Using the EBTS Transaction Tool

The EBTS Transaction Tool accepts either traditional or XML-encoded EBTS transactions and provides users with the ability to validate these transactions (determine if they conform to the EBTS requirements for that transaction). The result of an unsuccessful validation is a display of the missing and/or incorrect fields for invalid files. The result of a successful validation is a display of the validation status and the ability to convert the validated transaction(s) to another encoding. In either case, the results can be exported. For more information regarding EBTS, refer to the EBTS specification at www.fbibiospecs.cjis.gov/EBTS/Approved.

The tool is a Java Webstart application that downloads to the user's computer and executes totally within the user's environment. This prevents Personally Identifiable Information (PII) from being stored or processed on FBI servers, or intercepted and transmitted across the Internet.

NOTE: The Transaction Tool has been upgraded to Java 8, please make sure that you have Java 8 downloaded on your computer prior to using this tool. If you are not able to upgrade to Java 8 please use instructions below to make necessary adjustments to the SSL/TLS settings.

Use the following link to determine what version of Java you have: www.java.com/en/download/installed.jsp.

If you do not have Java 8 installed on your computer, please refer to the following link: www.java.com/en/download/help/windows_manual_download.xml.

If you receive the error "***Remote host closed during handshake***" you will need to set the Java SSL/TLS protocol 1.2. In order to do this, please use the following instructions.

For Windows:	For Mac:	For Linux:
1. Click on the Start Menu and type Java in the search field a. From the list select "Configure Java"	1. Click on System Preferences and click on the Java icon towards the bottom	1. In a new tab on Mozilla, type or paste **about:config** in the address bar and press Enter. Click the button promising to be careful.
2. When the Java Control Panel open click on the "Advanced" Tab	2. When the Java Control Panel open click on the "Advanced" Tab	2. In the Search box above the list, type or paste **tls** and pause while the list is filtered
3. Scroll down to the bottom and under "Advanced Security Settings" check the box next to "Use TLS 1.2"	3. Scroll down to the bottom and under "Advanced Security Settings" check the box next to "Use TLS 1.2"	3. To disable SSL3 and requires TLS of one flavor or another, double-click 4. **security.tls.version.min** and enter the desired value: • 0 = SSL 3.0 okay

		• 1 = at least TLS 1.0 • 2 = at least TLS 1.1
4. Click "Apply" and close the Control Panel	4. Click "Apply" and close the Control Panel	5. To disable TLS of one flavor or another, double-click **security.tls.version.max** and enter the desired value: • 0 = up to SSL 3.0 • 1 = up to TLS 1.0 • 2 = up to TLS 1.1

How do EBTS Transactions work?

To communicate biometrics data with the FBI, a user must submit transactions as defined in the EBTS specification. There are a variety of transactions, each identified by a unique code in a field named "Type of Transaction" (TOT), which defines the purpose of the transaction. For example, if you wanted to conduct a search of a fingerprint image without any markup, you would create a transaction using an LFIS (Latent Fingerprint Image Search) TOT and submit it to the FBI.

Each transaction is composed of various combinations of data records, each of which has a Record Type. Each valid record of a given Record Type has a list of defined fields which must conform to a set of requirements (e.g., character length, occurrence count, mandatory or optional, etc.). If a created transaction is not valid (does not conform to EBTS requirements) it cannot be processed by the FBI's biometric system.

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Step 1: Launch the Tool

1. To start the tool, click on the "EBTS Transaction Tool" button located at www.fbibiospecs.cjis.gov/EBTS/Approved under "EBTS Compliance Tool Suite".
    a. Most browsers will require you to download the tool and then run the download. See the help file for your browser to determine how best to navigate Internet downloads. If using Internet Explorer (IE), you will receive options to either open or save the tool.
    b. A loading icon from Java Webstart will appear (see Figure 1)

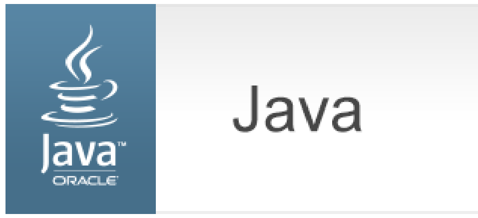


Figure 1. Java Web Start Loading Icon

c. A security warning may appear (similar to Figure 2) and, if so, select Run or the appropriate action to continue. The security pop-up may differ depending on the web browser used. If you do not want to see this screen every time you run the program, click on the checkbox next to the words "Always trust content from this publisher" if this is an option.

