

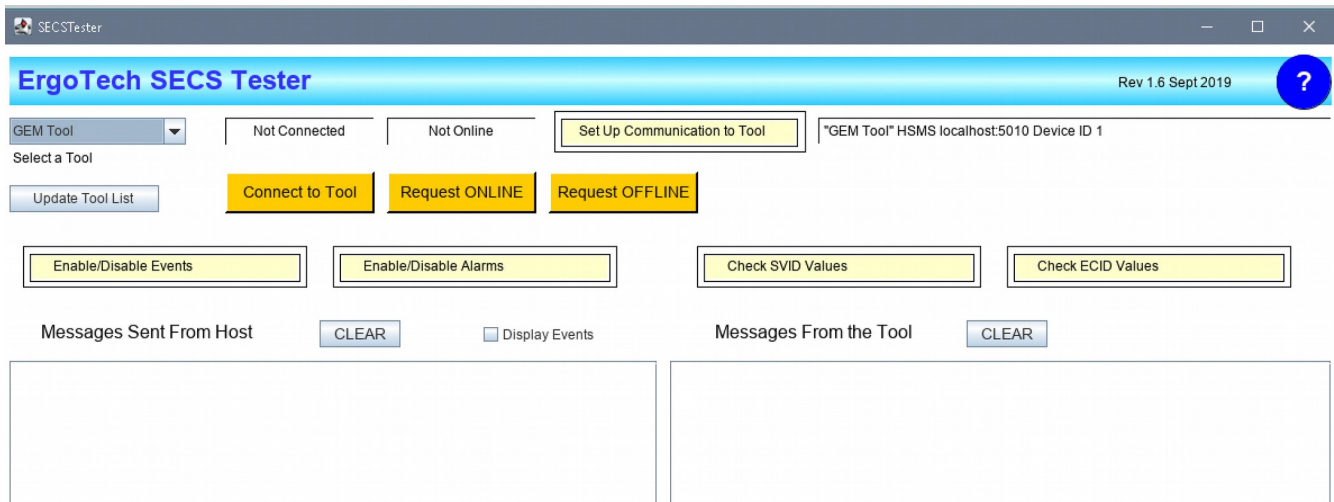
ErgoTech SECS Tester

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Introduction

The SECS Tester (ErgoTech SECSTester) is a stand alone Host application used to connect to and do simple characterization of an HSMS (Ethernet) or SECSI (serial port) SECS/GEM enabled Process Tool. It can be used to generate pdf reports and csv files of SVIDs, ECIDs, ALIDs, and CEIDs in the tool. This application was built entirely with ErgoTech's TransSECS and MIStudio (TransSECS Plus Reporting package).




The fields on the application with double borders, such as "Set Up Communication to Tool" can be clicked to popup dialogs and forms.

The two large text areas labled "Messages Sent From Host" and "Messages From the Tool" will display a log of current messages and replies. These messages are also logged in the SECSMessages.log in the application directory.

