Modeling Methodology version 2.0. For more information see: “ebIX® Recommendations for using UMM-2.0” (see www.ebix.org)

1.2. About the ebIX® Model

The model documents for the ebIX® domains describe the harmonized exchange of data in the European Energy Market. The models will be part of an overall ebIX® model for the European Energy Market. This model is important for having a common and agreed understanding on how the exchange of data in the European Energy Market works.

ebIX® has adopted an international and open standard as a basis for the methodology: UN/Cefact Modeling Methodology version 2.0 (UMM-2)

In line with UMM-2 the ebIX® model contains 3 main parts:

1. Business requirements in the “Business Requirements View”
2. Modeled processes in the “Business Choreography View”
3. Modeled information in the “Business Information View”

1.2.1. Business requirements

The data models in the Business Requirements are specified by business user groups. The ebIX® business user groups will follow ebIX® Rules for the use of UN/CEFACT Modeling Methodology version 2.0 (UMM-2) for their business requirements specification. UMM-2 uses UML as the Modeling Language.

1.2.2. Modeled processes

The processes are modeled in the Business Choreography View by the ebIX® Technical Committee using the ebIX® Rules for the use of UMM-2.

1.2.3. Modeled information

The information that is to be exchanged is described in the Business Information View by the ebIX® Technical Committee using the ebIX® Rules for the use of UMM-2. The class diagrams representing the information are constructed from Aggregated Business Information Entities (ABIE's), which are in turn based on UN/Cefact Aggregated Core Components. For the specification of the ABIE's ebIX® follows the recommendations from UN/Cefact.

The standard ABIE's in the class diagrams in the Information Models are tailored to the needs of the business requirements by means of standard OCL-statements.

1.2.4. ebIX® model and MDA

The 3 different Views represent a “Platform Independent Model” (PIM) as described in the Model Driven Architecture (MDA) paradigm. ebIX® derives from the PIM the following “Platform Specific Models” (PSM):

- Syntax specific representation of the information to be exchanged:
 - XML schema’s
 - Generic schema’s for exchange
 - Validation schema’s (tailored and instantiated on the basis of the business requirements per information exchange)
 - Message Implementation Guides for Edifact UNSM’s.
- Web service definitions as a technology specific representation of the exchange processes.

Platform Specific Models are derived from the Platform Independent Model by means of the ebIX® transformation tool.

1.3. Syntax dependent formats

The syntax dependent formats are published as annexes to the Business Information Models in separate documents.

1.4. National requirements

The requirements for the ebIX® model are based on mainly national procedural requirements.

For the metered data needed for imbalance settlement, requirements taken from national implementations based on ENTSO-E requirements for the imbalance settlement process have been the basis.

For more information on ebIX® models see “Introduction to ebIX® models” (www.ebix.org)

2. Generation of XML Schema’s

This manual deals with the generation of XML Schema’s from the UMM-2 ebIX data models. The transformation tool also allows for the generation of XML Schema’s for national data models on the condition, that these national data models are created 100% in line with ebIX UMM-2 modeling requirements.

The ebIX® transformation tool generates XML Schema’s for:

- Code lists
- BDT’s (both generic and instantiated for a particular information exchange in the model)
- ABIE’s (both generic and instantiated for a particular information exchange in the model)
- Complete documents (both generic and instantiated for a particular information exchange in the model)
- Payloads (instantiated for a particular information exchange in the model)

3. Prepare for the use of the transformation tool

3.1. Installing the framework for the ebIX® transformation tool

Step A

- Download the zipped file “ebIX TT Framework” containing all files for the framework of the transformation tool (mainly Eclipse)

Step B

- Unzip the file and install in a directory, preferably in the root (the total string for the files including the path specified by all directories should not be too long)

3.2. Adding the initial update to the ebIX® transformation tool

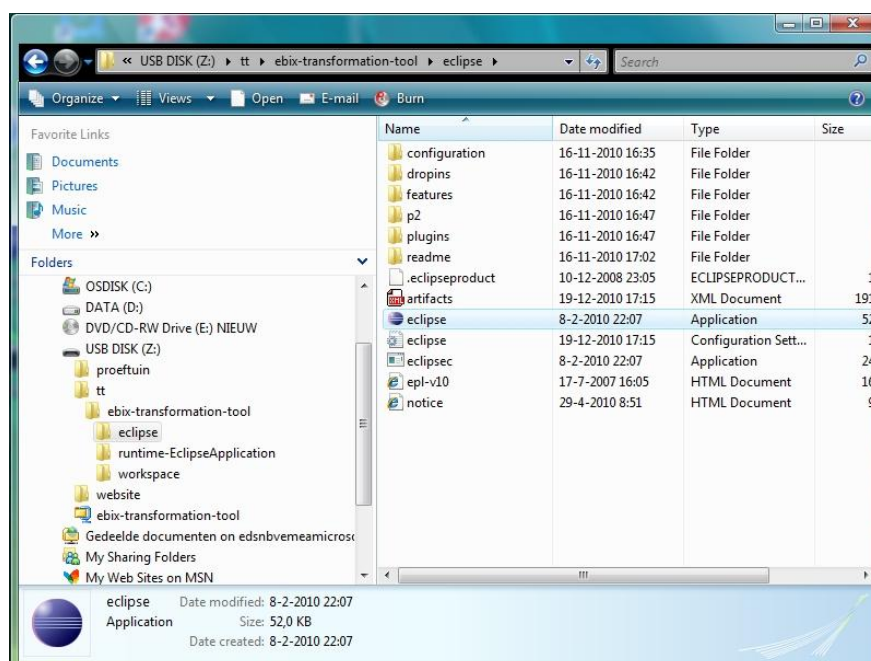
Step C

- Download the latest version of the zipped file containing the actual routines for the transformation tool with the name “update ebIX TT <date as version>” (like “update ebIX TT 20110216”). Do not unzip this file (in step .. you will import the complete zipfile into the TT framework).