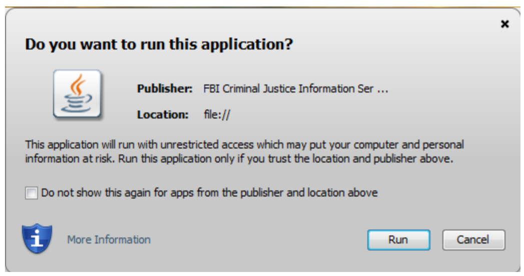


Figure 2. Security Warning

2. You will receive a Disclaimer screen, as shown in Figure 3, and must agree to the terms in order to use the software. If you select "Disagree", the tool will exit.

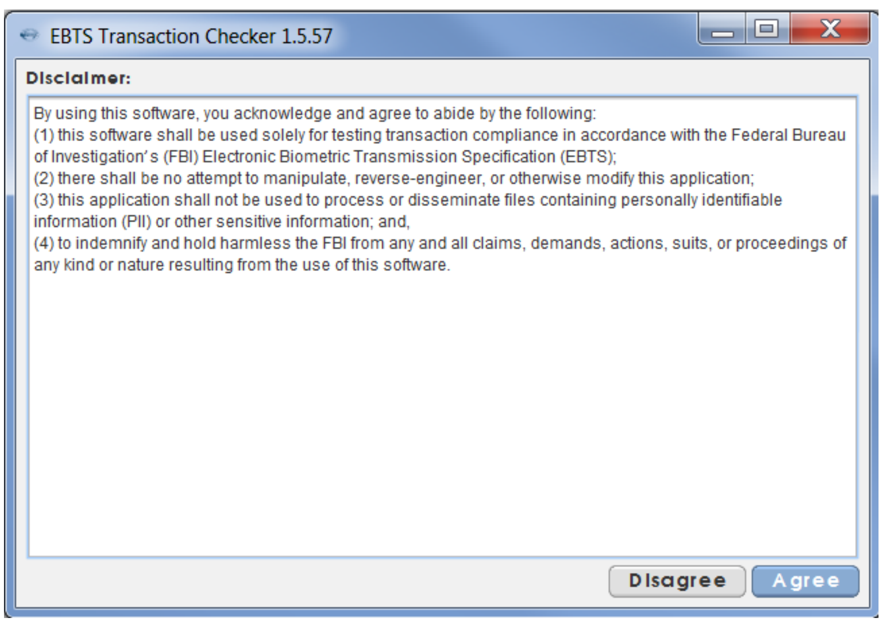


Figure 3. Transaction Tool Disclaimer

Step 2: Choose the EBTS Version

1. Once the “Agree” button is selected, the main Transaction Tool screen (see Figure 4) will appear on the user’s computer.

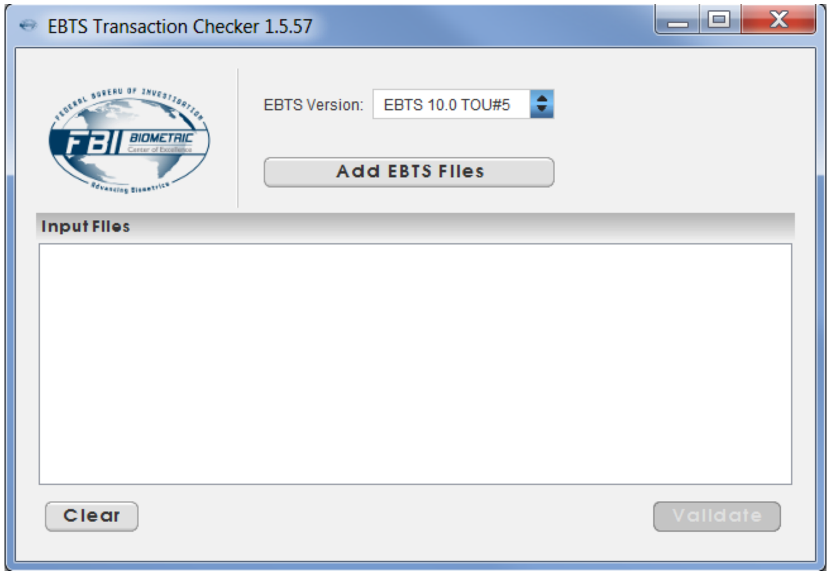


Figure 4. Transaction Tool Main Window

2. Select the EBTS version you wish to validate your file(s) against by clicking the arrows next to the “EBTS Version” pull-down. When you change the selected version, a loading bar is displayed while the program responds.

