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SMF-STF Bridge Transformation Tool - User manual

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LISTE OF MODIFICATIONS

Date	Author	Version	Nature
20 March 2008	E. Rillaerts	0.1	Created
15 May 2008	E. Rillaerts	0.2	All sections are updated to comply with the new bridge tool version 0.2. Memory requirements and Input validation section are added.
16 July 2008	E. Rillaerts	0.3	Updated section 2.4 Using the tool
6 October 2008	E. Rillaerts	0.4	Updated section 2.4, 2.4.2, 2.4.3
16 November 2009	E. Rillaerts	0.5	Updated section 2.2 (Jar executable)
20 January	E. Tassenoy	1.0	All sections are updated to comply with the new bridge tool version 1.0.
23 May	E. Tassenoy	1.O	Change of e-mail contact address

REFERENCE LIST

OECD-SMF-Manual: TIES - Tax Information Exchange System Manual.

OECD: Manual on the implementation of exchange of information provisions for tax purposes.

The OECD Standard Transmission Format for international information exchange in taxation - An introduction

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1. INTRODUCTION

1.1. SUBJECT OF THE DOCUMENT

This document explains how the OECD Bridge transformation tool should be used.

1.2. DEFINITIONS AND ABBREVIATIONS

SMF :   **S**tandard **M**agnetic **F**ormat
STF :   **S**tandard **T**ransmission **F**ormat for international information exchange in taxation.

2. RUNNING THE TOOL

2.1. PREREQUISITES

In order to run the transformation tool you should have a Java runtime (JRE) installed on your PC. Version 1.5 or higher is required. If you do not yet have a Java JRE or an older version, you can download it from the website of SUN or from www.**java**.com.

2.2. THE TOOL

The tool itself is packaged in a Java archive (jar file). All required components are stored in this archive. The current version of the tool is provided in the jar file named "OECD-bridge-1.0.jar".

Since version 0.7 there is also a jar executable available (wrapped Java executable), which has the file extension exe. It is a native Windows launcher that pre-sets the Java maximum heap size to 1600 megabyte. The executable has been build with the open source package JSmooth (Java Executable Wrapper). Since it is a native Windows executable it can only be used on a Windows platform.

2.3. STARTING THE TOOL

The tool can be started by double clicking the OECD-bridge-1.0.jar file. It is although preferred to start it from a command prompt, since technical errors that might occur will be logged to the command console.

Starting from the command prompt can be done via following command:

java -jar <name of the jar file> e.g. java -jar OECD-bridge-1.0.jar

The wrapped java executable (exe), see 2.2 The tool, can be started by double clicking the icon in Windows. The executable sets the Java maximum heap size by default to 1600 megabyte.

2.3.1. MEMORY REQUIREMENTS

When converting large STF files into SMF enough java heap memory has to be available, on java 1.5 the minimum memory required is equal to the STF file size * 3.

Setting the java heap size can be done when starting the tool via the command prompt with the "-Xmx" maximum Java heap size option. Following command will start the tool with a maximum heap size of 500 megabyte.

E.g. java -Xmx500m -jar OECD-bridge-1.0.jar

2.4. USING THE TOOL

The first step is to choose the kind of transformation, transform a SMF file into a STF file or a STF file into a SMF file by clicking the appropriate radio button.

When the option SMF to STF is selected there is a button at the right (transformation properties) which opens a dialog where specific parameters can be specified used by the transformation. The message specification parameters will be stored in the "MessageSpec" element of the generated STF document. The encoding type is mandatory and needs to match the encoding of the SMF file, the default is UTF-8.

When the option STF to SMF is selected, the associated transformation properties button appears and gives access to a dialog where the encoding can be specified of the SMF output file. The default is UTF-8.

The input file needs to be filled in the "input file" field or it can be selected with the file dialog. This dialog can be opened by clicking the button with the three dots next to the "input file" field.

The output file needs to be filled in the "target file name" field; it should be a fully qualified and non existing file. The file name can also be selected via the file selection dialog.

The transformation can be started by pressing the "start transformation" button. The transformation can be interrupted by clicking the stop button, which is only visible when a transformation is ongoing.

When the transformation is finished a message will display the result, success or failure. In case of a failure, the error is logged to the transformation messages box at the bottom of the main window. When there was a technical problem the detailed technical error information is printed on the console that started the tool.

