

# Unity Comments translator.

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## Document Revisions:

Version	Date	Author	comment
1.0	25/3/2016	P.Jouvenel	Creation
1.1	10/6/2016	//	Split initial file into 2 separate documents (comments, iocanning)

### 1. Disclaimer:

These tools are provided **as is** and may not have been tested exhaustively. The use of the tool does not imply any responsibility for Schneider-Electric.

### 2. General purpose:

These tools are intended to provide help to fasten action in unity and or do bulk operations.

They are provided primarily as command line tools. For the sake of example it can also provide an Excel add Ins or any other GUI. Excel extensions are provided as a zipped setup.

NB: Excel add Ins require at least excel 2010 installed

### 3. Trouble shooting:

In some cases the “add in” may not load on excel 2010. This is usually due to a wrong version of the [Microsoft VSTO 2010 Runtime] (vstor\_redist.exe) – Minimum required version: 10.0.60724

The folder Pre-Requisite contains the redistribution for:

- .net 4.61
- Microsoft VSTO 2010 runtime

### 4. License:

This open source project is licensed by Schneider-Electric under MIT agreement.

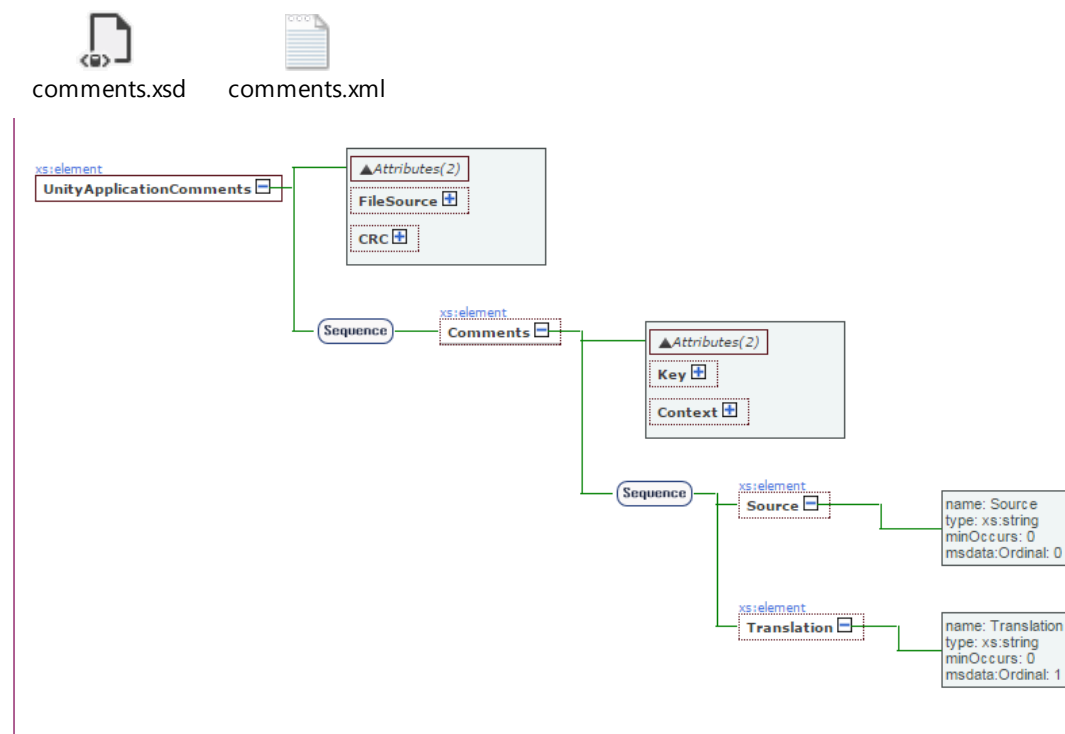
Please refer to License file for more details

### 5. Unity Comments extraction:

This tool allows to extract and re-inject translated/modified comments into unity applications. The comments can be translated outside. It allows bulk operations.

