SEQUENCE MANAGEMENT

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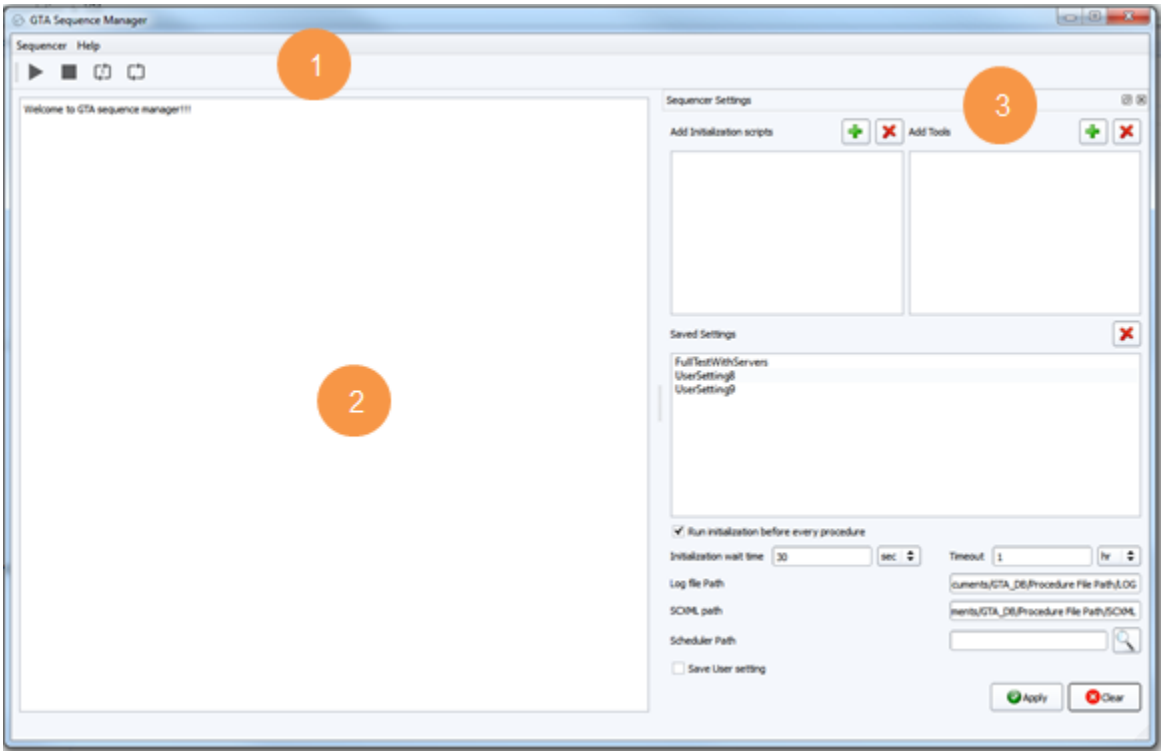
1. Introduction

The sequence manager is used to run sequence with certain prerequisite conditions which can be set by the user. The sequence manager provides the user with the flexibility to select the logging mechanism, the initialization process etc.

Shown below is the sequence management window. It basically consists of 3 major parts.

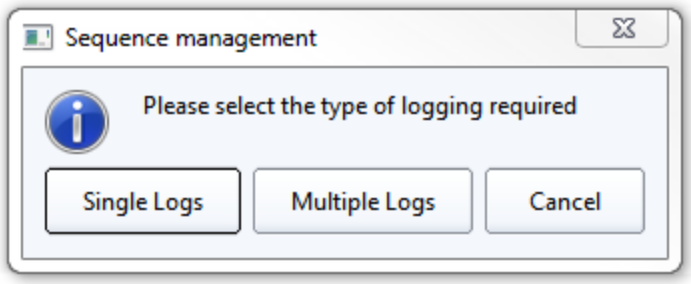
1. Sequencer operation tool bar
2. Logger
3. Sequencer settings



The following sections will describe the various components, the workflow of the sequencer.