When the result of the transformation is an STF document, the tool will display a Validate button, which allows validating the generated STF against the XSD schema. The validation errors, if any, will be displayed in the messages box and can also be saved to a file via the "Save as" button that is visible after a validation that returned validation errors.
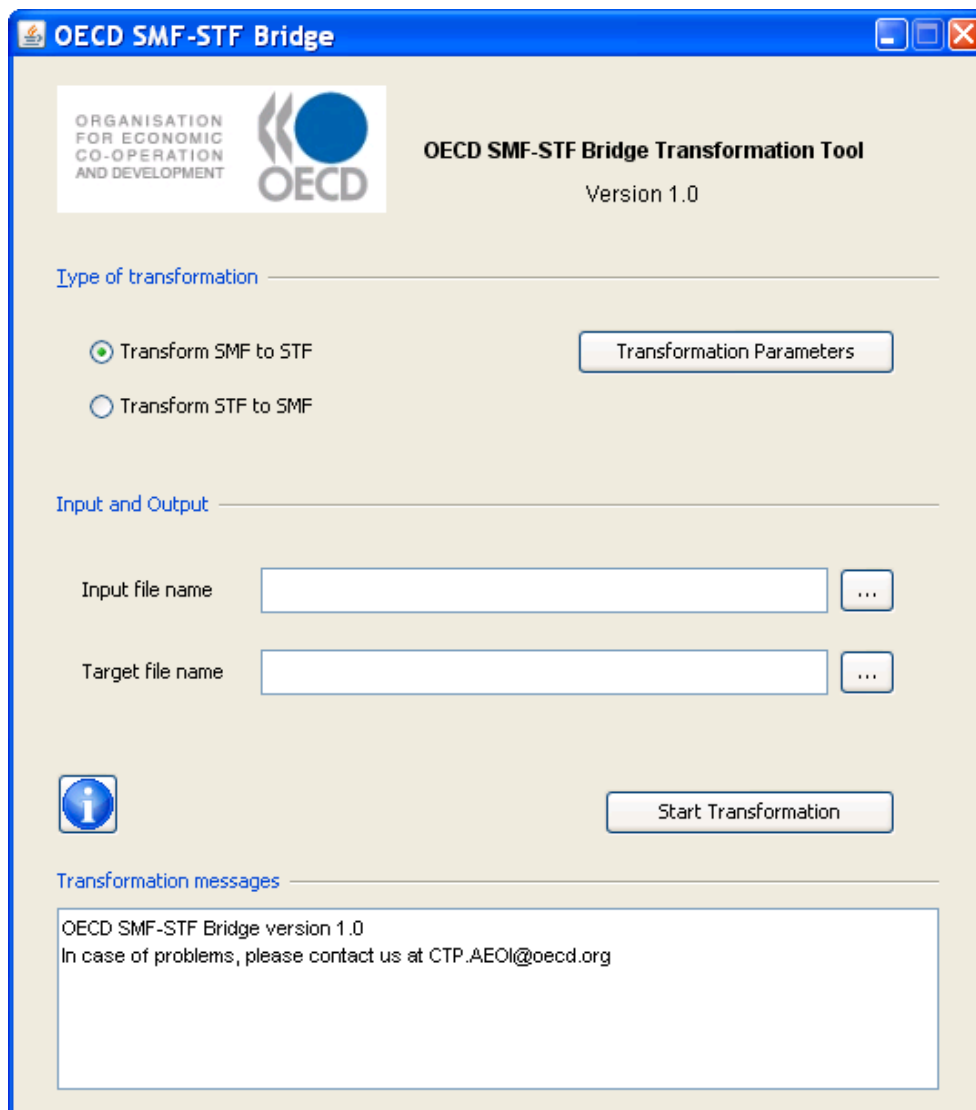
2.4.1.   MAIN WINDOW