#### 4.1. Extracted file format (pivot format)

The extracted informations are stored in xml format. The xml schema and example:



Example:

(Arabic translation)

### 4.2. Command Line tool:

**UnityTranslator.exe {command} {parameter1} {parameter2}**

Command	Parameters1:	Parameter 2:	Comments
<b>Extract</b>	<b>IN:</b> Path of the Unity application file to read comments from. Could be STU/STA/ZEF.	<b>OUT :</b> xml file to store the resulting model (comments)	<b>Pre-condition:</b> {parameter1} is a valid unity application file. Reads all comments from application {parameter1} and save it into (parameter2). ⇒ <b>Post-Condition:</b> the file contains all comments from the unity applications.
<b>Translate</b>	<b>IN-OUT :</b> Path of the xml file which contains the comments to translate	<b>IN :</b> Language to translate to	<b>Pre-condition:</b> {parameter 1} is a valid comment xml model. {parameter2} is the code of a supported language. The tool will automatically translates the comments into the given language using Microsoft translate service. NB: a key for Microsoft translate is included but is limited to 2 000 000 char per month. 1. The resulting xml contains all comments and their translation in the given language {parameter2}. <b>Remark:</b> the original xml (parameter1) file is saved as .back before being translated.
<b>Apply</b>	<b>IN :</b> Path of the xml file containing the comments and their translations	<b>OUT:</b> Path of the Unity application file to update comments (.ZEF).	<b>Pre-condition:</b> {parameter1} is a valid file. Updates application provided in {Parameter2} with the translations in the model {Parameter1}. 2. The resulting applications are conform to the model.

### 4.3. Restriction / usage

The key used to require automatic translations are stored in UnityComments.dll.config.

The tool support up to 4 keys. 2 basics are provided but should be replaced with your own.

To do that:

- 1) Create a keys in Microsoft translate tool as defined here: (steps1-4)  
<https://msdn.microsoft.com/en-us/library/mt146806.aspx>
- 2) Update the config file with MicrosoftTranslatorAccountkey as your client ID  
And MicrosoftTranslatorAccountPwd as your client secret.

NB: the keys are ordered. The tool will try the first, if it fails the second .... So put your own at first.

**UnityComments.dll.config. extracted part:**

```
<userSettings>
  <SchneiderElectric.UnityComments.Properties.Settings>
    <setting name="MicrosoftTranslatorAccountkey1" serializeAs="String">
      <value>se-unitytranslator</value>
    </setting>
    <setting name="MicrosoftTranslatorAccountPwd1" serializeAs="String">
      <value>FRWWzrS22b5x0nrhnI2vljYenTbv+LhxMF4SAdKQaF4=</value>
    </setting>
    <setting name="MicrosoftTranslatorAccountkey2" serializeAs="String">
      <value>unitytranslator-se</value>
    </setting>
    <setting name="MicrosoftTranslatorAccountPwd2" serializeAs="String">
      <value>L3McgaNVzU+RhmpN2pK5JlJjaaRGHyBqmPT3Z4REN0M=</value>
    </setting>
    <setting name="MicrosoftTranslatorAccountkey3" serializeAs="String">
      <value />
    </setting>
    <setting name="MicrosoftTranslatorAccountPwd3" serializeAs="String">
      <value />
    </setting>
    <setting name="MicrosoftTranslatorAccountkey4" serializeAs="String">
      <value />
    </setting>
    <setting name="MicrosoftTranslatorAccountPwd4" serializeAs="String">
      <value />
    </setting>
  </SchneiderElectric.UnityComments.Properties.Settings>
</userSettings>
```

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### 4.4. Log

A log file is created and contain all actions/ errors.

It is located in: %programdata%\Schneider Electric\Translator

### 4.5. Examples:

Extract:

```
Administrator: Developer Command Prompt for VS2015
d:\projects\dev\UnityScanner\Clients\UnityTranslator>bin\Debug\UnityTranslator.exe extract bin\test\base.zef bin\test\base.xml
74 INFO - Starts UnityTranslator
148 INFO - d:\projects\dev\UnityScanner\Clients\UnityTranslator\bin\test\base.zef : Loaded : 247 comments found
149 DEBUG - back up d:\projects\dev\UnityScanner\Clients\UnityTranslator\bin\test\base.xml => d:\projects\dev\UnityScanner\Clients\UnityTranslator\bin\test\base-back
149 INFO - Save results in d:\projects\dev\UnityScanner\Clients\UnityTranslator\bin\test\base.xml
execution took: ....:0 sec 139 ms
```