Step D

- Go to Eclipse and start Eclipse

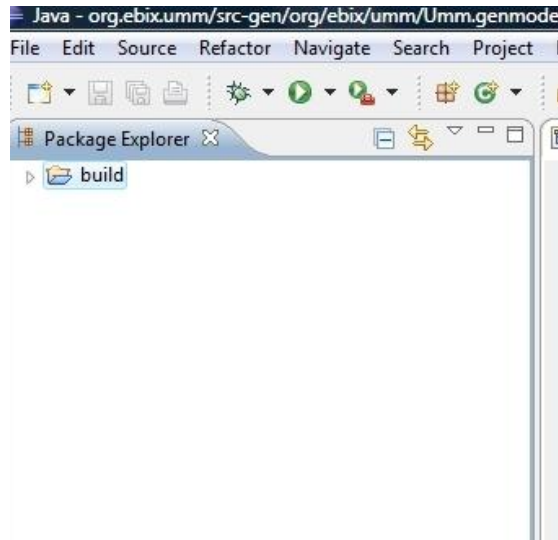
Select	Action
tt (folder)	Double <Left click>
ebix-transformation-tool (folder)	Double <Left click>
eclipse (folder)	Double <Left click>
eclipse (application)	Double <Left click>



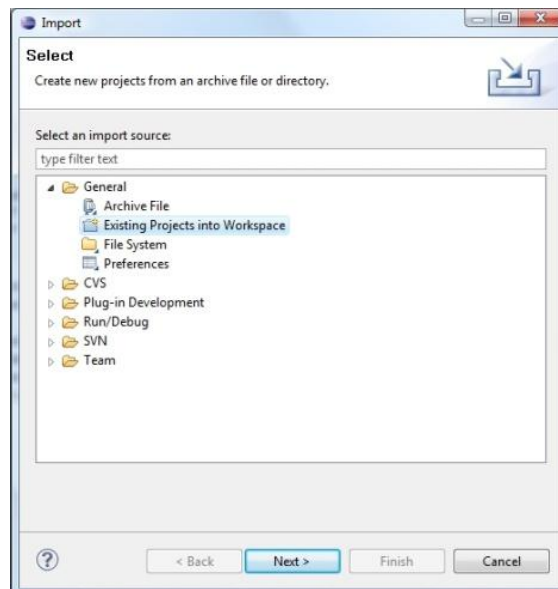
Step E

- Import update

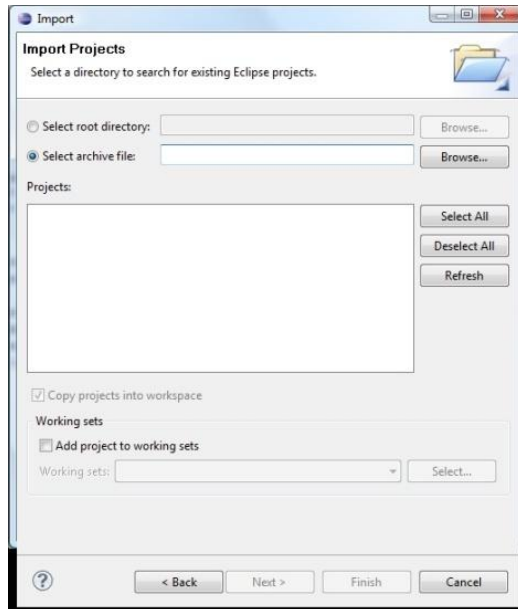
- After opening Eclipse you see a screen with the window as pictured below at the left hand side



- Select "File" from the main top bar in the window and then select "import" from the pop-up menu
- The next pop-up window: select "ExistingProjects into Workspace" (remark: don't type a filter text!) and select "Next"

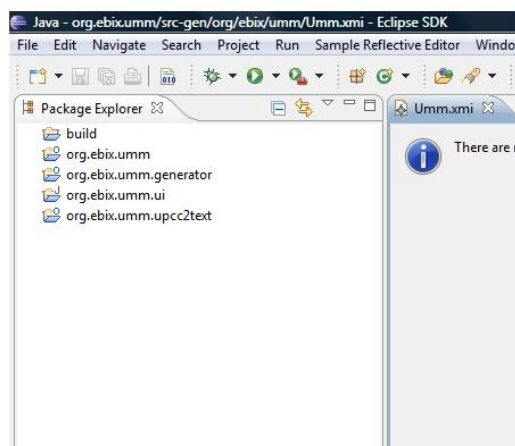


- The next pop-up window: mark the box “Select archive file” (is probably already default marked!) and then use the “Browse”-button to select the location where you have stored the zip-package with the updated project files that have received. The box “Copy projects into workspace” is default marked (and should be); the box “Add project to working sets” is default not marked and should be left this way. Finally select finish.