   Note: The latest effective version of EBTS is always recommended, but older versions are maintained for backward compatibility. As new versions of EBTS are published, they are added to the list of available choices, but the latest effective version is the default.

Step 3: Upload Files

1. Click on the “Add EBTS Files” button and the Open screen in Figure 5 appears. This screen will allow you to select the file(s) you wish to validate. You can view the folder structure by selecting the arrows next to the “Look In” box.

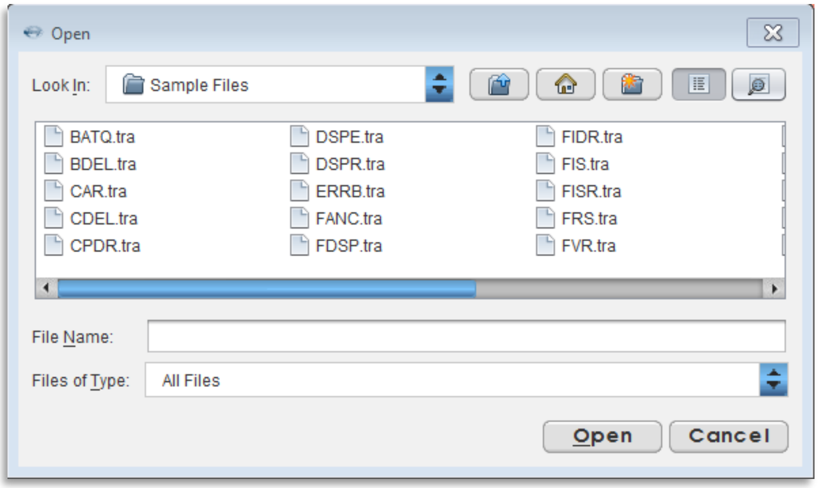


Figure 5. Open Files Window

The screen contains the following selections:

Up One Level: Allows you to navigate to a parent folder

Desktop: Brings you to the files and folders on your desktop

New Folder: Creates a new folder in the current location

List: Sets the current view as a list of folders and files

Details: Sets the current view to Include the size, item type, and date modified of each folder/file in the list

2. Select the file(s) you wish to validate (all chosen files will appear on the File Name line).

   Note: You can select multiple transactions to look up simultaneously by holding Shift or Ctrl and clicking on the desired transactions. Conversely, you can unselect a transaction by holding Shift or Ctrl and clicking on the highlighted transaction. Please note that Shift selects or unselects all items between the two items selected, whereas Ctrl selects or unselects only the two items.

3. Click “Open” when all files you wish to validate are selected. The file(s) will show up on the Transaction Tool main page under “Input Files”. You have two options, as show in Figure 6:

   a. Select “Clear”: Removes files listed under Input Files

   b. Select “Validate”: Starts the file validation process

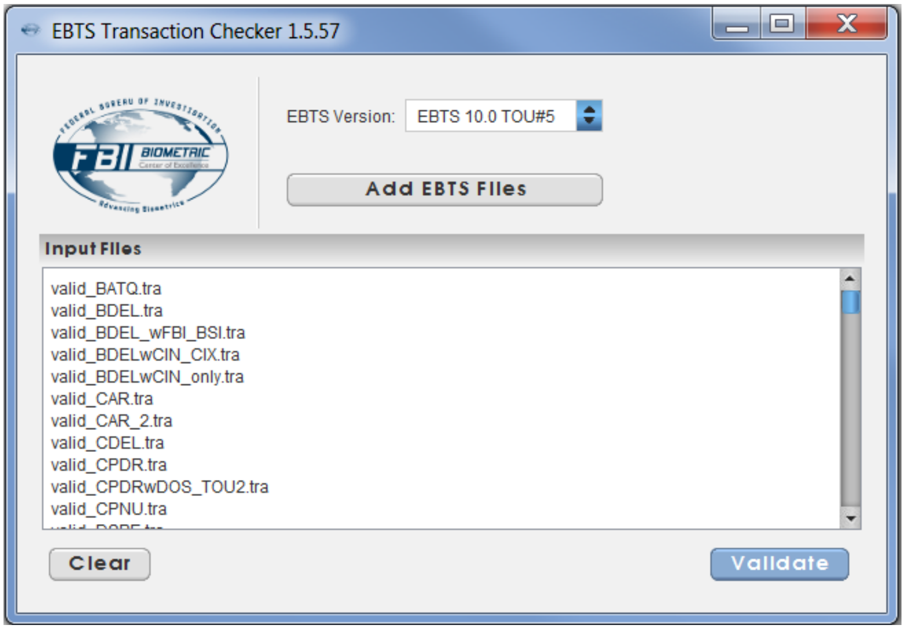


Figure 6. Main Page with Input Files

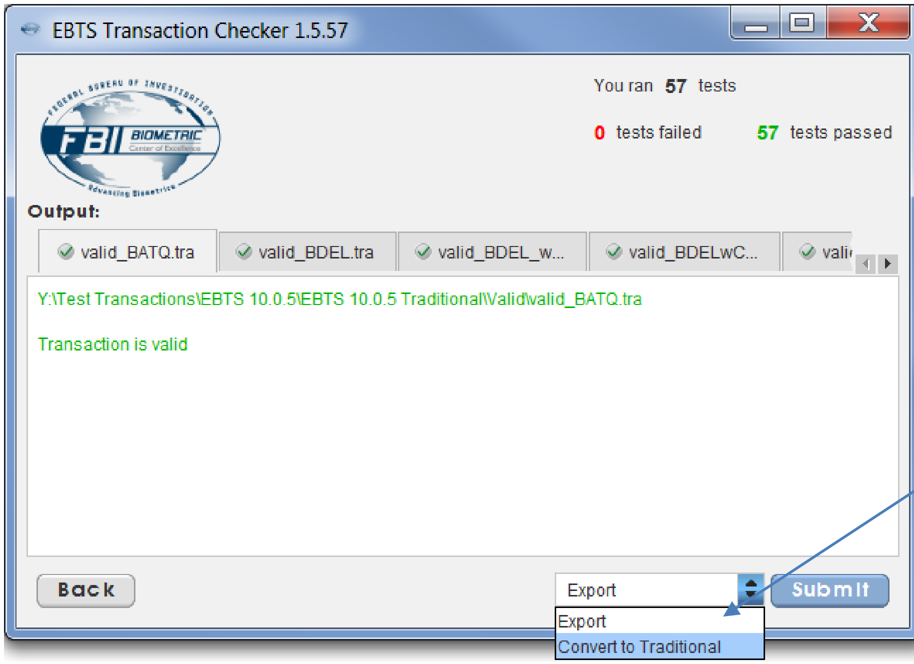
Step 4: View Results

1. Once you click “Validate”, the tool will display a loading bar on the top right of the Transaction Tool main screen until the Results screen is displayed (see Figure 7 and Figure 8).
2. The top right displays the number of input files and how many of them have passed and failed the validation.
3. Tabs on the window represent each input file. A green checkmark indicates that a file is valid (conforms to EBTS), and a red “x” indicates that the file is invalid and needs to be fixed. Invalid files will display the fields which are missing and/or incorrect.
4. The bottom right gives two actions: “Export” or “Convert to Traditional”. In the near future, a “Convert to XML” functionality will be available to the user.

    a. “Export”: Choosing this feature will allow you to export the validation results in text format. See Step 6: Export for more information.

    b. “Convert to Traditional”: Choosing this feature will allow you to convert EBTS v9.3 or v10.0 XML transactions into traditional format. See Step 5: Convert XML Transactions to Traditional for more information.