2. Starting sequence manager

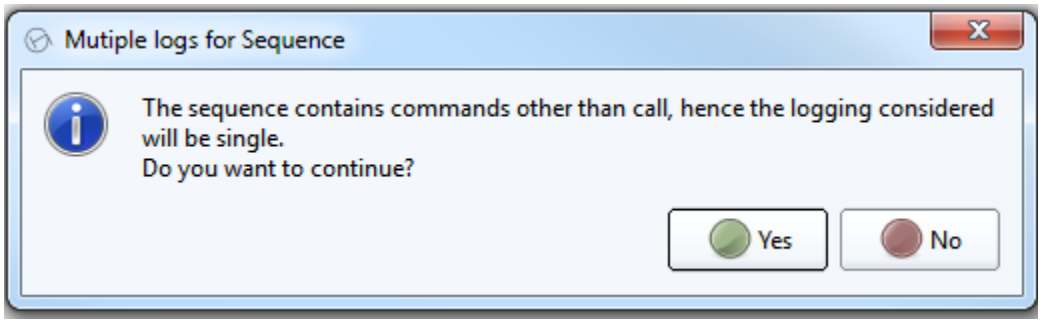
- Open a sequence in GTA.
- Click on the play button
- The user can complete check compatibility or skip it.
- A Sequence management pop up as shown below will be displayed.



- The user can select either Single Logs or multiple Logs.
- Once either of the setting is selected a new window of the sequence manager will be opened. Following picture shows the Sequence manager.

3. Single and Multiple Logs

- The concept of single and multiple logs is to be able to generate a single log or multiple logs on execution of the sequence. So in case of single logging, a single log will be generated for the sequence and in case of multiple logging, multiple logs will be generated. These will be logs for different procedures that have been called from the sequence.
- If the user wants to generate multiple logs then in that case, *the sequence must contain only call commands (call to procedures)*. If there are any other commands present apart from call to procedures then the logging mechanism considered by the sequencer will be single. Following is the message that the user will see if the scenario mentioned above takes place.



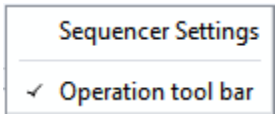
3.1 Ignored commands

- User must note that the commands ignored in the sequence will not be considered during execution.

4. Sequencer settings

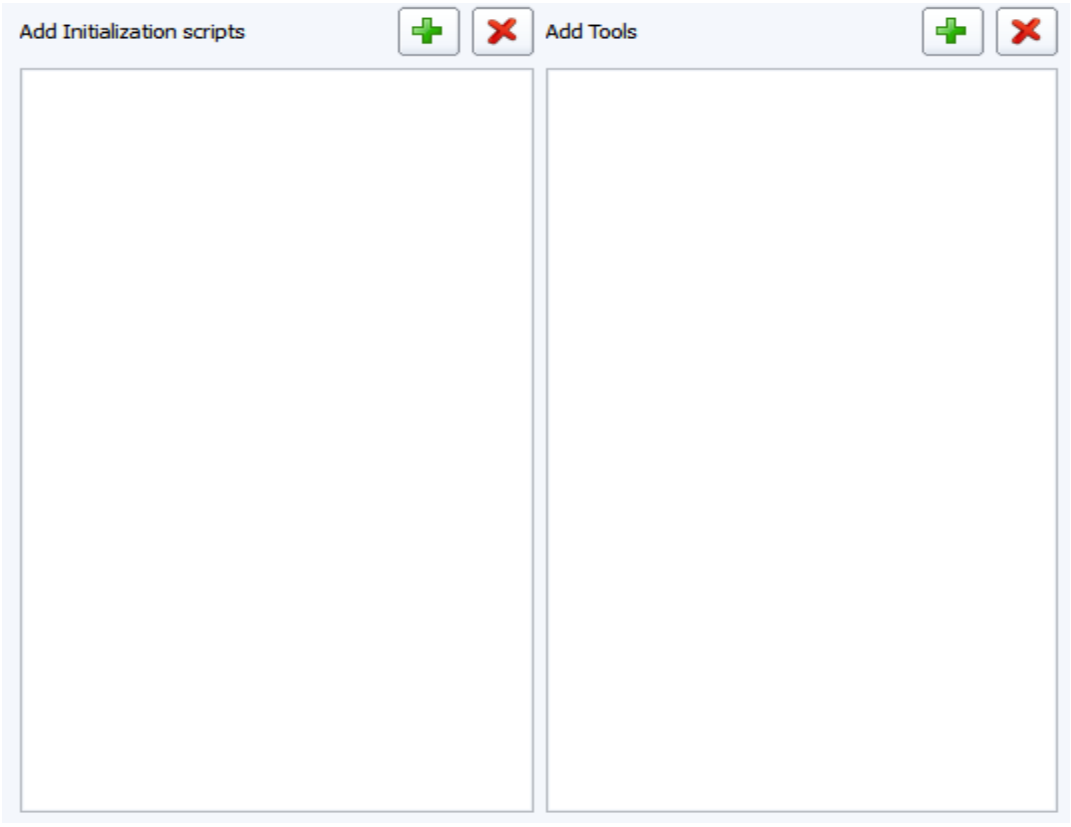
The sequencer settings are present on the right hand side of the Sequence Management window. It is a dock able window which can be placed anywhere in the Sequencer window or outside the Sequencer window.