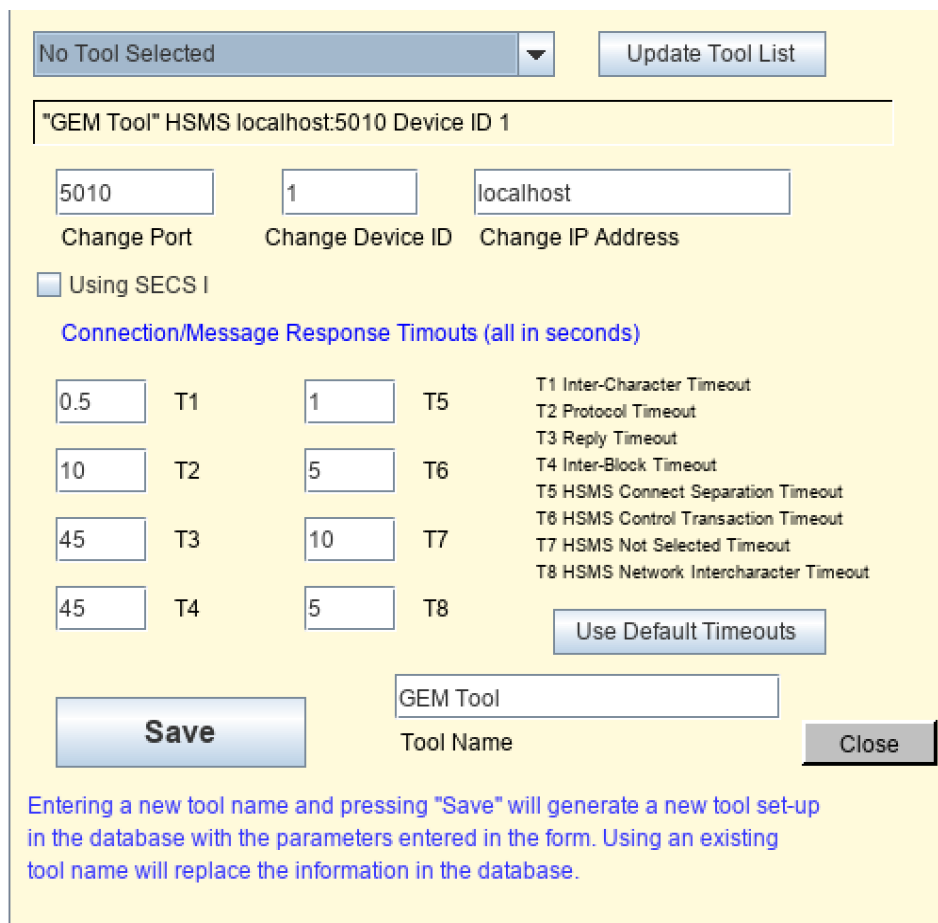
Set Up Communication to the Tool

The application has two pre-defined communication setups, one for HSMS (GEM Tool) and one for SECSI (GEM Tool SECSI). These configurations can be changed or others added using the *Set Up Communications to Tool* button.

Click on the **Set Up Communications to Tool** Menu button to display the configuration form.

A rectangular button with a yellow background and a black border, containing the text "Set Up Communication to Tool".

A form will appear with the default "GEM Tool" selected. If the tool list is empty, use the "Update Tool List" button to restore the list.

A screenshot of a web-based configuration form. At the top, there is a dropdown menu showing "No Tool Selected" and an "Update Tool List" button. Below this, a text box displays the current configuration: "'GEM Tool' HSMS localhost:5010 Device ID 1". Underneath are three input fields: "5010" (labeled "Change Port"), "1" (labeled "Change Device ID"), and "localhost" (labeled "Change IP Address"). A checkbox labeled "Using SECSI" is currently unchecked. A section titled "Connection/Message Response Timouts (all in seconds)" contains eight pairs of input fields and labels: T1 (0.5), T2 (10), T3 (45), T4 (45), T5 (1), T6 (5), T7 (10), and T8 (5). To the right of these fields is a legend: T1 Inter-Character Timeout, T2 Protocol Timeout, T3 Reply Timeout, T4 Inter-Block Timeout, T5 HSMS Connect Separation Timeout, T6 HSMS Control Transaction Timeout, T7 HSMS Not Selected Timeout, and T8 HSMS Network Intercharacter Timeout. A "Use Default Timeouts" button is located below the legend. At the bottom, there is a "Save" button, a text input field containing "GEM Tool" (labeled "Tool Name"), and a "Close" button. A blue note at the bottom explains that entering a new tool name and pressing "Save" will generate a new tool set-up in the database, while using an existing name will replace the information.

The connection options for the tool will change depending on if "Using SECS I" is selected. If "Using SECS I" is selected you will see options for the serial port you will use to connect to the tool.

GEM Tool SECSI Update Tool List

"GEM Tool SECSI" SECSI Port 0 (COM1) Device ID 1 19200 Baud

Not Selected 1 19200 Update Port List

Change Port Change Device ID Change Baud Rate

Using SECS I

[Connection/Message Response Timeouts \(all in seconds\)](#)

If the port list in the combo box above "Change Port" is empty or not current, use the "Update Port List" button to get the currently available serial port list.

The change to the configuration will not be saved unless the "Save" button is pressed. When the Save button is pressed, the entry in the current Tool Name field will be used to save the configuration. If a new Tool Name is entered, this will add a new configuration to the database and this tool configuration will be available from the Tool List options on the main application page. If the tool name is not changed, the stored configuration for this tool will be replaced with the new configuration when the Save button is pressed.

Test Communications

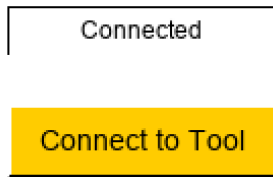
Select one of the tool definitions from the available tool names on the main application page. When the tool is selected a summary of its connection parameters will be shown in the upper right text box of the main application. Check that the connection parameters (IP address or SECS port, device id, and port) are correct. If they are not correct use *Set Up Communications to Tool* to make changes.

