

Intrepid Control Systems, Inc.

HTML Test Report Generation

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1. Introduction:

Vehicle Spy support to HTML code in Function Block script. This application note describe to write script in Function Block to generate HTML test report.

2. HTML Test Report Generation

2.1 Software Setup: Vehicle spy 3

2.2 'Log data' Command:

In [Function Block](#) Menu, Log data expression provides feature to create HTML report.

Follow below steps to configure log data expression in Function Block

- Go in 'Scripting and Automation' and select 'Function Blocks' option.
- To add new Function Block, click on add button '+' available on left side and select 'Script' option.
- Double click in 'Description' column of Function Block to open list of [available commands](#). Select '[Log Data](#)' command from list (figure 1).

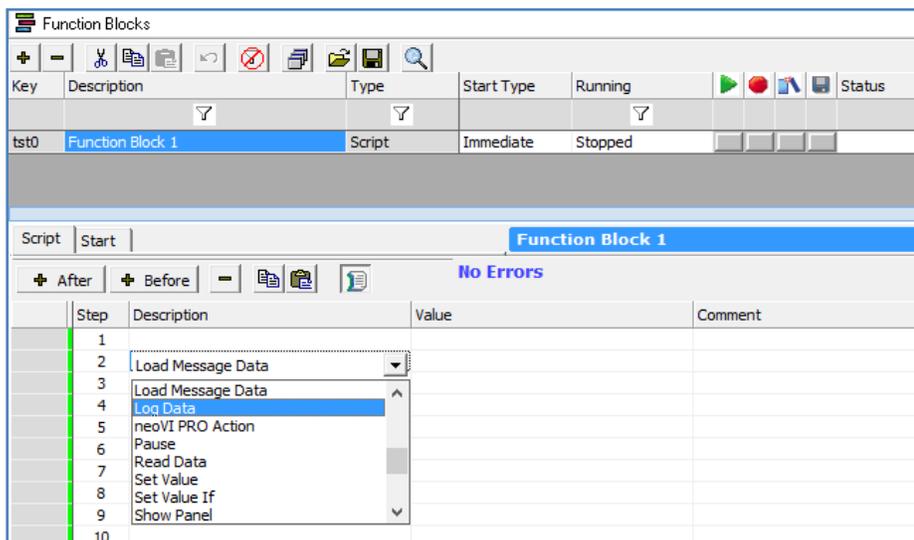


Figure 1: Commands List in Function Block

- To open command configuration window click on value column text available 'Log Text:Equation Not set' (figure 2). It will popup the 'Setup Log Data' window (Figure 3).