If the window is closed, then right click on the menu bar or tool bar will show following context menu. User must select the Sequencer Setting option to view the settings window again.



4.1 Adding initialization scripts and tools

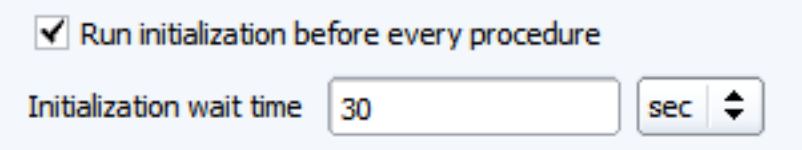
- The user can add initialization scripts and tools which will be run before starting the execution of the sequence.
- There are two separate lists, one for scripts and other for tools. The user can add (.py and .bat) scripts by browsing through the file system. Similarly the user can add tool i.e. executables (.exe) from the file system. Also option has been provided to the user to delete the scripts and tools added in the list
- The screenshot shows the two separate lists for scripts and tools.



4.1.1 Initialization options

Following initialization options have been provided to the user:-

- **Run initialization before every procedure**
  - The **"Run Initialization before every procedure"** option when checked will run the initialization scripts again and close the tools that were running and again start them before execution of each procedure in the sequence.
  - If this option is un-checked, then the initialization will be done only before the execution of the sequence.
  - This option is useful only in the case of multiple logging, as in single logging everything will be considered as a single procedure and executed altogether. So for single logging initialization will happen only once i.e. at the start.



- **Initialization wait time**
  - The user can set initialization wait time. This time can be set in seconds and minutes. This is the time interval the sequencer will wait after starting all scripts and tools. This has been provided so that the sequencer waits for the given time interval after initialization and then starts the execution of the sequence.

4.2 Log file Path and SCXML Path

Log file Path and SCXML Path will be set automatically. This will be taken from the GTA and set in Sequence Manager. These two fields cannot be edited by the user. The SCXMLs generated will be picked from this place and the logs will be placed in the log file path.

4.3 Scheduler Path

The user can set the scheduler path (emoTest.exe). A search button is provided  to user for searching through the file system.

The Sequencer will not operate if a valid scheduler path is not added.

4.4 Scheduler Timeout

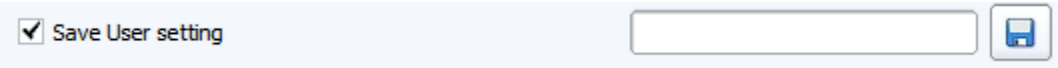
This is for setting scheduler timeout interval. The sequencer will be continuously monitoring the execution during which if it finds that the sequencer is not responding for the mentioned scheduler timeout interval then the current execution will be stopped and next procedure will be started. In case of single logging, the execution will be stopped.

4.5 User settings

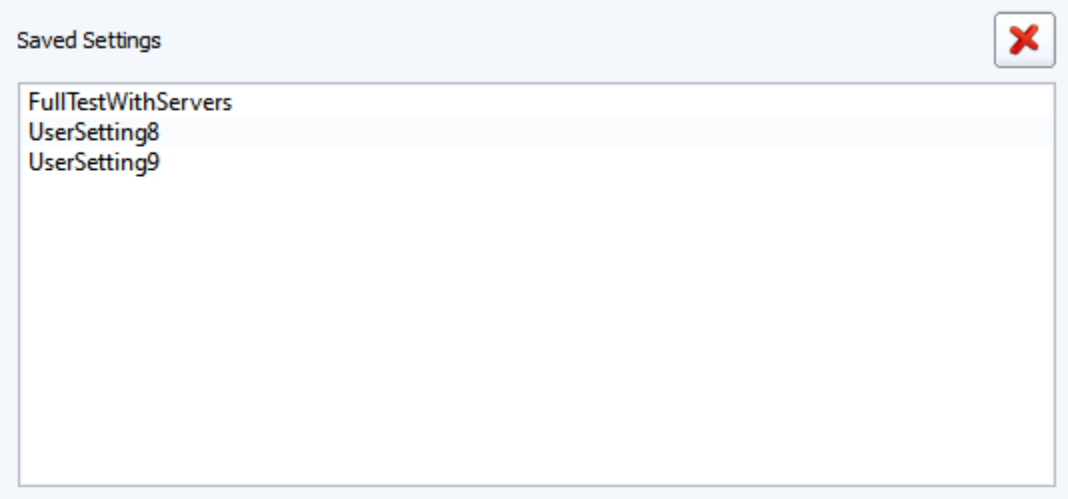
All the settings including the initialization scripts, tools and all other settings are called user settings. In order to save them and delete them

