

# Test Evaluation Logging and Analysis Tool (Project Scribe)

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# Test Evaluation Logging and Analysis Tool

- Automates the process of recording, saving, and analyzing reliability data during System Operational Readiness Tests (SORT)
- The System Operational Readiness Tests include
  - A stage that represents a mission area
  - A header that represents the overall type of checks the tester will be performing
  - A subheader that provides actions to take before completing test steps
  - The test steps themselves that give a fine-grained course of actions for the tester
  - A space to determine whether a test step passed, failed, or wasn't tested
  - A space for comments for each test step
  - A column for the variant that the test step falls under

# Practical SORT Example

- House Inspection

Structural Integrity	Electrical	Plumbing
Visible foundation in good condition	Lights and switches functional	Visible pipes show no sign of damage/leaking
Sides of house appear straight	Visible wiring in good condition	Water heater showing no signs of rust
No cracks, dents, or rotting on house siding	No fuses in electrical panel overheating	Water heater producing sufficiently hot water

# System Operational Readiness Test (SORT)

■ Stage    ■ Subheader    ■ Result  
■ Header    ■ Test Step    ■ Comment Area    ■ Variant

Stage 1								
General			P/F/NT	Comment	Variant			Variant
	Check the following before being called by examiner:				ALL			V(1) - 86 Coupe
		Engine at normal operating temperature by having the engine kept running while waiting for the test to commence.			ALL			V(2) - Avalon Hybrid Sedan
		Familiarize yourself with the vehicle controls, all light switches, boot, bonnet, fuel cap operation, and so on.			ALL			V(3) - Corolla Sedan
		Make sure that any headlamp levelling device is set in the correct position for a vehicle without a load (usually a small wheel control on the dash which is numbered and in most cases the correct position will be at 0).			ALL			V(4) - Camry Sedan
		Have vehicle registration certificate, appointment card, and previous MOT certificate (if applicable) readily available for examination.			ALL			V(5) - C-HR SUV
	Upon being called by examiner:				ALL			V(6) - Prius Hatchback
		Drive vehicle to allotted parking space and keep it in park with the parking brake on.			ALL			V(7) - Mirai Sedan
		Make sure the blinker works.			ALL			V(8) - Tundra
		Make sure the installed GPS can find your location.			All			V(9) - Yaris

# SORT Represented by TELAT

The screenshot shows a web-based application titled "Checklist" with a menu bar at the top containing "File", "Select Variant", "Select Sheet", "Find", "Switch Mode", "Go To", and "Help". The main content area is divided into two sections, each with a "General" tab. Section 1, numbered "1", contains a text box with the instruction "Check the following before being called by examiner:", a status dropdown menu currently set to "Passed", and a feedback text box containing "Engine at normal operating temperature by having the engine kept running while waiting for the test to commence." and "Engine temperature OK!". Section 2, numbered "2", contains a text box with the instruction "Familiarize yourself with the vehicle controls, all light switches, boot, bonnet, fuel cap operation, and so on.", a status dropdown menu currently set to "Failed", and a feedback text box containing "Can't operate some controls.".

File Select Variant Select Sheet Find Switch Mode Go To Help

## Checklist

General

1 Check the following before being called by examiner:

Engine at normal operating temperature by having the engine kept running while waiting for the test to commence.

Engine temperature OK!

Passed

2 Familiarize yourself with the vehicle controls, all light switches, boot, bonnet, fuel cap operation, and so on.

Can't operate some controls.

Failed

# CCLog

Keeps track of events during a test:

- Date, System in question, action taken
- Functions, Device affected, impacts

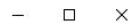
## Problem Reporting

- Number of attempts to fix problem
- Number of times successful
- New or existing problem?

The screenshot shows a software window titled "Event" with a "File" menu. The main area contains four panels for data entry:

- General Info:** Includes fields for "Date and Time" (04/12/18 16:54:37), "Recovery (in min)" (120), "Action" (Action A), and "System/Subsystem" (Subsystem 3).
- General Info 2:** Includes dropdowns for "Function" (Read), "SubFunction" (Type), "Device" (Mouse), and "Impact" (Medium).
- TLAM Counts:** Includes dropdowns for "Type" (Type 1) and input fields for "Number of Attempted" (100) and "Number of Successful" (89).
- PR:** Includes dropdowns for "Type" (Type A), "Number" (10), "Title" (The PR), "New or Existing" (Existing), and "If Existing, Result?" (Positive).