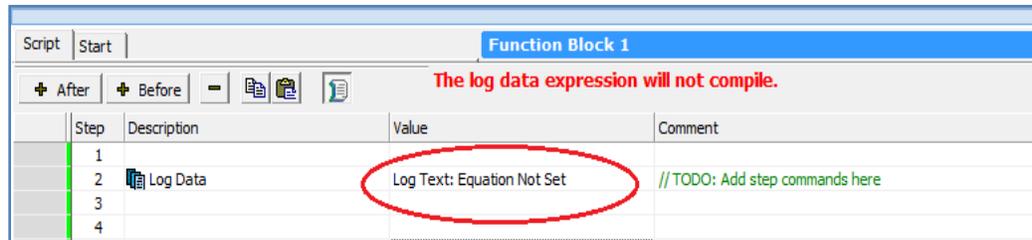


Figure 2: 'Log Data' command view

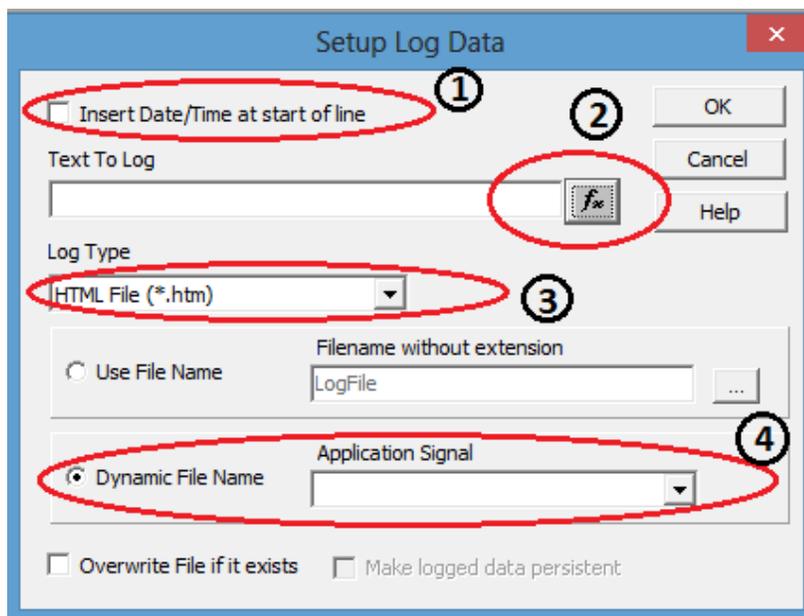


Figure 3: 'Log Data' Command setup

- Checked box of 'Insert Date/Time at start of line' to insert date and time in report (Figure 3(1)).
- Click on 'fx' button of 'Text to Log' field (Figure 3(2)), it will popup the 'Enter expression' window (Figure 4).

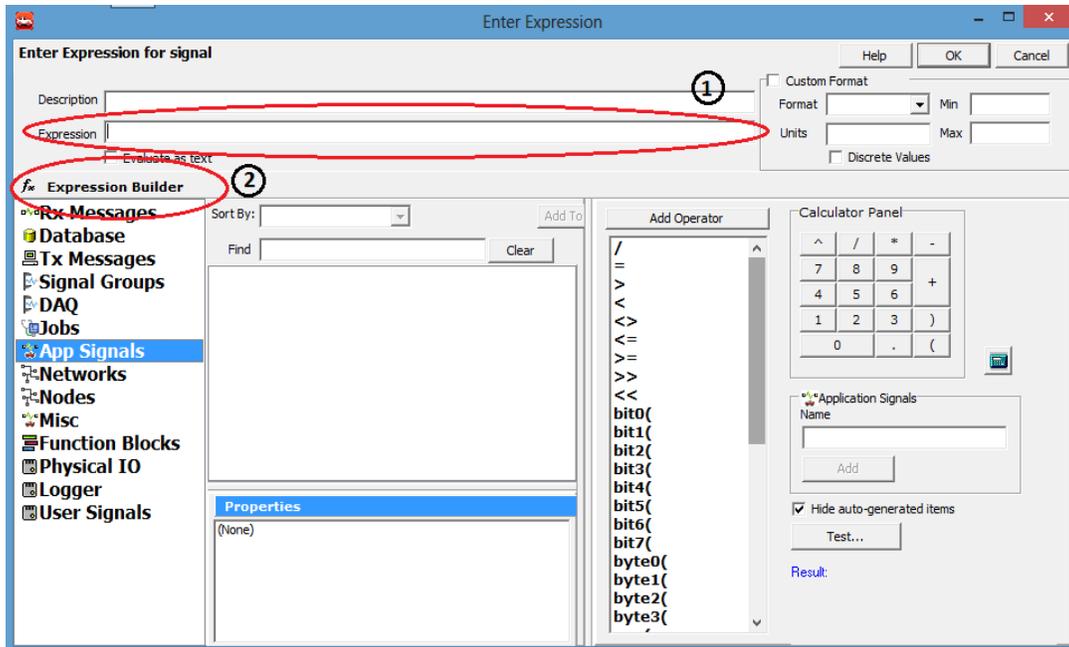


Figure 4: 'Enter expression' window configuration

- '[Enter expression](#)' window configuration:
 - In expression field (Figure 4 (1)) write the text which we have to log in Log file (Report file). For HTML format write HTML coding.
 - To log any signal value access the Application signal, Receive signal or Transmit signal from expression builder field (Figure 4(2)).
- To select file format, click on 'Log type' option .It will give the list of available file formats. Select 'HTML file (*.htm)' option to create log file in HTML format (Figure 3(3)).
- To assign file name there are two options.
 - Use File Name: In this option we can write file name.
 - Dynamic File Name: Give application signal value as file name

2.3 Procedure:

2.3.1 Configure Application signal

- It is possible to use [Application signals](#), Receive signals and Transmit signals in Function Block to pass its values in HTML report.
- This document describes HTML report generation for Initialisation Test, Write VIN Number, Read ECU Details, DTC Test, Speed Limit Test.
- This example uses Application signal as variable to pass for HTML report.
- Create Application Signal:
 - Go to ‘Scripting And Automation’ option and select ‘Application Signal’.
 - Click on ‘+’ button to add new application signal.
 - Enter signal description as ‘VIN Number’ to input signal for write VIN number test and select ‘Signal Type’ as ‘Text’. Similarly create text type application signal for Read Application software ID and ECU serial number test.
 - For ‘Initialisation test result’ application signal set ‘Signal Type’ as ‘State encoded’ and add State description as ‘Passed’ for row value 1 and as ‘Failed’ for row value 2.
 - Similarly for ‘DTC test result’ application signal use ‘Signal Type’ as ‘State encoded’ and add State description as ‘DTC not Present’ for row value 1 and as ‘DTC Present’ for row value 2
 - Create analog type application signal for Vehicle speed input.
 - (Note- Refer Scripting And Automation--> Application Signal in given example)