Apply:

```
Administrator: Developer Command Prompt for VS2015
d:\projects\dev\UnityScanner\Clients\UnityTranslator>bin\Debug\UnityTranslator.exe apply bin\test\base.xml bin\test\base-ar.zef
82 INFO - Starts UnityTranslator
142 DEBUG - Update comments mapping for d:\projects\dev\UnityScanner\Clients\UnityTranslator\bin\test\base.zef
233 INFO - d:\projects\dev\UnityScanner\Clients\UnityTranslator\bin\test\base.xml : Loaded : 247 comments found
233 INFO - generate unity application d:\projects\dev\UnityScanner\Clients\UnityTranslator\bin\test\base-ar.zef:
234 DEBUG - back up d:\projects\dev\UnityScanner\Clients\UnityTranslator\bin\test\base-ar.zef => d:\projects\dev\UnityScanner\Clients\UnityTranslator\bin\test\base-ar-back
execution took: ....:1 sec 552 ms
```

Translate:

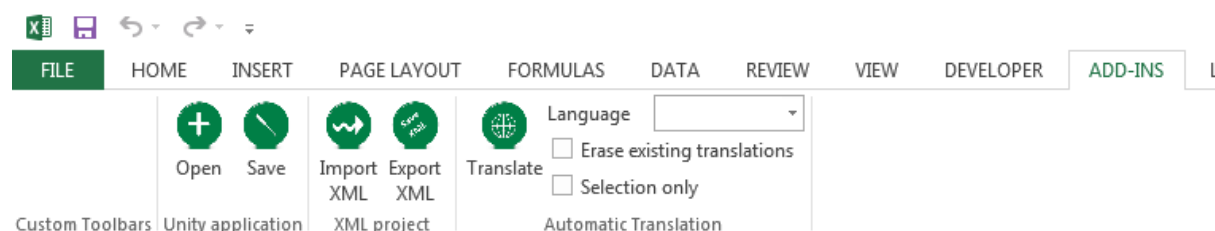
```
Administrator: Developer Command Prompt for VS2015
d:\projects\dev\UnityScanner\Clients\UnityTranslator>bin\Debug\UnityTranslator.exe Translate bin\test\comments.xml it
80 INFO - Starts UnityTranslator
149 DEBUG - Update comments mapping for d:\projects\dev\UnityScanner\Clients\UnityTranslator\bin\test\base.zef
2312 INFO - Translate d:\projects\dev\UnityScanner\Clients\UnityTranslator\bin\test\comments.xml : from: en to it
2388 DEBUG - Translation for source text 'Station comments' from en to it is I commenti di stazione
2482 DEBUG - Translation for source text 'Device DDT For BME NDC Factory Cast' from en to it is Dispositivo DDT per BME NDC fabbrica Cast
2835 DEBUG - Translation for source text 'Ethernet status' from en to it is Stato Ethernet
3186 DEBUG - Translation for source text 'Link up/down for Ethernet port 1' from en to it is Link su/giù per la porta Ethernet 1
3456 DEBUG - Translation for source text 'Link up/down for Ethernet port 2' from en to it is Link su/giù per la porta Ethernet 2
3787 DEBUG - Translation for source text 'Link up/down for Ethernet port 3' from en to it is Link su/giù per la porta Ethernet 3
4089 DEBUG - Translation for source text 'Link up/down for Ethernet backplane port' from en to it is Link su/giù per porta backplane Ethernet
4336 DEBUG - Translation for source text 'Link up/down for HSBV port' from en to it is Link su/giù per la porta HSBV
4524 DEBUG - Translation for source text 'Redundancy status / backup path available' from en to it is Lo stato di ridondanza / percorso disponibile di backup
4709 DEBUG - Translation for source text 'Scanner ON and scanning at least 1 equipment (if at least 1 equipment configured)' from en to it is OK scanner e almeno 1 attrezzatura di scansione (se configurato almeno 1 attrezzatura)
5151 DEBUG - Translation for source text '0: one or more services not operating normally / 1: all operational' from en to it is 0: uno o più servizi non funzionano normalmente / 1: tutti operativi
5262 DEBUG - Translation for source text 'One bit for each user-observable feature' from en to it is Un bit per ogni funzionalità utente osservabile
5412 DEBUG - Translation for source text '0: service not operating normally / 1: service operating normally or disabled' from en to it is 0: servizio non funzionante normalmente / 1: servizio funziona normalmente o disabilitato
5855 DEBUG - Translation for source text 'Main IP address status (0 in case of duplicate IP or no IP assigned)' from en to it is Stato dell'indirizzo IP principale (0 in caso di IP duplicato) o nessun IP assegnato
6162 DEBUG - Translation for source text 'Ethernet backplane hardware status (0: failure, 1: OK)' from en to it is Lo stato dell'hardware backplane Ethernet (0: fallimento, 1: OK)
```