The first step is to Press the Connect to Tool to send an S1F13 to the tool.

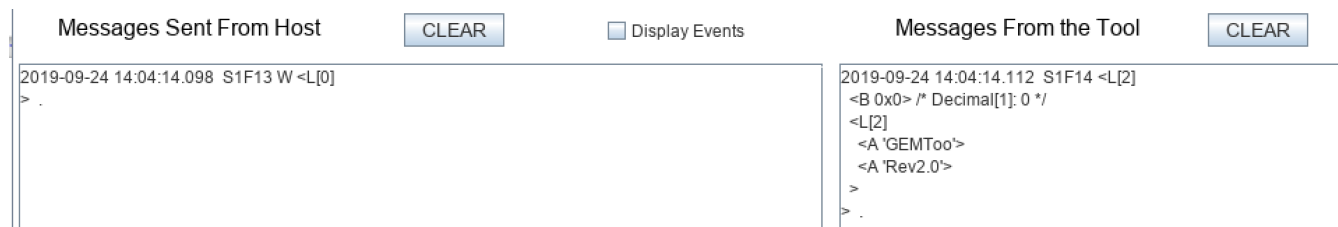
Not Connected

Connect to Tool

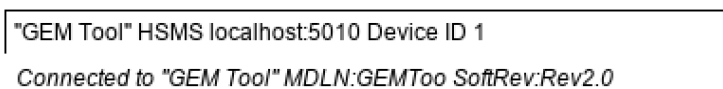
If the message is sent successfully the "Not Connected" message will change to "Connected". If you see a message about an incorrect Device ID in this field, this means the messages was received by the tool but the device id was wrong.



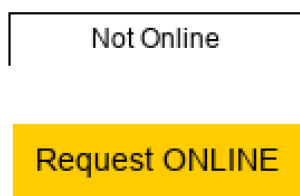
You should also see the S1F13 message in the messages log, as well as the S1F14 reply.



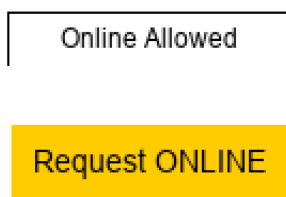
You will also see a description of the connection under the connection information field using the MDLN and Softrev returned by the tool.



After the tool is connected, Request ONLINE should be sent by pressing this button.



If the result of sending the S1F17 is "Online Allowed" then the tool is accepting the host connection and is ready to receive other SECS messages from the SECS Tester.



Event CEID Report and Enabling Events

Click on the Enable/Disable Events field to display the Event Setup and Reports form.



Events Setup

If the tool has no CEIDs, all Event/CEID related functions will be disabled on this panel.

Note: Some older GEM tools will not respond to the S1F23 message to get the CEID list.