5. Select the “Back” button at the bottom of the screen to go back to the Transaction Tool main screen (see Figure 6).



Select either Export or Convert to Traditional and select Submit

Figure 7. Valid File Example

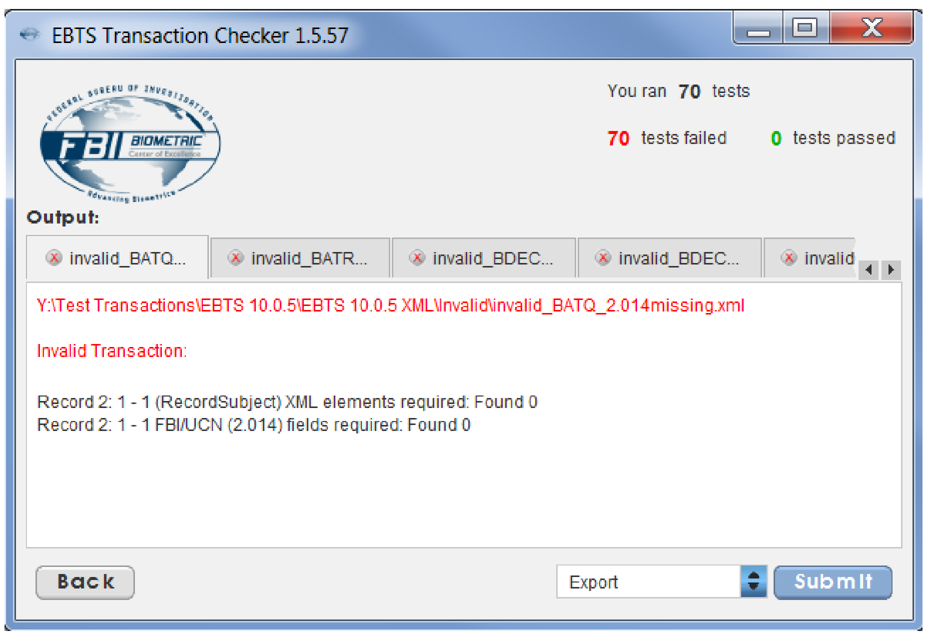


Figure 8. Invalid File Example

Step 5: Convert XML Transactions to Traditional

1. You can choose to convert valid XML transactions into Traditional (or Legacy) format by selecting the “Convert to Traditional” action and clicking the “Submit” button. Note that the tool will not allow you to convert invalid transactions. Therefore, only valid transactions will be

displayed in the Convert Transactions screen. You can manually select the files by clicking on the checkmark boxes next to the file names (see Figure 9).

2. Select the "Convert" button to convert the selected transactions.

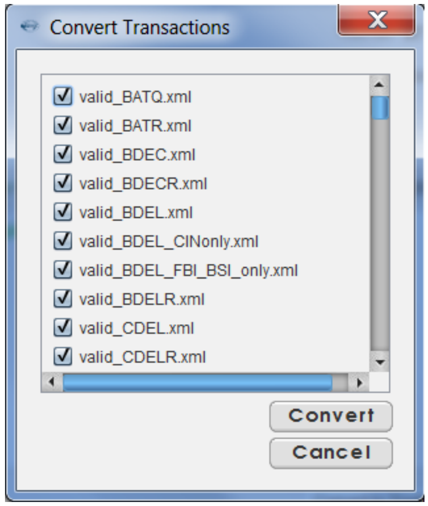


Figure 9. Convert Transactions Window

3. After selecting "Convert", the tool will ask you where you want to save the converted and newly created traditional transactions (see Figure 10). It consists of the same buttons as the screen in Figure 5. You do not have to specify a file name since the tool will automatically use the file names of the XML transactions and will replace the ".xml" file extension with ".tra".

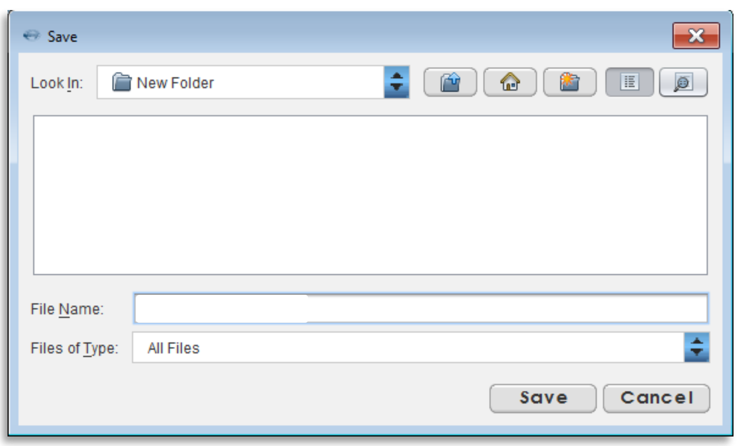


Figure 10. Save Window

4. After selecting the folder in which to save the transactions, the screen in Figure 11 will notify the user that the transactions have been converted and will ask if validation of the converted transactions (running them against the Transaction Tool) is desired. If you select "Yes", the converted transactions will be displayed in the Transaction Tool Results Screen in addition to the original validated XML files (Figure 12). If you select "No", then nothing further will happen.