The insertion of the new project files will take a while: so have some patience!

After this step the window will look like the picture below and the transformation tool will be ready for use.

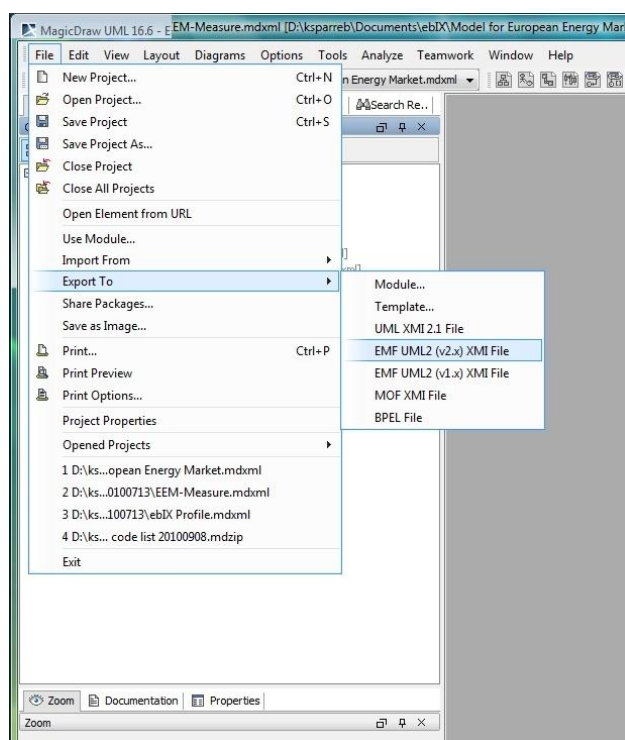


4. How to use the ebIX® Transformation Tool?

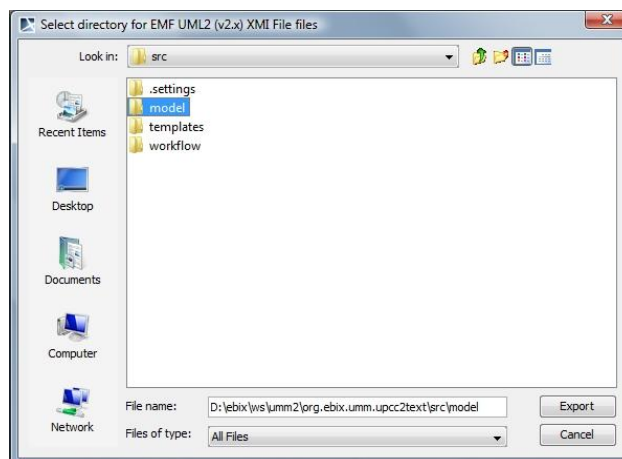
4.0. Note regarding export project EEM from MagicDraw to XMI-file

The file that is to be exported from MagicDraw shall be saved in the location you have created for the transformation tool with the additional path specification included in the tool. This additional path specification is: `tt/org.ebix.umm.upcc2text/src/model`. This may result for example in:
`D:tt/org.ebix.umm.upcc2text/src/model`

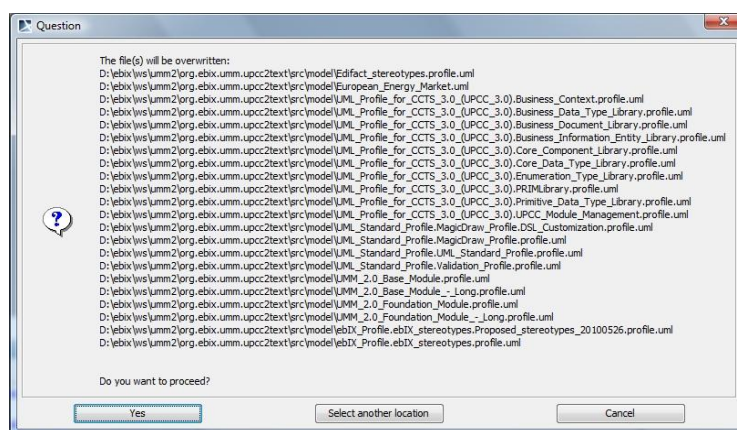
4.1. Step 1: export project EEM from MagicDraw to XMI-file