Get List Of CEIDs

CEID List

Enable the Selected CEID

Reports

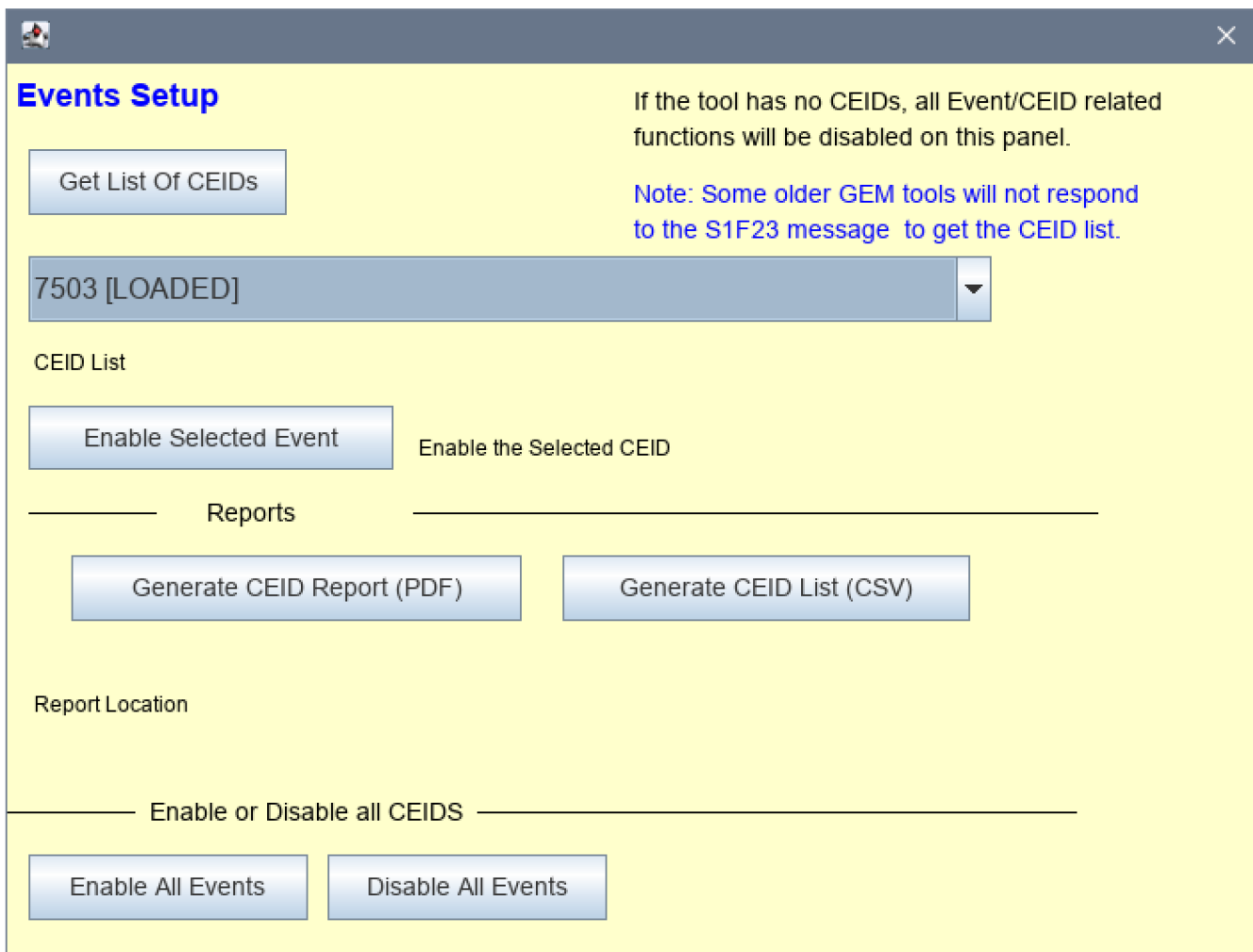
Report Location

Enable or Disable all CEIDS

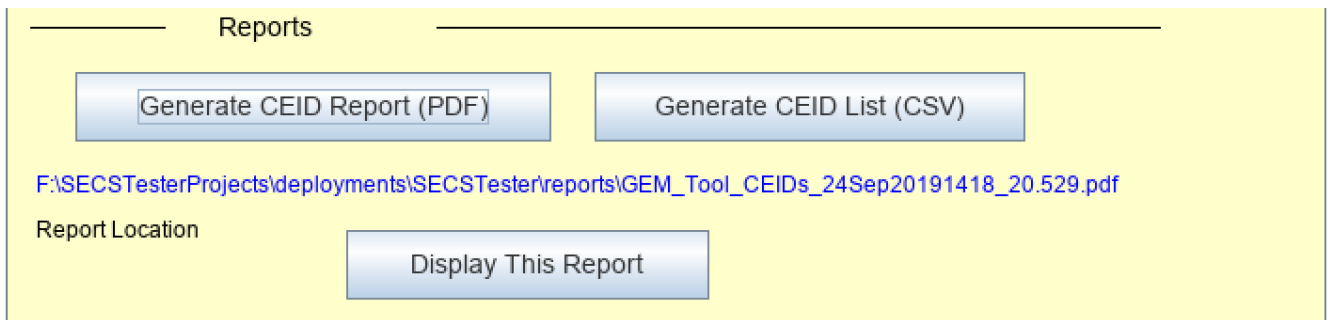
This form will be blank until you press the Get List of CEIDs to request the CEID list from the tool. If the tool has no defined CEIDs you will not see any further form items and will see a message indicating there were no CEIDs. Some older SECS/GEM tools will not understand the S1F23 message and you will see an S1F0 reply in the incoming messages log.

Once the CEID list is received and parsed, you will have a list of CEIDs to select from to be able to enable a single event. You may also generate pdf and csv reports of the available CEIDs.

All CEIDs may be enabled in the tool using the Enable All Events button. Likewise, all CEIDs may be disabled using the Disable All Events button.



A report in PDF or CSV format may be generated from the CEID list. This report will be stored in the location shown in blue under the generate buttons once a report is generated.



You may also launch your platform specific viewer to display the report on your desktop using the "Display This Report" button. Pressing this button will display the last report you generated, either the PDF or the CSV file.