Figure 1 - The main window

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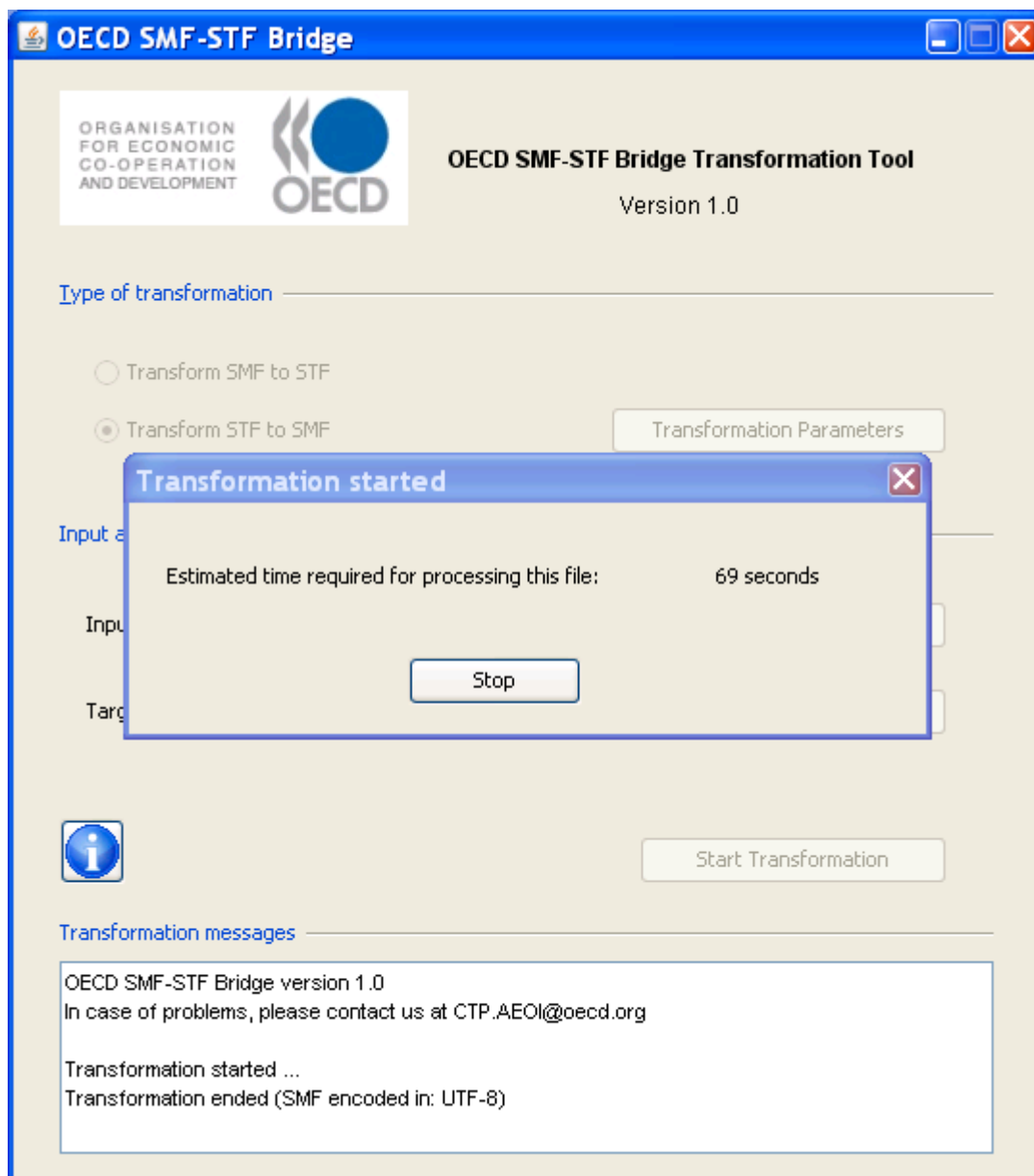
Figure 2 - The main window - An ongoing transformation, displaying the estimated time to complete.

2.4.2. TRANSFORMATION PROPERTIES WINDOW SMF-STF

Figure 3 - Transformation properties window

By hovering the mouse over the label of a field, a tooltip will show up displaying detailed information of the field. The mandatory fields are indicated by a red star.

The Tax Year List field is a read-only field. It can be edited via the Tax Year List input dialog that can be accessed by clicking the 'Edit Tax Year List' button.

The encoding of the SMF file can be specified, the default is UTF-8. If a wrong encoding is specified, the transformed STF can contain unreadable characters.