Select	Action
File	
Export to	
EMF (UML2 (v2.x) XMI File	<Left click>



Select	Action
model	<Left click>
Export	<Left click>

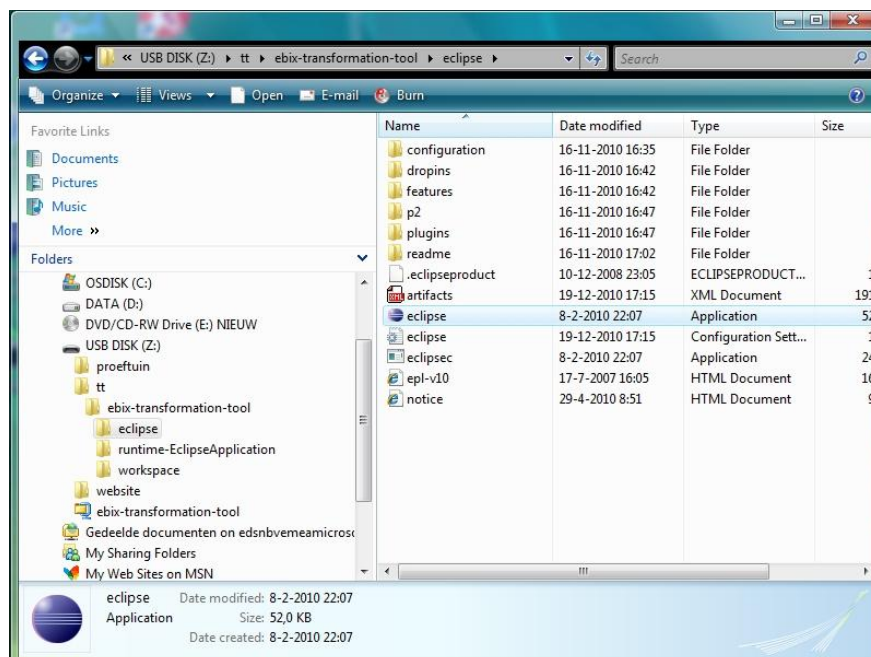


Select	Action
Yes	<Left click>

Note: the first export (when no old files are in the target directory) this window will not appear. But all subsequent exports it will.

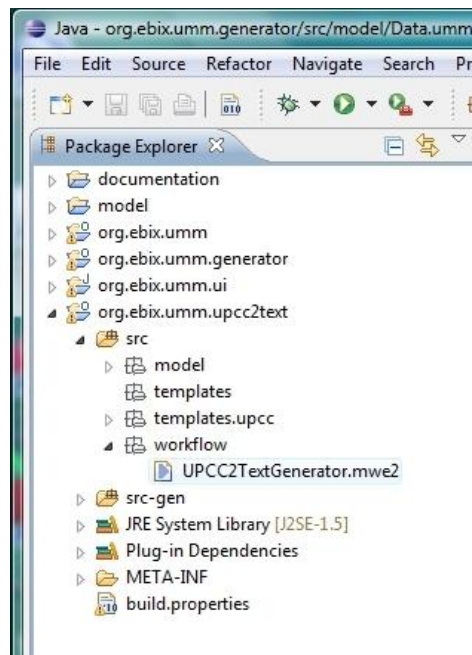
Clear warnings in MagicDraw after export has been completed and close window for warnings

4.2. Step 2: start Eclipse



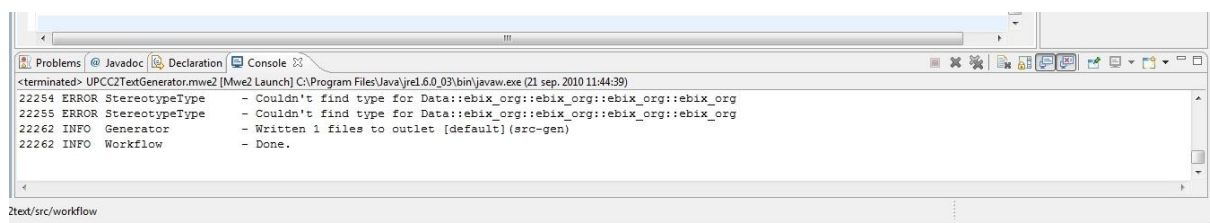
Select	Action
tt (folder)	Double <Left click>
ebix-transformation-tool (folder)	Double <Left click>
eclipse (folder)	Double <Left click>
eclipse (application)	Double <Left click>

4.3. Step 3: select & prepare exported XMI-file



Select	Action
org.ebix.umm.upcc2text	<Left click> on opening symbol directory
src	<Left click> on opening symbol directory
workflow	<Left click> on opening symbol directory
UPCC2TextGenerator.mwe2	<right click>
Run as	-
1 MWE2 Workflow	<Left click>

Wait for the screen to display the following status (Done):

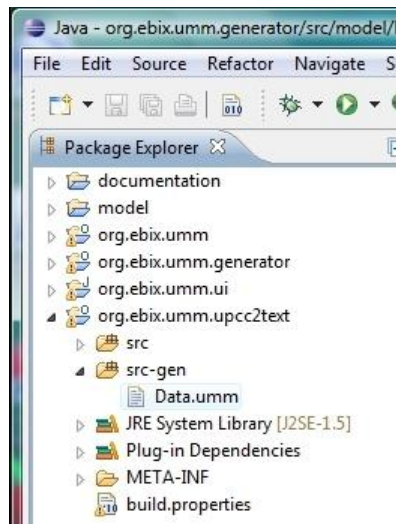


4.4. Optional extra step: edit Eclipse file

Remark: when no editing is needed (no syntax error detected) skip this step and go directly to 4.5.

