AST Unit Tester

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Overview

Overview

AST Unit tester is a tool to perform quick and easy Unit tests on LabVIEW code.

AST Unit Tester looks for VI's in the current project that begin with "Test" and a bookmark named "#AST_Unit_Test". The user can then run all tests or run just a selected test. AST unit tester displays the result of each test as green for pass, red for fail. User can also save results of Unit test to a simple text file

Examples can be found in

National Instruments\LabVIEW <Version>\examples\Automated Software Technology\AST Unit Tester\AST Unit Tester Examples

Run All	▶ 1 Run Test	Abort	New	Add	Remove	Refresh Se	earch	Save	(?) Help	AST Unit Tester
										^ ^
						Fail				

Creating a Unit Test

Creating Unit Test in AST Unit Tester

Creating unit tests is very simple.

Select where you would like the unit test vi to be in your project. Click on the New Test button.



Save the Unit test as Test <Your Unit Test>.vi. The unit test will be automatically added to the project at the location specified. The AST unit tester looks for test in the name of the unit test and the #AST_Unit_Test bookmark.

Create your Unit test. Wire the "Pass?" Boolean to your function or groups of functions you want to test. The AST Unit tester looks for the "Pass?" Boolean and makes sure the error out cluster does not report an error

📴 Test add.vi Block Diagram on test.lvproj/My 📃 🗌	×	
File Edit View Project Operate Tools Window Help	Te	art
수 🕸 🔘 🛚 💡 🕮 🛏 🖻 🎿 15pt Dialo 🔍 💡	L	
	-	^
#AST_Unit_Test		
Do Not Remove		
error ou	t	
error in (no error)		
		~
test.lvproj/My Computer <	>	:

You are now ready to run some tests. The created test should appear in the test list. If not you can use the Add button to add the test.

Select Run all or Select a Unit test or tests to run and Select Run selected

😽 AST Unit Tester					_	\Box ×
Run All Run Test	Abort New	Add Remove	Refresh Search	Save	(?) Help	AST Unit Tester
Test Add.vi						^
						~
			Pass			

That's it! Happy Testing

Creating a Unit Test From Template

Creating Unit Test from AST Unit Test Template

Select File\New\From Template\AST Unit Tester\Test AST Unit Test Template.vit

🗈 New	— 🗆 X	
Create New	Description	
	Description	1
	A #AST_UNIT_Test	
Bolymorphic VI		
AST Unit Tester		
Test AST Unit Test Template.vit		
Frameworks		
Design Patterns		
Master/Slave Design Pattern	Add VI's to Linit teat	
Producer/Consumer Design Pattern (Data)	to Sea?	
Producer/Consumer Design Pattern (Events)		
User Interface Event Handler		
Dialog Using Events		
SubVI with Error Handling		
🖃 🗁 Instrument I/O (GPIB)		
📲 Read and Display		
🖹 🧰 Simulated		
📲 Generate and Display	Window Snip	
📲 Load from File and Display	error in the error out	
🖨 🧰 Touch Panel		
12" Windows Embedded Standard Landscape Screen		
12" Windows Embedded Standard Portrait Screen	No description available	
15" Windows Embedded Standard Landscape Screen		
15" Windows Embedded Standard Portrait Screen		
6" Windows Embedded Standard Landscape Screen	*	
6" Windows Embedded Standard Portrait Screen]
Unit lest Framework	Add to project	
	Projects	
User V	Untitled Project 1	1
	OK Cancel Help	

Save the Unit test is Test <Your Unit Test>.vi Make sure you add the unit test to your project. The AST unit tester looks for test in the name of the unit test and the #AST_Unit_Test bookmark.