### 4.6. Excel add ins:

The Excel add in is designed to help doing bulk modifications/translations to all comments in a unity application. It allows to display, and modify the displayed comments using the power of excel. As it is based on the same xml model (cf 5.1), it may be useful to mix batch operations using command lines and edition operation using excel sheet.

After installation of the unity comment excel plugin, open Excel.

In the add-ins tab, you will find a bar with green buttons:



The buttons allow to pilot the extraction translation and generation of the comments.



Usually the flow is:

- open unity project.

Unity application	XML project	Automatic Translation
1. Comments	T_BMENO03801_2(DOTSource)/comment	Project(commentheader)/comment
2. Station comments	T_BMENO03801_2(DOTSource)/comment	T_BMENO03801_2(DOTSource)/comment
3. Device DDT For BME NOC Factory Cast	T_BMENO03801_2(DOTSource)/comment	T_BMENO03801_2(DOTSource)/comment
4. Ethernet status	T_BMENO03801_2(DOTSource)/comment	T_BMENO03801_2(DOTSource)/comment
5. Link up/down for Ethernet port 1	T_BMENO03801_2(DOTSource)/comment	T_BMENO03801_2(DOTSource)/comment
6. Link up/down for Ethernet port 2	T_BMENO03801_2(DOTSource)/comment	T_BMENO03801_2(DOTSource)/comment
7. Link up/down for Ethernet port 3	T_BMENO03801_2(DOTSource)/comment	T_BMENO03801_2(DOTSource)/comment
8. Link up/down for Ethernet backbone port	T_BMENO03801_2(DOTSource)/comment	T_BMENO03801_2(DOTSource)/comment
9. Link up/down for HSBY port	T_BMENO03801_2(DOTSource)/comment	T_BMENO03801_2(DOTSource)/comment
10. Redundancy status / backup path available	T_BMENO03801_2(DOTSource)/comment	T_BMENO03801_2(DOTSource)/comment
11. Scanner OK and scanning at least 1 equipment (if at least 1 equipment configured)	T_BMENO03801_2(DOTSource)/comment	T_BMENO03801_2(DOTSource)/comment
12. If one or more services not operating normally / 1: all operational	T_BMENO03801_2(DOTSource)/comment	T_BMENO03801_2(DOTSource)/comment
13. One bit for each user-observable feature	T_BMENO03801_2(DOTSource)/comment	T_BMENO03801_2(DOTSource)/comment
14. If service not operating normally / 1: service operating normally or disabled	T_BMENO03801_2(DOTSource)/comment	T_BMENO03801_2(DOTSource)/comment
15. If service not operating normally / 1: service operating normally or disabled	T_BMENO03801_2(DOTSource)/comment	T_BMENO03801_2(DOTSource)/comment
16. If service not operating normally / 1: service operating normally or disabled	T_BMENO03801_2(DOTSource)/comment	T_BMENO03801_2(DOTSource)/comment
17. Main IP address status (0 in case of duplicate IP or no IP assigned)	T_BMENO03801_2(DOTSource)/comment	T_BMENO03801_2(DOTSource)/comment
18. Ethernet backbone hardware status (0: failure, 1: OK)	T_BMENO03801_2(DOTSource)/comment	T_BMENO03801_2(DOTSource)/comment
19. Ethernet backbone error (0: error, 1: OK)	T_BMENO03801_2(DOTSource)/comment	T_BMENO03801_2(DOTSource)/comment

This will open the project, read the content, extract the comments and display them.