4.5.1 Saving user setting

The user can save the current sequencer settings by checking the "Save User setting" and entering the name in the input box and clicking save button.



The saved setting name is displayed in a list under the name "Saved Settings" as shown in the screenshot.



The user can also delete any one of the saved settings by selecting and clicking the  button.

4.5.2 Saved Settings

As shown in the screenshot above, user can see all saved user settings in a list.

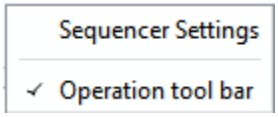
The user can select any one of the setting and click 

button.

5. Sequencer operations

The Sequencer options are present in the tool bar. Following are the Sequencer operations viz. Start, Stop, Replay One and Replay All.

The user can show/hide this tool bar by selecting/de-selecting the



5.1 Start

The user can start the execution of the sequence with the start button. Firstly the initialization process will take place then the execution of the sequence.

A point to be remembered here is that, until and unless user has given a valid scheduler and applied the settings the start button will remain disabled. Hence after adding all the scripts, tools and other settings, apply button must be clicked so that the Sequencer uses the most recent settings for the execution.

5.2 Stop

The user can stop the execution of the sequence. The execution can be stopped any time during execution. The sequencer will display the name of the procedure stopped mid execution, it will also list all the procedures that were not executed after stopping the execution; this is in case of multiple logging. In single logging too, the execution will be stopped, however the name of the procedure displayed in the log window will be that of the sequence itself.

5.3 Replay One

The Replay one option is enabled only when an execution is in progress or when an execution has been completed or stopped.

Replay one executes procedure that was running before the execution stopped. It executes that procedure only once and stops after its completion.

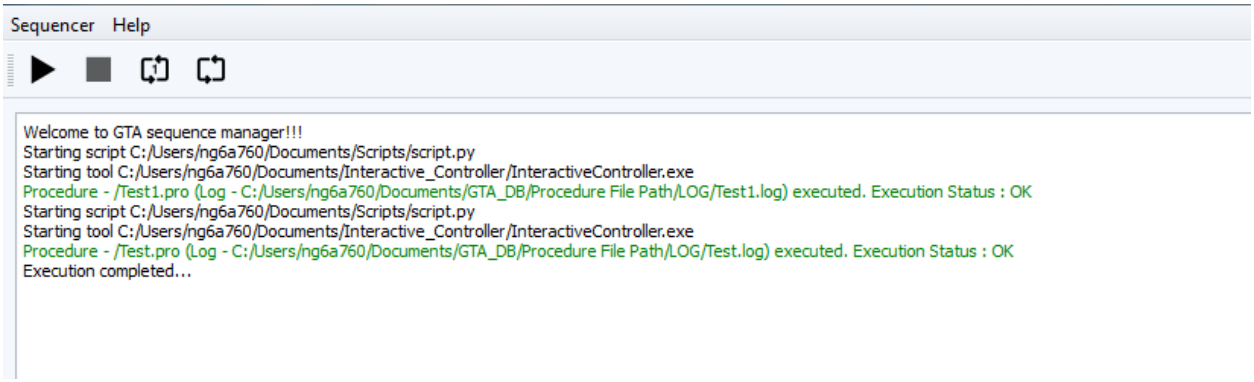
5.4 Replay All

Replay all option is also enabled when an execution is in progress or when execution has been completed or stopped.

The Replay all executes the sequence from the start.

6. Sequencer Log window

The sequencer has a log window wherein all messages are displayed for user. For example, scripts that are started, tools that are started, procedures that are executed, execution status of procedures, etc.