Create your Unit test. Wire the "Pass?" Boolean to your function or groups of functions you want to test. The AST Unit tester looks for the "Pass?" Boolean and makes sure the error out cluster does not report an error

AST Unit Tester

🜇 Test add.vi Block Diagram on test.lvproj/Mv 🗕		<
File Edit View Project Operate Tools Window Hel	n LT	ark
	<u>* * </u> -	
#AST Unit Test		
Do Not Remove		
DO NOT KENIOVE		
Pass?		
error in (no error)	rror out	
		~
test.lvproj/My Computer <	>	

You are now ready to run some tests. Select Tools\AST Unit tester to run the tool

📭 AST Uni	t Tester								—	\Box ×
Run All	▶ 1 Run Test	Abort	New	H Add	Remove	Refresh	Search	Save	(?) Help	AST Unit Tester
Test Add.vi										^
										~
						Fail				

Select Run all or Select a Unit test or tests to run and Select Run selected

🕞 AST Un	t Tester								_	\Box ×
Run All	▶ 1 Run Test	Abort	New	Add	Remove	Refresh	Search	Save	Help	AST Unit Tester
Test Add.vi										^
										~
						Pass				

That's it! Happy Testing

Programmatically Run Tests

Programmatically Run Tests

Allows the user to run AST Unit tester Progammaticlally from the block diagram without the GUI

You can access the VI by going to the Functions palette Addons/AST Unit Tester/Run AST Unit Tester



You can specify a path to the project you want to run tests on. Leaving the path empty will run tests on the current project.

System requirements

System Requirements

LabVIEW 2015 Open G WF Progress bar

Getting help

Contact Automated Software Technology

AUTOMATED SOFTWARE TECHNOLOGY

www.autosofttech.net

UI

UI

😽 AST Unit	Tester								—	
	▶1		-	÷		Ż		(?)		ΛST
Run Tests	Run Test	Abort	New	Add	Remove	Refresh	Save	Help		Unit Tester
										^
					Fail					
					1.011					



Run all Tests.



Run Selected Tests. User can run 1 or multiple tests selected in the selection list box.



Aborts all tests. This is useful if the test hangs up



Creates a new test from the AST Unit Test Template and adds to the project



Add Test from file.



Remove selected tests.



Refresh Tests from project. Use this after adding tests to project



Save Test Results to a text file. User will be promoted for Results file path



Brings up Help Dialog

Test Unit Test 1.vi	*
	Ŧ

Displays Unit Tests found in project. After test is run row will be colored green for pass and red for fail. User can select test to run by clicking on test. Holding down the ctr key while selecting selects multiple tests. User can directly go to test by double clicking test.

Fail

Test Results

Main Screen

Main Screen

Main Screen of AST Unit Tester.

Run All	P1 Run Test	(C) Abort	New	Add	Remove	Refresh	Search	Save	(?) Help	AST Unit Tester
										^
						Fail				

Run All

Run All



Run all Tests.

Run Selected Tests

Run Selected Tests



Run Selected Tests. User can run 1 or multiple tests selected in the selection list box. User can hold down the Ctr Key to select multiple tests to run.

Abort



Aborts all tests. This is useful if the test hangs up

New

New



Creates a new test from the AST Unit Test Template and adds to the project

Add

Add



Add Unit Test from file. This is useful if for some reason the GUI doesn't load a test

Remove

Remove



Remove selected tests. User can select multiple test to remove from list box by holding the Ctr key and clicking on the desired tests to remove

Refresh

Refresh



Refresh Tests from the project that are not in the test list. Use this after adding tests to project using the AST Unit Test Template

Search

Search

Search

Searches the test name for the text entered.

Save

Save



Save Test Results to a text file. User will be promoted for Results file path

Help

Help



Brings up Help Dialog

Test List

Test List

Test Unit Test 1.vi	*
	Ŧ

Displays Unit Tests found in project. After test is run row will be colored green for pass and red for fail. User can select test to run by clicking on test. Holding down the ctr key while selecting selects multiple tests. User can directly go to test by double clicking test.

Test Results

Test Results



Test Results display. Will be red for fail and green for pass