In this result sheet, the model structure is flat. Each line represent one comment in the source application. The second column will contain the translations/modifications of the comment at this

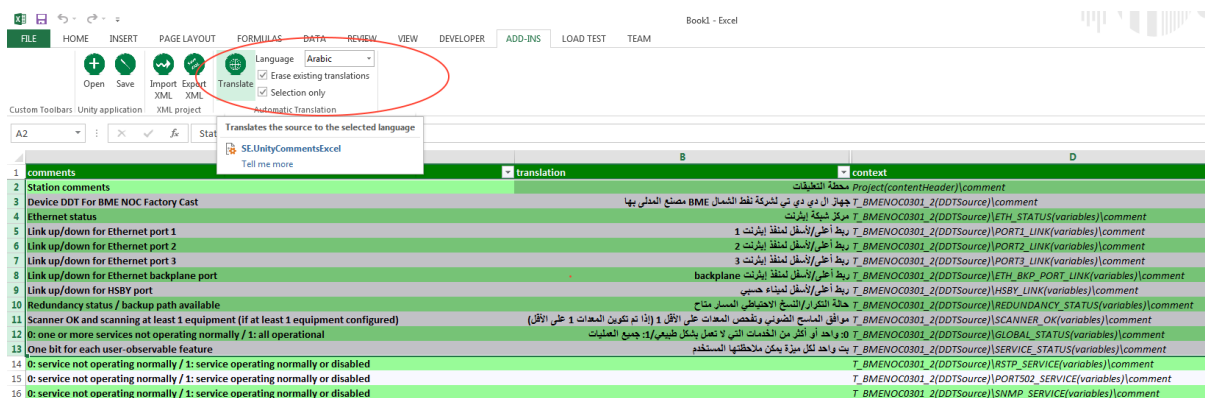
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stage it is empty (just read an application), and then in column D the context is displayed. The context helps the operator to understand from where comes the comment: is it a comment in a code section or in the station properties or on a variable etc....

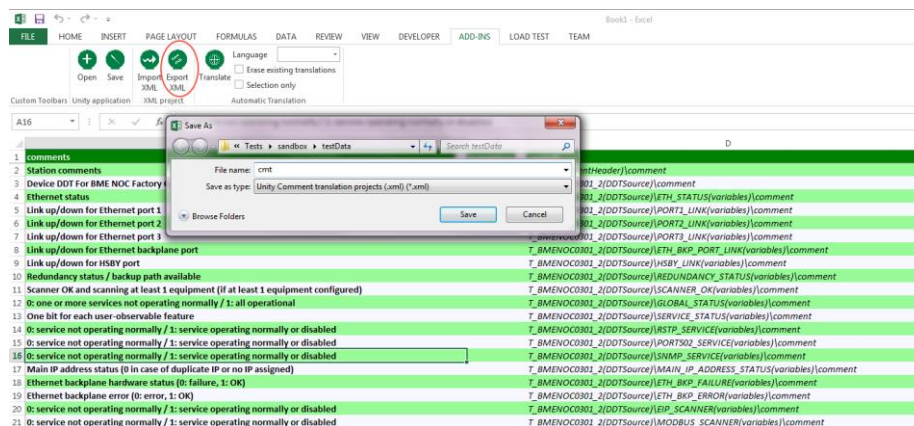
- Modify / translate the comments for example copy column A in column B and modify some of them. NB: during the save operation, if a comment is not translated/modified (empty col B) the original comment is used.
- Use the automatic translation: the tool allow to use Microsoft translator to propose a first version of the translation for the comments. For sure it needs to be checked but could be a quick first loop.

When using the automatic translation, you need to:

- Select the target language (source language will be determined automatically)
- Adapt the combinable options as desired:
  - Check “erase existing translation” if and only if you want to re translate all comments, even the one already done (non-empty col B). If this option is unselected, only the non Blanc items will be translated.
  - Check “selection only” if you want to submit only the selected items to the translator. If not selected, the whole file is submitted.