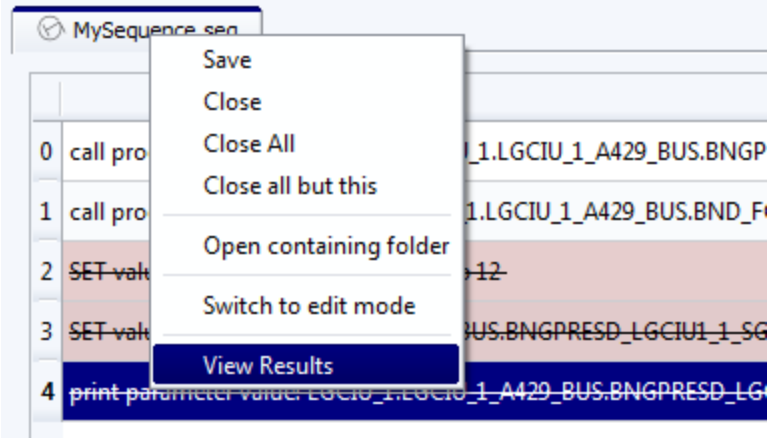


7. Viewing execution results in GTA

Once the execution of sequence is completed, the user can now come to GTA window and view results and generate LTRA. Here also the logging factor comes into picture. The handling of logs, results and report is slightly different in these two scenarios.

7.1 Single Log

As it has been mentioned before that in single logging the entire sequence will be executed, hence a single log is generated. Now to see the results the user must go to the GTA window. The user can go to the result tab, select the log and the sequence and view results. Another option that has been provided to the user in V24 release of GTA is the context menu option viz. View Results. Clicking on the View Results will switch to result view with the results analysed and displayed. The user can then generate LTRA. The workflow in this scenario is the same as in any normal procedure execution.



7.2 Multiple Logs

In multiple logs scenario, different procedures in the sequence will be executed and their logs will be saved separately in such a way that each procedure will have a matching log. To view the results, the user can click the View Results option.

Select “View Results” for the sequence, the result tab is displayed. In the result the execution status of call to each procedure is mentioned.