When editing is needed:

Go to left hand window again:

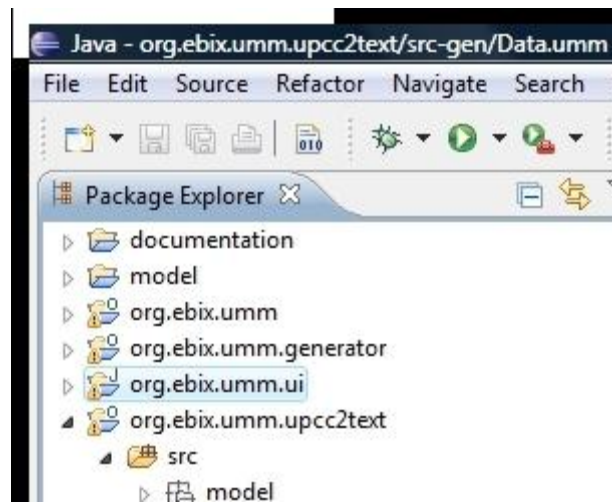


Select	Action
org.ebix.umm.upcc2text	<Left click> on opening symbol directory
Src-gen	<Left click> on opening symbol directory
Data.umm	Double <Left click>

Go to middle window:

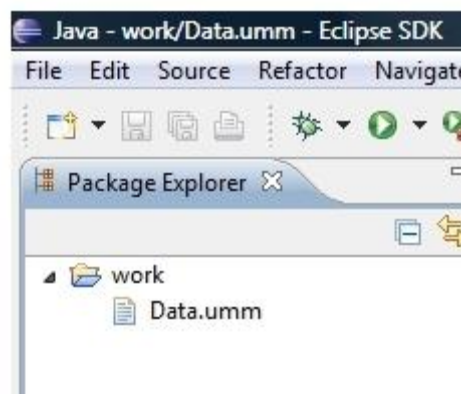
Select	Action
Middle window	<CTRL-A>
	<CTRL-C>

4.4.1. Start a second instance of Eclipse and check prepared file



Select	Action
org.ebix.umm.ui	<right click>
Run as	-
1 Eclipse Application	<Left click>

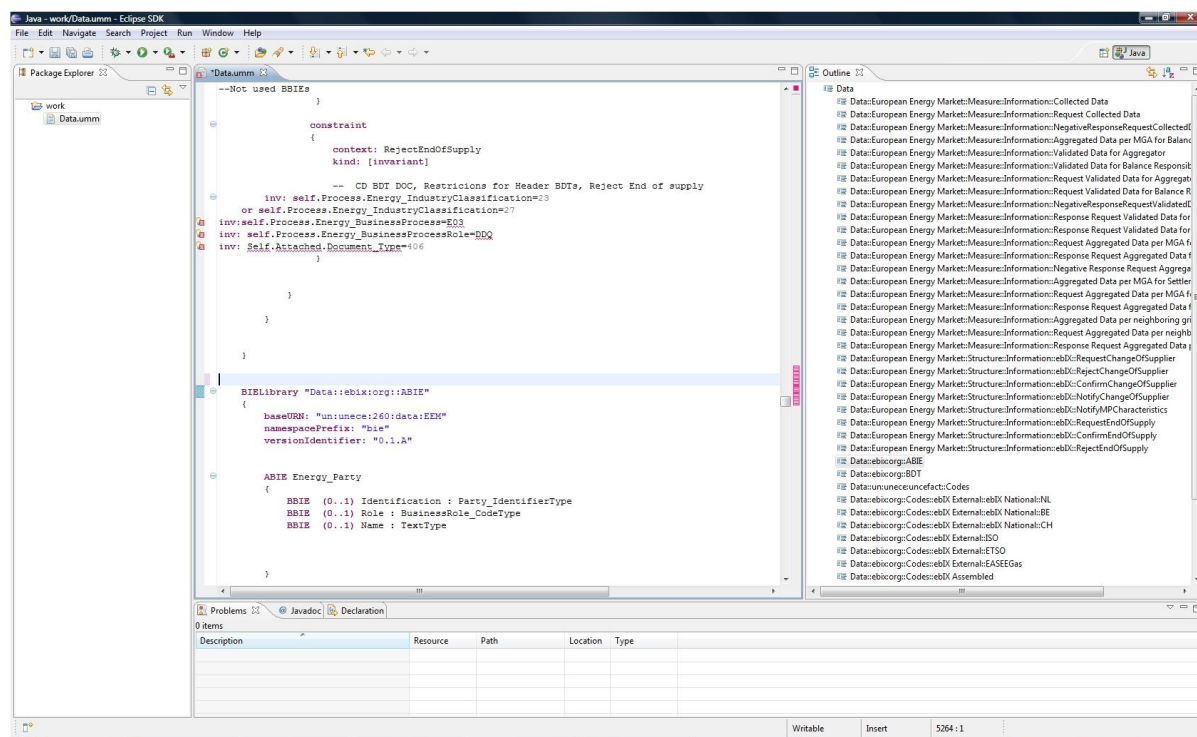
Go to left hand window (in 2nd Eclipse instance):



Select	Action
work	<Left click> on opening symbol directory
Data.umm	Double <left click>

Go to middle window (in 2nd Eclipse instance):

Select	Action
Middle window	<CTRL-A>
	<CTRL-V>



After pasting the contents that have been copied from the 1st Eclipse instance into this 2nd instance, in case of errors red indications appear in right status bar for the middle window.

Each line containing an error has also a red dot in the left status bar.