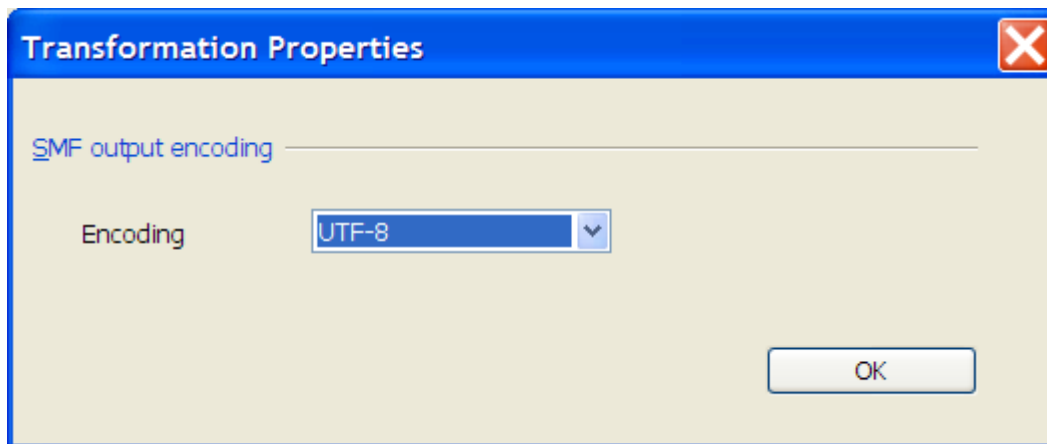### 2.4.3.   TRANSFORMATION PROPERTIES WINDOW STF-SMF

Figure 4 - Transformation properties window

The encoding can be specified in which the transformed SMF file will be created; the default is UTF-8.

2.5. INPUT VALIDATION

A STF document should conform to the STF XML schema. When transforming a STF document into the SMF format, the STF document will be validated against the STF schema. When an error is found it will be logged and the transformation will be stopped.

A SMF file should contain records that have a length of 2760 characters (following the SMF standard). Each record should be separated by a new line. When a record is encountered that doesn't match the required length, the transformation will be stopped and an appropriate error will be displayed.

2.6. PROBLEM SOLVING

When the transformation fails, the transformation messages area (at the bottom of the main window) should be consulted. If not enough information is visible here to identify the actual problem, the command prompt console in which the application is started can be consulted for detailed error messages.

When a SMF file is transformed into a STF file and the transformation failed or the result is not what is expected, verify if the SMF input file is valid and whether the right encoding was selected in the Transformation parameters dialog.

When a STF file is transformed into a SMF file and the transformation failed or the result is not what is expected, verify if it is a well formed STF document and verify if the XML namespace definitions are correct in the STF file. The definition should look like:

<STF_OECD xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xalan="http://xml.apache.org/xslt" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:oecd:ties:stf:v2.1">

2.7. XSLT STYLESHEETS

The stylesheet (XSL) used by the transformation tool for the SMF to STF transformation is a changed version of the original version (smf2stf-1.3.xsl). This, rather small change is required to allow the XSLT transformer to process property values for the different child elements of the "MessageSpec" element (sending country, receiving country, warning, contact, message ref id, tax year list). This allows to encode these properties in a dynamic way (e.g. via the transformation tool properties dialog), instead of having them statically defined in the XSL itself.

Next to this, another small update of the xsl:output instruction is made to make the transformer (Xalan) indent the output properly (`xalan:indent-amount is added`).

2.8. DISCLAIMER

THIS TRANSFORMATION TOOL HAS BEEN WRITTEN AND TESTED WITH CARE. THERE WILL BE, HOWEVER, NO GUARANTEE WHATSOEVER REGARDING ITS CORRECTNESS. ANYONE USING THIS TRANSFORMATION TOOL WILL DO THIS UNDER HIS OR HER OWN RESPONSIBILITY AND BEFORE USING IT, WILL HAVE TO TEST IT AS CONSIDERED NECESSARY. NO LIABILITY WILL BE ACCEPTED BY OECD, THE OECD TIES GROUP, OR THE AUTHORS OF THIS TRANSFORMATION TOOL FOR ANY DIRECT OR INDIRECT DAMAGE THAT MAY RESULT FROM USING THIS TRANSFORMATION. THIS TRANSFORMATION TOOL MAY BE USED AND CHANGED FREELY IF AND ONLY IF THESE CONDITIONS ARE ACCEPTED.

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