Alarms Reporting and Enabling

Alarm reporting and enabling is accessed by clicking on the Enable/Disable Alarms field. The procedure is similar to that for the Events. Press the Get List of ALIDs to populate the form. If there are no defined ALIDs on the tool you will not see any choices on the form for reporting or enabling/disabling alarms.

Alarms Setup and Reports

Get List Of ALIDs

If tool has no ALIDs, all AID related functions will be disabled on this panel.

5502 [Temperature Problem]

ALID List

Enable Selected Alarm Enable the Selected ALID

Reports

Generate ALID Report (PDF) Generate ALID List (CSV)

F:\SECSTesterProjects\deployments\SECSTester\reports\GEM_Tool_ALIDs_19Jul20181550_18.220.pdf

Report Location

Display This Report

Enable or Disable all Alarms

Enable All Alarms Disable All Alarms

Once the ALID list is received and parsed, you will have a list of ALIDs to select from to be able to enable a single alarm. You may also generate pdf and csv reports of the available ALIDs.

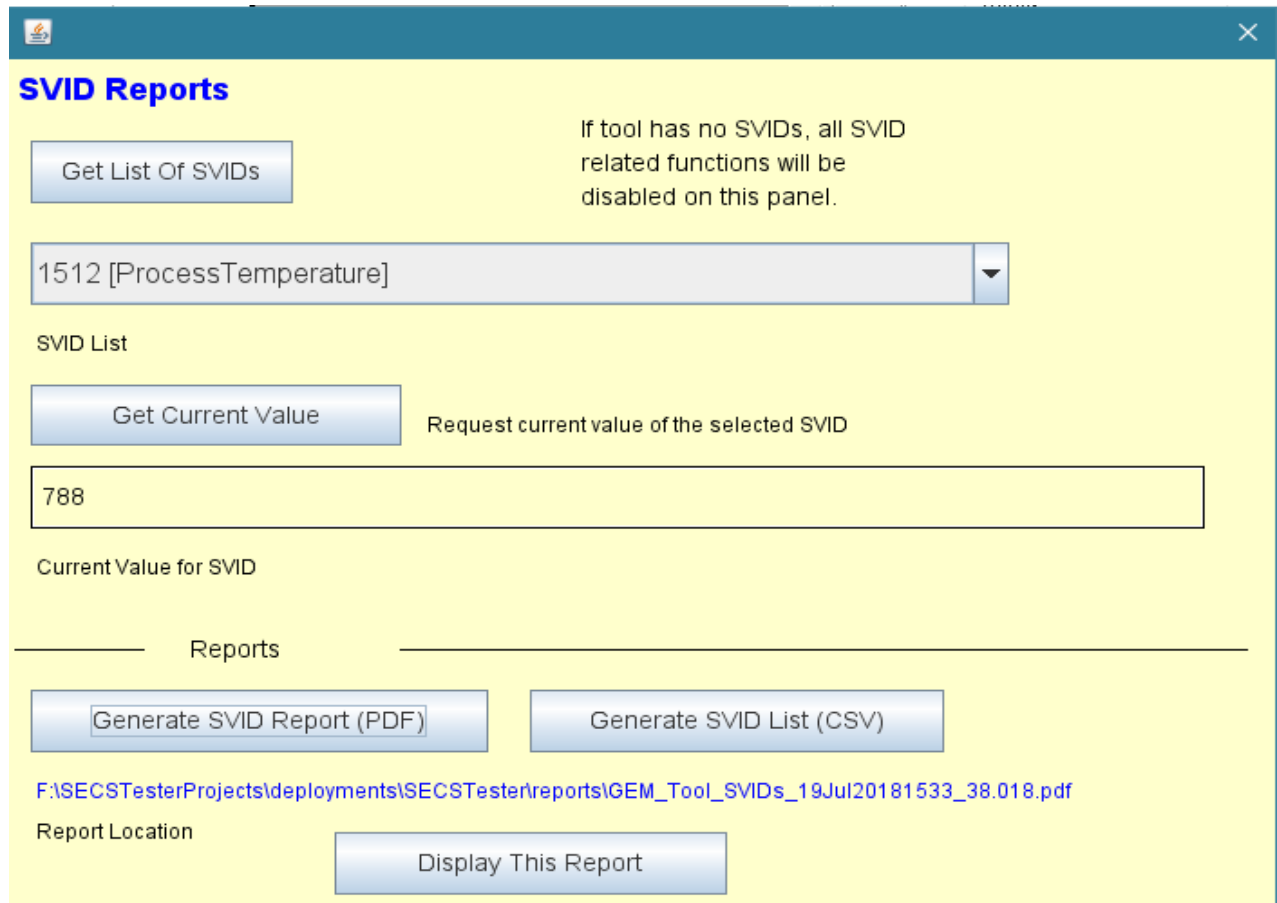
All ALIDs may be enabled in the tool using the Enable All Alarms button. Likewise, all alarms may be disabled using the Disable All Alarms button.