At the bottom, there is a "Comments" section with a text area containing the placeholder text "The event."



File

General Info	General Info 2	TLAM Counts	PR	Comments
Date and Time 4/11/18	Function Choice 1	Type Choice 1	PR Type Choice 1	
Recovery (in min) 505	SubFunction Choice 1	Number Attempted 500	PR Number 550	This is event 14.
Action Choice 1	Device Choice 1	Number Successful 432	PR Title 504	
System/Subsystem Subsystem14	Impact Choice 1		New or Existing Choice 1	
			If existing, Result? Choice 1	

General Info	General Info 2	TLAM Counts	PR	Comments
Date and Time 4/10/18	Function Choice 3	Type Choice 3	PR Type Choice 3	
Recovery (in min) 403	SubFunction Choice 3	Number Attempted 410	PR Number 403	This is event 13
Action Choice 3	Device Choice 3	Number Successful 404	PR Title 199	
System/Subsystem Subsystem13	Impact Choice 3		New or Existing Choice 3	
			If existing, Result? Choice 3	

Prev Next

# Time-keeping

Shift Entry

File Switch Mode View Help

## Shift Entry

Test Duration (in hours):

Shift Length (in hours):

Number of Shifts:

Add Shift

	<u>Start Time</u>	<u>Stop Time</u>	<u>Test Director</u>	<u>Personnel</u>
Shift: 1	800	1630	Person 1	Person 2
Shift: 2	900	1730	Person 2	Person 3
Shift: 3	800	1630	Person 2	Person 4
Shift: 4	700	1530	Person 5	Person 6
Shift: 5	700	1530	Person 5	Person 3
Shift: 6	700	1530	Person 1	Person 2
Shift: 7	800	1630	Person 3	Person 4



# Test Overview

## Executive Summary

Test Name:

Newest Test

Shift Length:

8 hours

Test Dates:

3/21/18

3/28/18

Test Location:

Umass Dartmouth

### Known Discrepancies of System

Any discrepancies at the start of test?

Choose ▾

Wrong PC version number

### Version Information

Build

PLWD-34

Ship Variant

K15

### Version Numbers

TC Version:

TC1.1

PC Version:

PC2.01

Add Version Numbers

# Counts

- Provides metrics of a test
  - Number of steps
  - Steps passed
  - Steps failed
  - Steps not tested
- Calculates percentages
  - Percentage of steps passed, failed, etc. on the selected sheet
  - Percentage of steps passed, failed, etc. across all sheets

Stage 1

Counts

				Percent	
Number of Test Steps:	31	31	/	31	100.0
Number of Test Steps Passed:	3	3	/	31	9.68
Number of Test Steps Failed:	3	3	/	31	9.68
Number of Test Steps Not Tested:	1	1	/	31	3.23

Overview

Number of Test Steps:	60	60	/	60	100.0
Number of Test Steps Passed:	3	3	/	60	5.0
Number of Test Steps Failed:	4	4	/	60	6.67
Number of Test Steps Not Tested:	1	1	/	60	1.67

CCLog

Number of Events:	13	Number of TLAMs:	13
Number of PRs:	12	Number of Attempted TLAMs:	5830
Number of New PRs:	3	Number of Successful TLAMs:	5464
Number of Existing PRs:	9		

# The Development Process

- 2 week sprints
- 2-3 meetings a week
- Weekly client meetings
- Weekly progress reports
- Weekly testing reports



<https://checkback.co.uk/services/bs7858-security-vetting/>

# Tools Utilized

- Programming language: Java 8
  - JavaFX
  - Scene Builder
  - Apache POI
- HTML
  - CSS
  - Bootstrap
- Version control: Git
- Remote repository: Github
- File storage: Google Drive



# Testing

- Issue/Bug tracker
- Test cases
- Acceptance
- Integration
- Regression
- Unit Test
  - JUnit 4 and test runner



<http://elasticstar.com/index.php/our-services/software-testing/>

# Demonstration



# Questions?