The 4 most common ways of dealing with errors:

1. Go back to MagicDraw, solve the problem there and start all over again;
2. Repair the problem in the middle window in the 2nd Eclipse instance;
3. Isolate the block that contains the error(s) by making it a comment:
 - a. Insert `<*/>` at the end of the block and insert `</*>` at the beginning of the block: this turns all text in between into a comment;
 - b. Insert `<//>` at the beginning of a line: this turns this one line into a comment;
4. Delete the line(s)

Note: double <left click> on an item in the right hand window will move directly to that “chapter” in the middle window.

Note: Eclipse takes its time. Don't be too hasty. E.g. after inserting the `*/`, `/*` or `//` it will take some time to see the effect.

Save the resulting text file (*not really necessary for the generation, but just in case of*):

Select	Action
Save button in top bar (2 nd from the left)	<Left click>

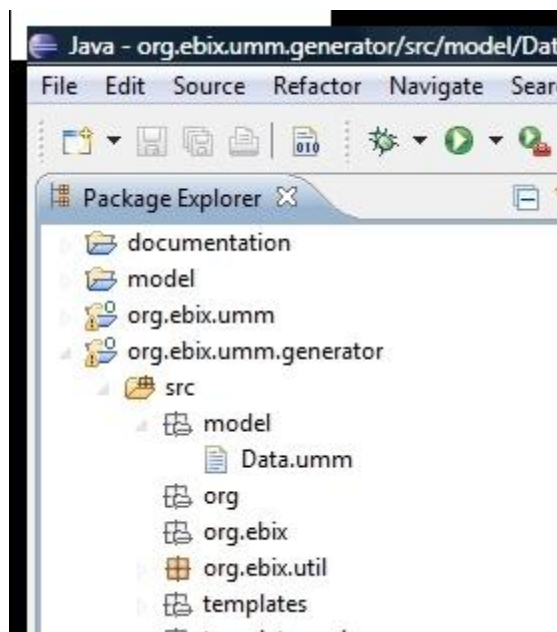
4.4.2. Move corrected file for the creation of XML Schema's to the first instance of Eclipse

Select the complete text in the middle window (*this is really necessary for the generation*):

Go to middle window (in this same 2nd Eclipse instance):

Select	Action
Middle window	<CTRL-A>
	<CTRL-C>

Go back to the 1st instance of Eclipse again:

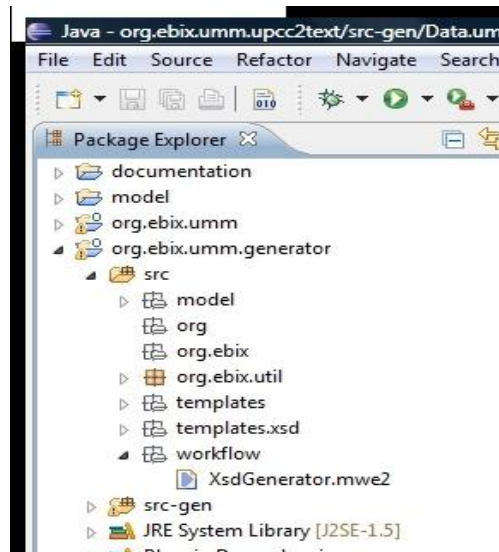


Select	Action
org.ebix.umm.generator	<Left click> on opening symbol directory
src	<Left click> on opening symbol directory
Data.umm	Double <left click>

Go to middle window:

Select	Action
Middle window	<CTRL-A>
	<CTRL-V>

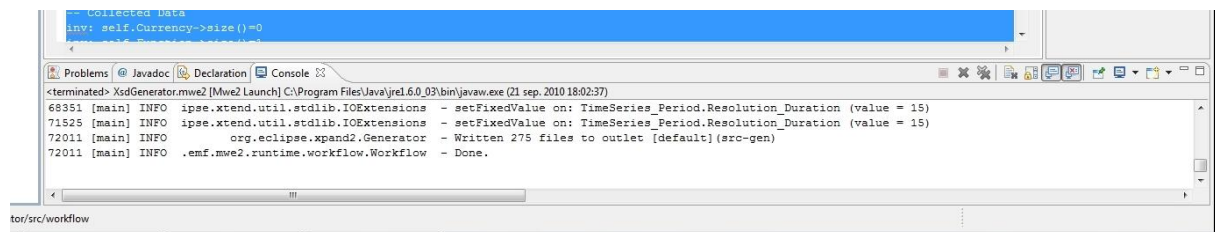
4.5. Step 4: generate XML Schema's



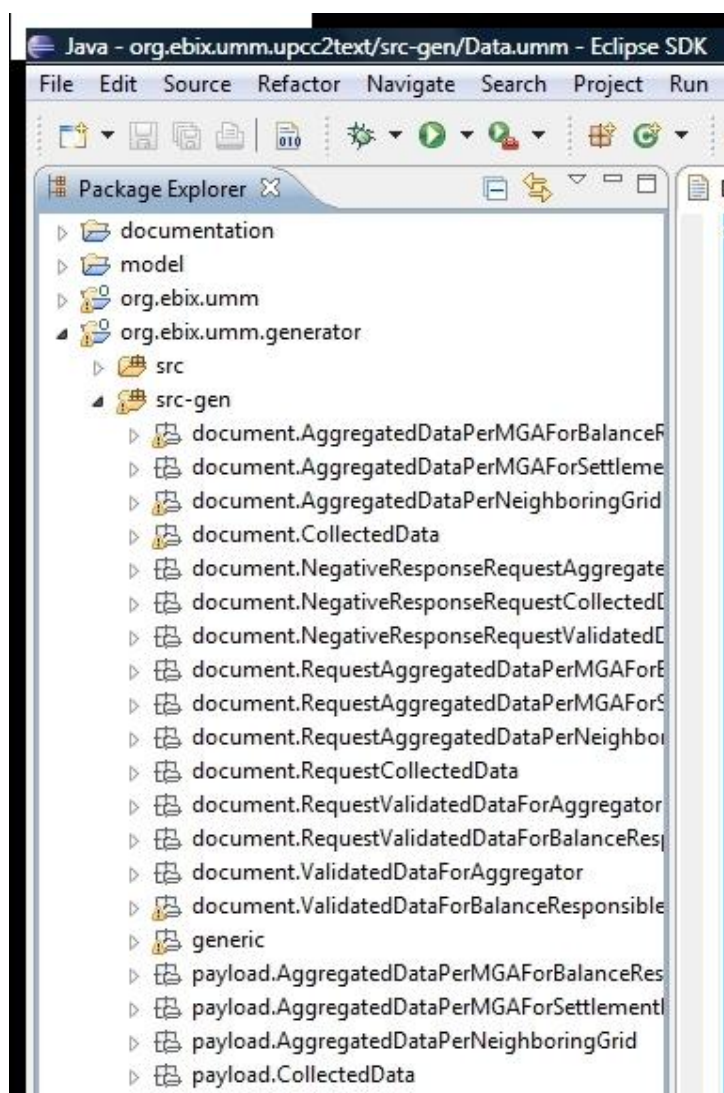
Select	Action
org.ebix.umm.generator	<Left click> on opening symbol directory
src	<Left click> on opening symbol directory
workflow	<Left click> on opening symbol directory
XsdGenerator.mwe2	<right click>
Run as	-
1 MWE2 Workflow	<Left click>

After a while (don't be too hasty!) the messages stop appearing in the under middle window and the final text appears:

```
72011 [main] INFO          org.eclipse.xpand2.Generator - Written 275 files to outlet
[default](src-gen)
72011 [main] INFO      .emf.mwe2.runtime.workflow.Workflow - Done.
```



4.6. Step 6: open generated XML Schema's



Select	Action
org.ebix.umm.generator	<Left click> on opening symbol directory
src-gen	<Left click> on opening symbol directory
One of the directories	<Left click> on opening symbol directory
One of the files in that directory	<right click>
Open with	-
System Editor	<Left click>

The files can of course also be opened with XML-Spy or any other tool capable of loading XML-Schema's. In this case the files are to be found in: <diskname>:<in case of additional path:/>tt/org.ebix.umm.generator/src-gen/<one the dedicated directories created by the tool for the XML-schema's>.

5. How to update the ebIX® Transformation Tool?

5.1. Download update

Step A

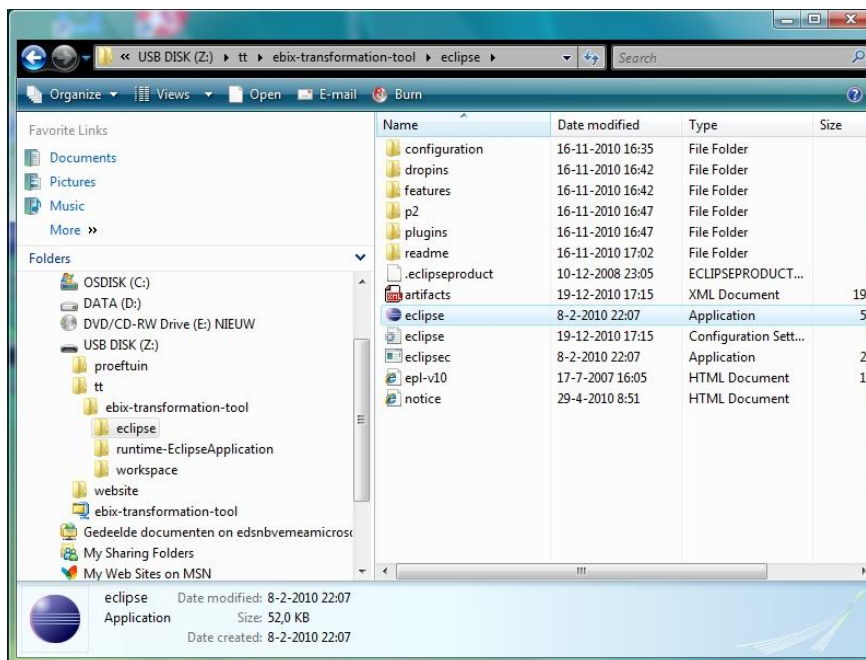
- Download the latest version of the zipped file containing the actual routines for the transformation tool with the name “update ebIX TT <date as version>” (like “update ebIX TT 20110216”). Do not unzip this file (in step .. you will import the complete zipfile into the TT framework).