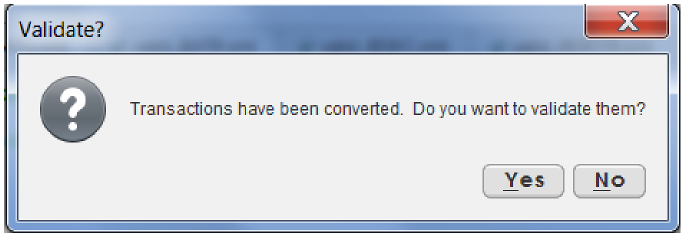


Figure 11. Validate Window

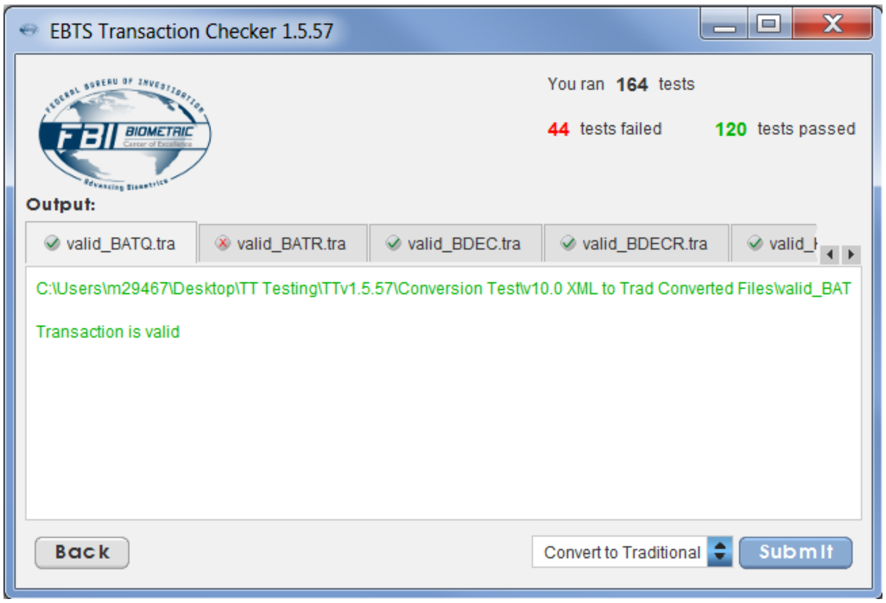


Figure 12. Transaction Tool Results Window with Validated Converted Traditional Transactions

5. To view the converted/traditional transactions, navigate to the folder where you saved the transactions in Step 3. You can open these transactions in any editor/viewer that supports traditional or legacy format (see Figure 13).

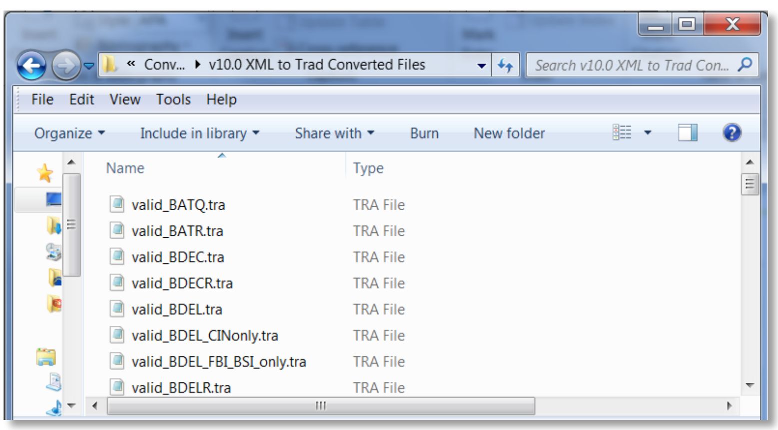


Figure 13. Converted EBTS Transactions

Step 6: Export Results

1. You can choose to export the validation results into a text file format by selecting the "Export" action and clicking on the "Submit" button. The Export Files screen shown in Figure 14 will appear and will list each of the files which were validated. The following options are allowed:
    a. "Select All": Selects all files
    b. "Select Passed Tests Only": Selects only files that passed the validation test
    c. "Select Failed Tests Only": Selects only files that failed the validation test
    d. Manual selection: If there are one or more specific files you wish to export, you can manually select the files by clicking on the checkmark boxes next to the file names.

