

Automation Framework for HIFU Ablation Device

Project Background

- The Software applications were software interfaces for electrical devices manufactured by the company and was basically about setting different set of values for patients, controlling the parameters and communicating with the device.
- These applications were graphical user interfaces to the electrical devices. TEL automated the testing of client software, which has numerous fields to be set and different combinations of actions that need to be performed on the application.
- Due to large testing cycle and considering the frequency of 2-3 releases for the application every year, automation of the applications was a necessity

Framework Summary

To test the client application, the Hybrid Automation Framework was used. Hybrid framework is a combination of below mentioned frameworks:

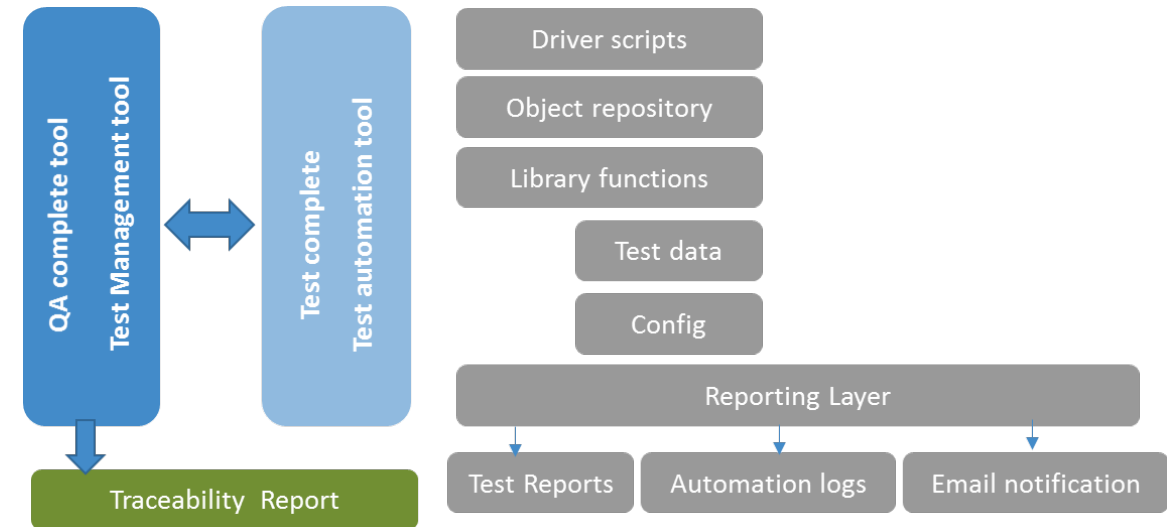
- **Data Driven Framework:** Testing with different files containing different treatment data of patients.
- **Keyword Driven Framework:** Test data and objects being independent of the Automation Tool.
E.g. all the object properties/test data will be defined in one file. In case of feature enhancement, changes related to that feature need to be done at one file only, helping reducing maintenance effort.
- **Modular Automation Framework:**
 - Test Script Modularity Framework - Enables creation of Small, Independent Scripts representing Modules and Functions of the Application under Test (AUT)
 - Test Library Architecture Framework - Enables creation of Library Files representing Modules & Functions of the Application Under Test (AUT)



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Highlights

- **Selective test execution:** Apart from executing specific test cases, test cases can be executed as a batch and can be executed based on the attributes (for e.g. Category. Priority)
- **Multiple machine execution:** The test cases can be executed on a target machine, or individual test cases can be assigned to different machines
- **Reporting Excel :** The framework allows logging the results in excel file, PDF and doc format. This descriptive results are designed to give details on the actions performed in each test case
- **Web based Reporting:** The framework comes with Web based reporting wherein the website reads the data from the excel results. The results can be viewed across the network through the network. Together with the description and status of the actions performed, screen shots are associated with each step to show the state of the application under test when an action is performed
- The **out-of-the-box approach** allows to verify images and traceability which would have impossible with the automation tool alone. The automation effort has covered areas that would have difficult to test manually considering the different combinations that are possible and thereby ensuring at least 50% lesser testing cycle per release of the application



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Test Coverage Run Summary by Requirement

Project: Orders R Us
Folder: Orders Application

Release	Requirement	Test Set	Configuration	# Asserting Run	# Passed	# Failed	# Blocked	Total
Release 1.0/Sprint 01	048-0001 Order Listing Screen	Batch Processing and Basic Listing Tests	Windows XP / IE 7 Windows XP / IE 8 Windows XP / IE 9	0	2	0	0	2
			Configuration	0	2	0	0	2
				0	1	0	0	2
		Batch Processing and Basic Listing Tests Test Set Total:		0	5	0	0	6
		Batch Processing and Basic Listing Tests Test Set Pct:		0%	83%	17%	0%	
		Cycle 1 Regression	Windows 7 / IE 9 Windows XP / IE 9	0	1	1	0	2
				0	2	0	0	2
		Cycle 1 Regression Test Set Total:		0	3	1	0	4
		Cycle 1 Regression Test Set Pct:		0%	75%	25%	0%	
		Order Maintenance	Windows XP / Firefox Windows XP / IE 7 Windows XP / IE 9	0	0	0	4	4
				2	2	0	0	4
				0	0	0	0	0
		Order Maintenance Test Set Total:		2	8	0	4	14
		Order Maintenance Test Set Pct:		14%	57%	0%	29%	
		Regression Test Set 1	Win 7 64-bit / IE 9 Windows 7 / Chrome Windows 7 / Firefox Windows 7 / IE 8 Windows 7 / IE 7	1	0	0	0	1
				1	0	0	0	1
				1	0	0	0	1
				1	0	0	0	1
		Regression Test Set 1 Test Set Total:		4	1	0	0	5
		Regression Test Set 1 Test Set Pct:		80%	20%	0%	0%	
		Test Cycle 1 - Functional Tests	Windows 7 / Chrome Windows 7 / Firefox Windows 7 / IE 9	2	2	0	0	4
				4	2	0	0	8
				8	4	0	2	14