2.3.2 Function Block for report header structure:

- Add new Function Block, click on add button (+) available on left side and select 'Script' option.
- Give Function Block name in description field and set 'Start' option as 'Manual Start'
- Report header structure will contain the image, date and time, report title, column headers etc.
- Use separate 'Log Data' command for each activity. Some common settings for all Log Data commands are as below:
 - Uncheck the 'Insert Date/Time at start of line' check box.
 - Select Log Type as 'HTML file (*.htm)' to create report in HTML format.
 - For file name use 'Dynamic File Name' option and select VIN number Application Signal to give VIN number value as file name.
 - Write HTML code in 'Text To Log' field as per data to be display on report.
- Write HTML code in 'Text To Log' field of Log data command.
 - Display title on report (Figure 7(1)):
Initialize the HTML coding by using <HTML> command. Use <table> command to configure table and create label using <caption> command. Set label parameter such as font size and colour in HTML code.
 - Display image on report (Figure 7(2)):
Set image (Logo) as heading1. Gives the image path to access the image from system and set image style such as position, width and height (Figure 5(2)).

Step	Description	Value	Comment
1			
2	Log Data	Log HTML: <html><table width="800" border ="3"><caption>Test Report</caption>	// Create Table with label
3	Log Data	Log HTML: <h1></h1>	// To access image from system
4	Log Data	Log HTML: <h2><p align="center">Date and Time:{DAY}/{MONTH}/{YEAR} {HOUR}::{MINUTE}::{SECOND}</P></h2>	// Set Date and Time;Use Misc signal available in vehicle spy
5	Log Data	Log HTML: <h3><tr><th colspan="2"align="Center">Test<th>Result</tr></h3>	// To create row and Set cell text as column header
6	Stop	n/a	
7			

Figure 5: Function Block configuration for report header structure

- Display date and time (Figure 7(3)):
 - Set heading 2 as date and time. Use Vehicle spy available Misc signals i.e. Day, Month, Year, Hours, Minute and Second. To access this signal in Expression field, select 'Misc' option from expression builder, select signal from available list and press 'Add To Expression' button to add signal in expression field (Figure 6).
 - Configure its other parameter such as position, font size and colour in HTML coding (Figure 5(3))

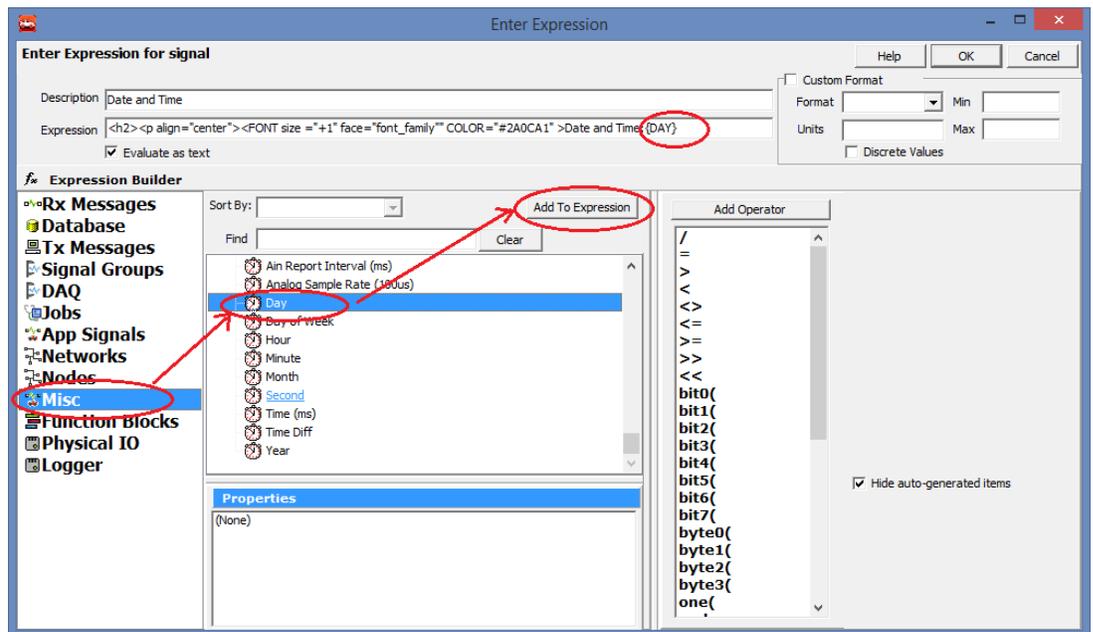


Figure 6: Access Misc signal in Expression

- Create table column header (Figure 7(4)):
 - Write HTML code to create row and enter cell text to assign header for column. Use <tr> command to create row and <th> command for cell header. Assign name 'Test' for first column and 'Result' for second column. Set other parameter of header such as font size and colour (Figure 5(4)).
- When this Function Block will run it will create log file in data directory and report header structure view will be as shown if Figure 7.