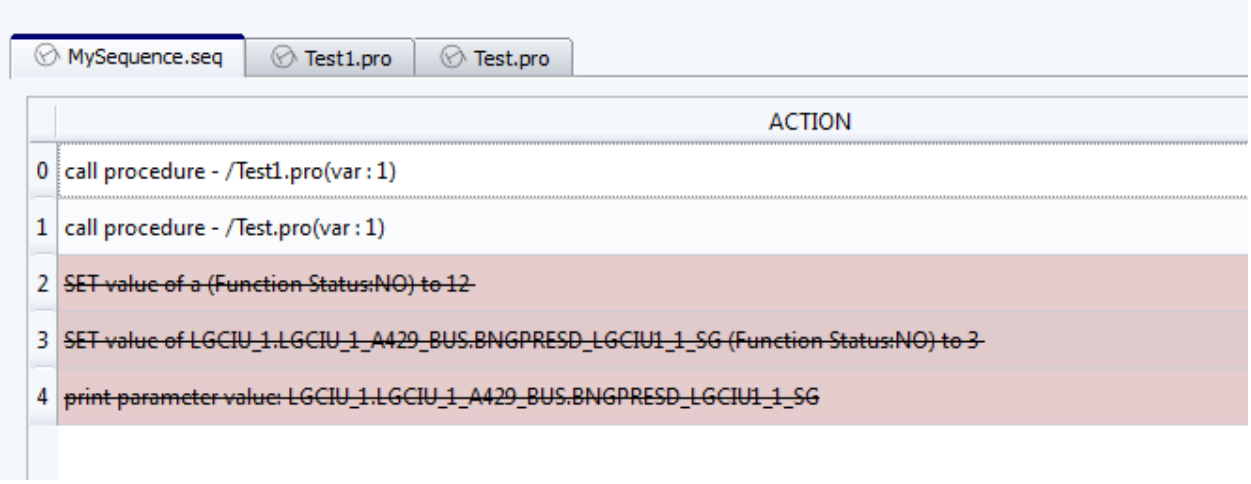


Fig. Sequence

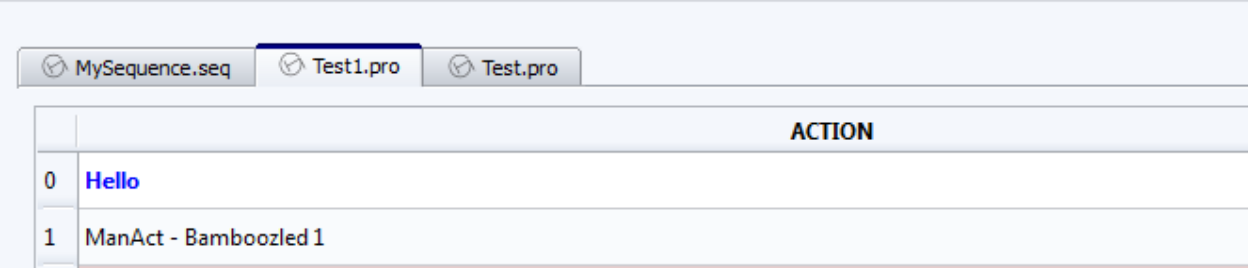
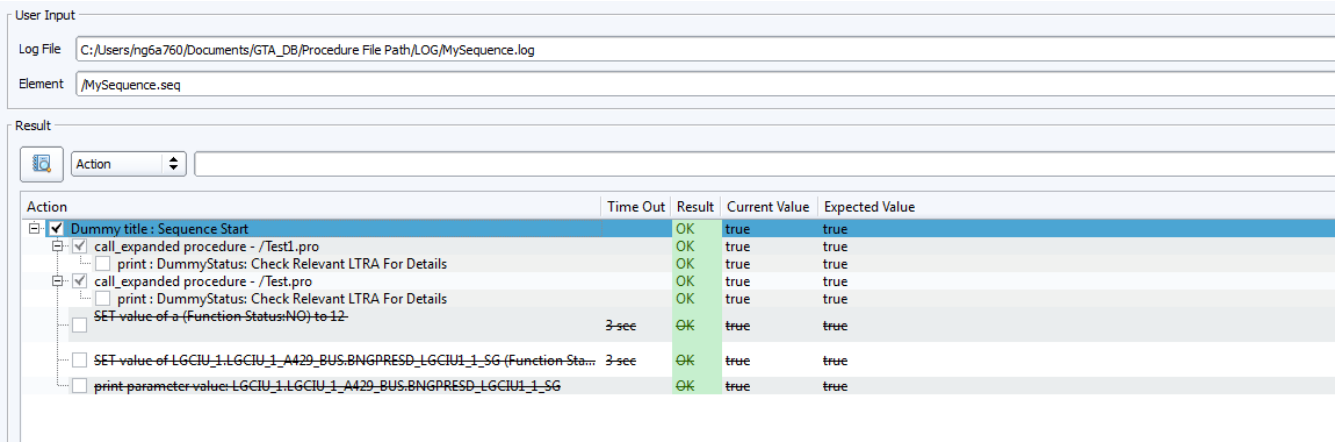


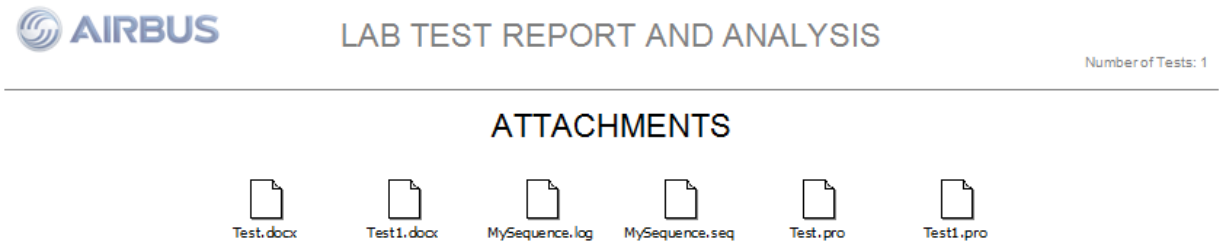
Fig. Procedure 1

Fig. Procedure 2

As shown in the screenshots above for a sequence with calls to two procedures the result will look like something this, as shown in the screenshot below:-



The user can generate LTRA for the sequence. The LTRA for sequence will contain global status and execution status of each call command. A detailed LTRA for each procedure will be present in the document as an attachment. Each attachment can be opened and report for each procedure can be viewed.



8. Future scope and enhancements

Further enhancements will be made to the sequencer wherein there will be a master-slave kind of design which will help user to start tools and scripts on different computers on the network.