5.2. Open Eclipse

Step B

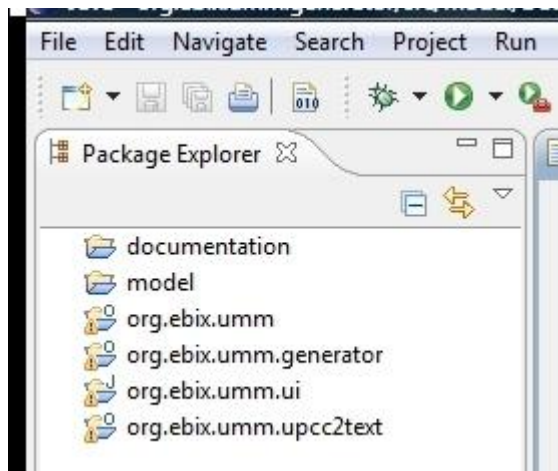
- Go to Eclipse and start Eclipse

Select	Action
tt (folder)	Double <Left click>
ebix-transformation-tool (folder)	Double <Left click>
eclipse (folder)	Double <Left click>
eclipse (application)	Double <Left click>



Eclipse is now opened.

5.3. Delete outdated files in Eclipse



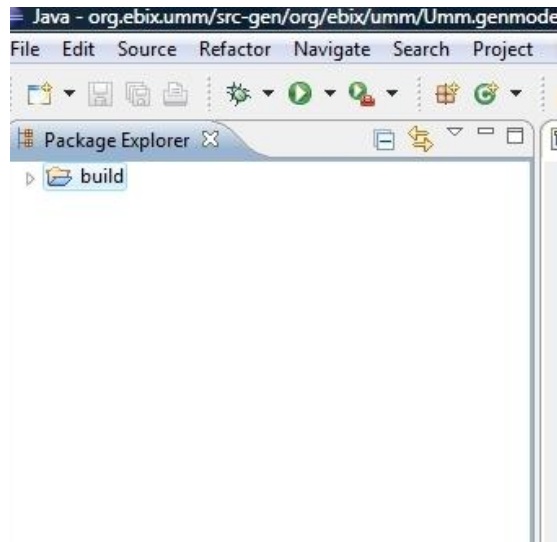
Step C

- Select in Eclipse (window on left hand side of the screen) the following 4 Eclipse project files:
 - o org.ebix.umm
 - o org.ebix.umm.generator
 - o org.ebix.umm.ui
 - o org.ebix.umm.upcc2text
- when you have selected this set of 4, right click and select from the pop-up menu the option "delete". The next pop-up menu will ask whether you want the files to be deleted on disk as well: you mark that box (meaning you want them deleted from disk as well) and then click "OK".

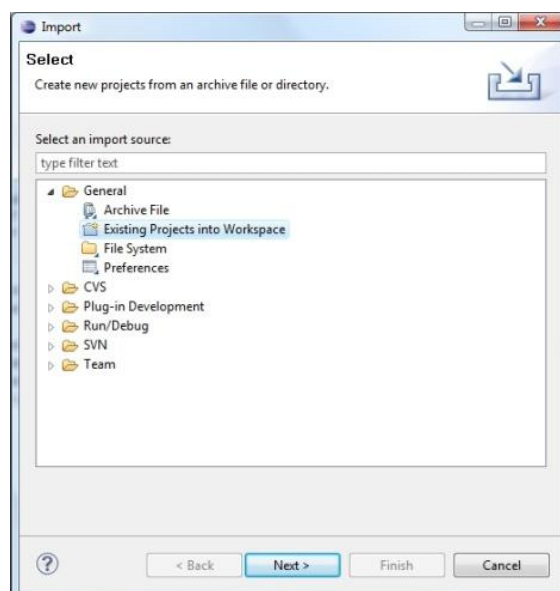
5.4. Adding the update to the ebIX® transformation tool

Step D

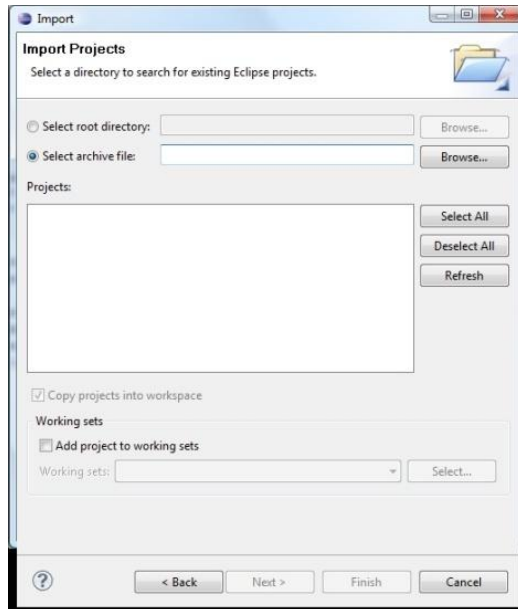
- Import update
 - After opening Eclipse you see a screen with the window as pictured below at the left hand side



- Select "File" from the main top bar in the window and then select "import" from the pop-up menu
- The next pop-up window: select "ExistingProjects into Workspace" (remark: don't type a filter text!) and select "Next"



- The next pop-up window: mark the box “Select archive file” (is probably already default marked!) and then use the “Browse”-button to select the location where you have stored the zip-package with the updated project files that have received. The box “Copy projects into workspace” is default marked (and should be); the box “Add project to working sets” is default not marked and should be left this way. Finally select finish.



The insertion of the new project files will take a while: so have some patience!

After this step the window will look like the picture below and the transformation tool will be ready for use again.