A report in PDF or CSV format may be generated from the ALID list. This report will be stored in the location shown in blue under the generate buttons once a report is generated. You may also launch your platform specific viewer to display the report on your desktop.

Check SVID Values

The Check SVID Values form is accessed by double clicking on the "Check SVID Values" field. Press the Get SVIDs button to request the list of defined SVIDs from the tool. If there are no SVIDs defined then no other options will appear on this form and a message indicating that there are no SVIDs will be shown.

An SVID may be selected from the list of SVIDs returned from the tool and used to request the current value of the VID using the "Get Current Value" button.



The screenshot shows a software window titled "SVID Reports" with a yellow background. At the top left is a "Get List Of SVIDs" button. To its right is a message: "If tool has no SVIDs, all SVID related functions will be disabled on this panel." Below the button is a text input field containing "1512 [ProcessTemperature]". Underneath is the label "SVID List". A "Get Current Value" button is positioned to the left of the text "Request current value of the selected SVID". Below this is a text input field containing "788". Underneath is the label "Current Value for SVID". A horizontal line separates this section from the "Reports" section below. In the "Reports" section, there are two buttons: "Generate SVID Report (PDF)" and "Generate SVID List (CSV)". Below these buttons is a blue text string representing a file path: "F:\SECSTesterProjects\deployments\SECSTester\reports\GEM_Tool_SVIDs_19Jul20181533_38.018.pdf". Below the path is the label "Report Location" and a "Display This Report" button.

A report in PDF or CSV format may be generated from the SVID list. This report will be stored in the location shown in blue under the generate buttons once a report is generated. You may also launch your platform specific viewer to display the generated report on your desktop using the Display This Report button.

Check ECID Values

The current values and reports for defined ECIDs in the tool is obtained by clicking on the Check ECID Values field on the main application. The procedure is similar to that for the SVIDs.

The screenshot shows a window titled "ECID Reports" with a yellow background. At the top left is a "Get List Of ECIDs" button. To its right is a message: "If tool has no ECIDs, all ECID related functions will be disabled on this panel." Below the button is a dropdown menu showing "33007 [TimeFormat]". Underneath is the label "ECID List" and a "Get Current Value" button. To the right of this button is the text "Request current value of the selected ECID". Below that is a text box containing the number "16". Underneath the text box is the label "Current Value for ECID". A horizontal line separates this section from the "Reports" section below. In the "Reports" section, there are two buttons: "Generate ECID Report (PDF)" and "Generate ECID List (CSV)". Below these buttons is a blue text string representing a file path: "F:\SECSTesterProjects\deployments\SECSTester\reports\GEM_Tool_ECIDs_19Jul20181555_00.109.pdf". Below the path is the label "Report Location" and a "Display This Report" button.

A report in PDF or CSV format may be generated from the ECID list. This report will be stored in the location shown in blue under the generate buttons once a report is generated. You may also launch your platform specific viewer to display the generated report on your desktop using the Display This Report button.

Troubleshooting

You may not be able to connect to your SECS/GEM tool if another host is already connected. Select "Display Events" on the main application screen to show the events logged for the outgoing messages. These events may have some information to help you understand why the connection cannot be made.

S9F1 (Bad Device ID)

There is communication to the tool but the Device ID you have defined in the Tool Communication Set-Up is not correct. For example, you have set the Device ID to 0 and the tool is not set up on Device ID 0. Try setting the Device ID to a different number, such as 1.

Running on Linux

The SECS Tester will run on Linux with a few minor changes as noted in the README.txt file located in the LINUX directory of the distribution. Please contact us if you have specific questions about running on Linux. For testing SECSI connections you will need to install the rxtx serial library for Linux.

Questions? Problems?

Please contact ErgoTech through our website contact form or email to secsandgem@ergotech.com.

If you find a specific problem with any of the functions of this application or messages sent to your tool, please let us know so we can improve this application. Please let us know what you were trying to do and what you expected (or what happened which was unexpected). Please send us the SECSMessages.log along with your problem description.

Thanks for your interest!