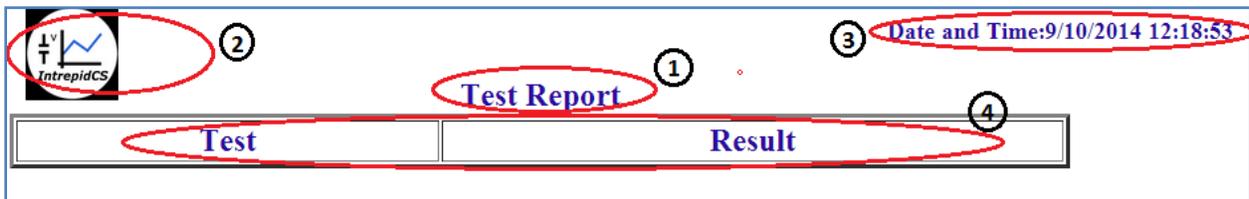


Figure 7: Test Report header view

2.3.3 To log test result in Report

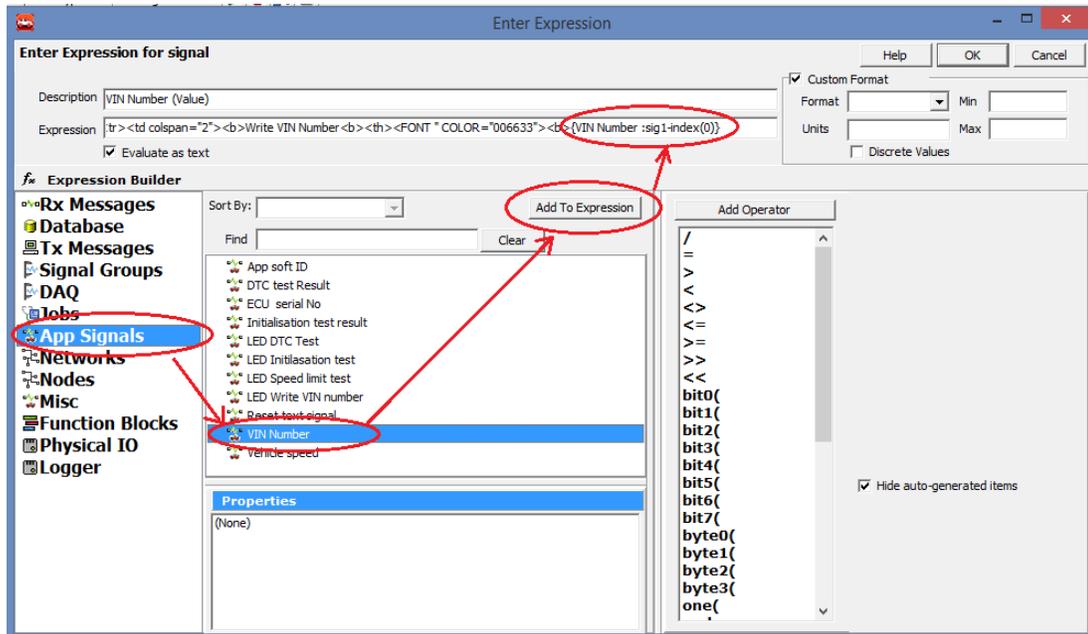
2.3.3.1 Initialisation Test:

- Create new Function Block, give description as test name (Initialisation) and set 'Start' option to 'Manual Start'.
- Test Condition: Select 'if' command from command list and set test condition if 'Initialisation test result' application signal value is '1'(Passed) then log test result as 'Passed' else log result as 'Failed' in report.
- To log test result as Passed: Add 'Log Data' command in 'If' function and write HTML code in 'Text To Log' Field. Create table row using <tr> command. Add test name as 'Initialisation' in data cell and test result as 'Passed' in header cell. Set test result font colour as green (use colour code '006633').
- To log test result as Failed: Add 'Log Data' command in 'Else' function and write HTML code in 'Text To Log' Field. Use same coding as like passed condition except write test result as 'Failed' in header cell and set font colour as red (Use colour code 'CC000').
- For both log data commands, Select Log type as 'HTML file (*.htm)' and for file name use 'Dynamic File Name' option and select VIN number application signal.
- Use 'Stop' command to stop Function Block execution.