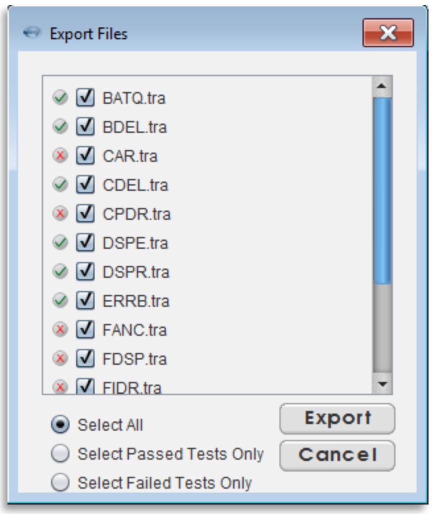


Figure 14. Export Files Window

2. Once the desired files are marked, select the "Export" button. The Save screen opens and asks where the export file should be saved. It consists of the same buttons as the screen in Figure 5. Save the file to the desired location by typing in a file name and selecting "Save" (Figure 15).

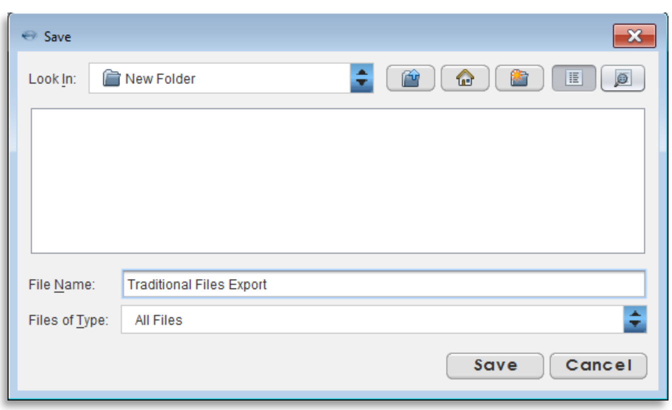


Figure 15. Save Window

3. The saved exported file can be opened via Microsoft Notepad, Microsoft WordPad, or Word by right clicking on the file name and selecting “Open With”. A text display, as in Figure 16, will be shown.

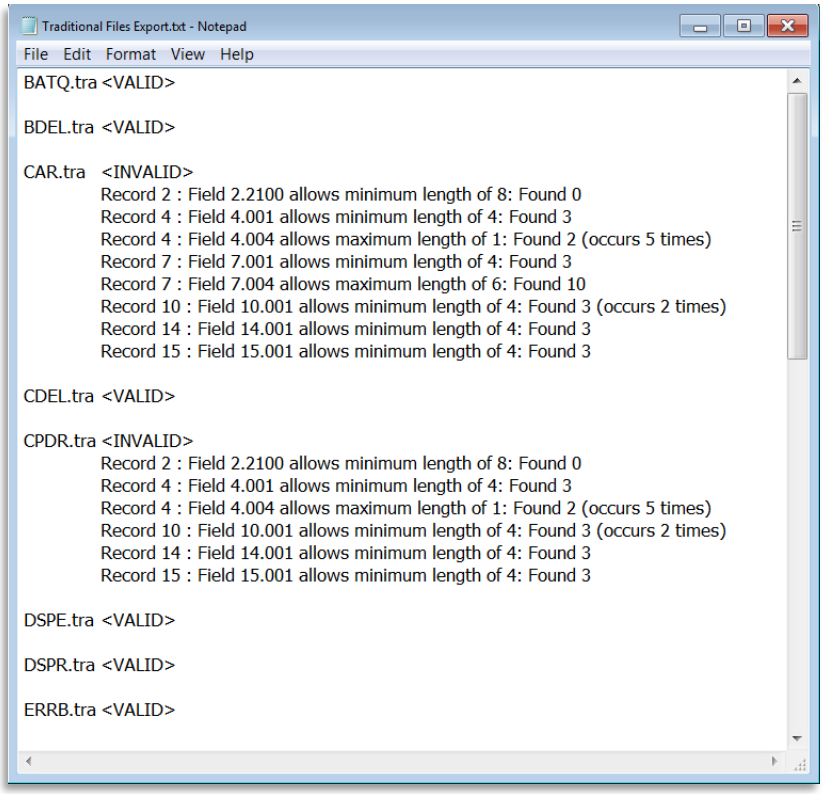


Figure 16. Exported File Example