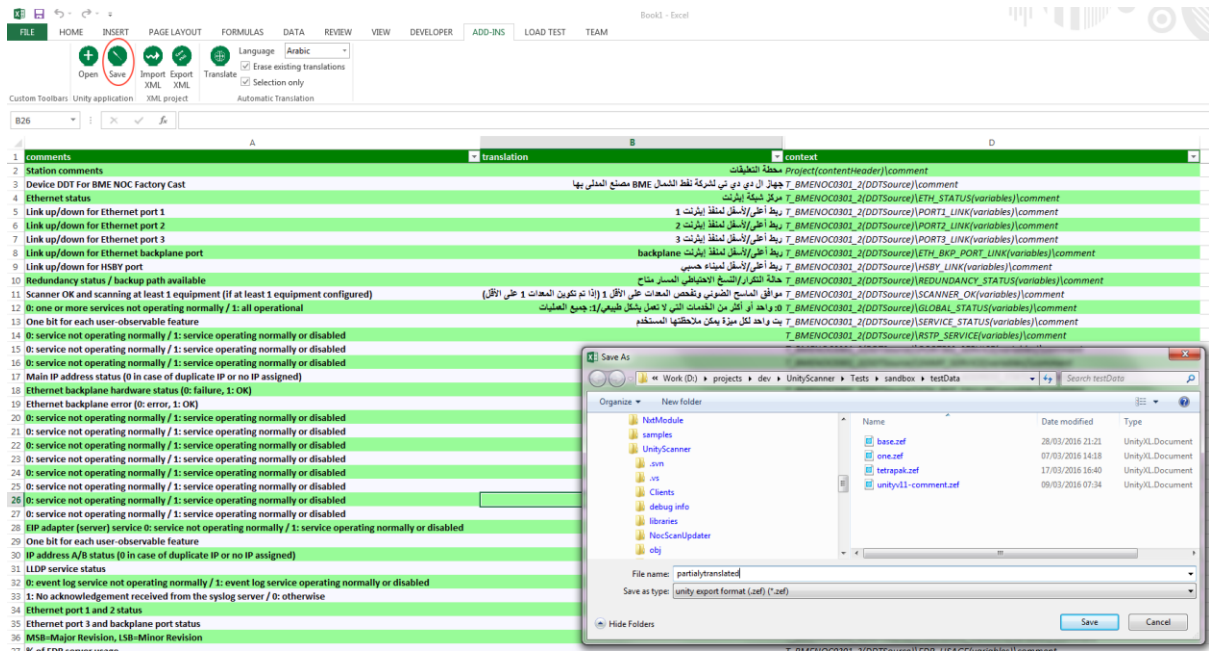
- Save the model, to be able to reopen it more quickly later.





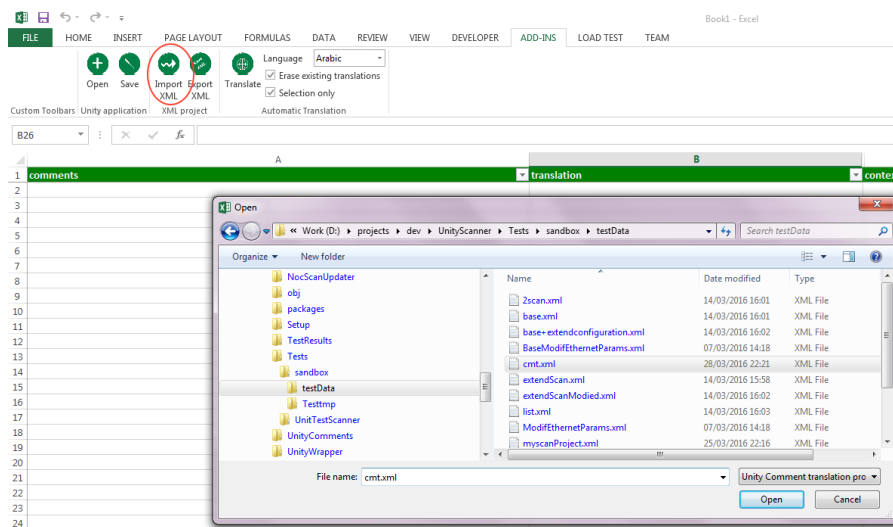
## Unity Productivity Tools: Take benefits of unity automation interfaces

### ➤ Update unity applications



This will update the application with the translations/modifications.

### ➤ Load model



This will reload the xml file into the worksheet