2.3.3.2 Write VIN number test:

- Create new Function Block, enter description and set 'Start' option to 'Manual Start'.
- Log Data Command configuration: Add Log Data command and write HTML code in 'Text To Log' Field. Create new row using <tr> command and add test name as 'Write VIN number' in data cell. To display VIN number in report, access the VIN number application signal from 'Enter Expression' window as follows (Figure 8):
 - Select 'App Signals' from expression builder list.

- Select ‘VIN Number’ application signal from signal list and press ‘Add To Expression’ button to add signal in HTML coding.
- It will display the ‘VIN number’ application signal in Expression field.



application signal from 'Enter Expression' window. (Refer 'Write VIN Number' test). Set Font size and font colour as green (use colour code '006633').

- For both Log Data command, Select Log type as 'HTML file (*.htm)' and for file name use 'Dynamic File Name' option and select VIN number application signal.
- Use 'Stop' command to stop Function Block execution.

2.3.3.4 DTC Test:

- Create new Function Block, enter description and set 'Start' option to 'Manual Start'.
- Test Condition: Select 'If' command from command list and set condition as if 'DTC test result' application signal value will be '1'(DTC not present) then use Log Data command to log test result as 'Passed' else (DTC present) log data as 'Failed' in report (refer Initialisation test).
- Log Data Command configuration : Add 'Log Data' command in 'If' function to display test name and test result as 'Passed' with green colour and add another Log Data command in 'Else' function to display test name and test result as 'failed' with red colour. Refer Log data command used in Initialisation test.
- For both Log Data commands, Select Log type as 'HTML file (*.htm)' and for file name use 'Dynamic File Name' option and select VIN number application signal.
- Use 'Stop' command to stop Function Block execution.

2.3.3.5 Speed Limit test:

- Create new Function Block and give description as test name (Speed Limit test).
- Test Condition: Select 'If' command from command list and set condition as if 'Vehicle Speed' application signal value will be in limit then use Log

Data command to log test result as 'Passed' else log data as 'Failed' in report.

- Log Data command configuration: Add one 'Log Data' command in 'If' function to display Test name, Vehicle speed and test result as 'Passed' in green font colour for Passed condition. Same way add another Log Data command in 'Else' function to display test result as Failed with red font colour.
- To display Vehicle speed create one extra column and access the 'Vehicle speed' signal value from expression builder.
- For both Log Data command, Select Log type as 'HTML file (*.htm)' and for file name use 'Dynamic File Name' option and select VIN number application signal.
- Use 'Stop' command to stop Function Block execution

2.3.4 Run test and generate test report:

- Create new Function Block and give description.
- Set 'Start' option to 'Start Immediately' or 'Manual Start' as per requirement. If set as 'Start Immediately' it starts Function Block immediately when Vspy goes online and if set as 'Manual Start' then it need to start manually.
- Call and run Function Block using 'Function Block Action' Command.
- First call 'Report header structure' Function Block so it will generate report header first then call all test Function Block sequentially to log test result.

2.3.5 Test report:

- After execution of all tests, report will be available in data directory.
- Click on 'Data' button at the right corner of vehicle spy.
- Check for file of name as VIN number and extension with .htm.
- Open the .htm file in Web browser to see test results.

2.4 Result:

Generated test report will give the test result for all tests. Figure 9 and Figure 10 give the the test report view for passed and failed test result.



Date and Time:9/10/2014 19:30:58

Test Report

Test		Result
Initialization		Passed
Write VIN Number		ICSI12343567890123
Application Software ID		AB12345V
ECU Serial Number		01234567
DTC Test		Passed
	Vehicle Speed	
Speed Limit Test	53 Kmph	Passed

Figure 9: Test Report View for passed test



Date and Time:10/10/2014 7:59:8

Test Report

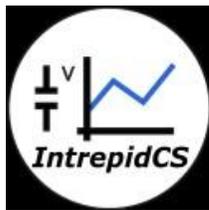
Test		Result
Initialization		Passed
Write VIN Number		ICSI12343567890123
Application Software ID		AB12345V
ECU Serial Number		01234567
DTC Test		Failed
	Vehicle Speed	
Speed Limit Test	53 Kmph	Passed

Figure 10: Test Report view for failed test.

NOTE: Please refer 'Test Report Generation.vs3zip' from [Test Report Generation.zip](#) file.

Please save the image ICSLogo.jpg at 'C:\' location on PC system

3. Contact Us:



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