Discover What's Possible™ Anritsu

TECHNICAL NOTE

MD8470A
Signalling Tester

Supplementary Service Test

ANRITSU CORPORATION

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Explanation of the Sample Supplementary Service Scenario

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Part 1: General

General

1. Please download the Supplementary Service Scenario (W-CDMA/GSM/GPRS) from the following URL:
https://www1.anritsu.co.jp/Download/MService/Login.asp

General

2. After extracting the downloaded file, you can see :
   - 3 Readme xls files (Sequence, Readme, Source)
     - table of 'Test case vs file name'
   - Sequence folder
     - protocol sequence arrow diagram for each test case
   - Readme folder
     - usage for each test case
   - Source folder
     - source code and header file for each test case

Part 2: How to compile and execute

How to compile and execute

Compiling the scenario

1. Please copy the ‘Source’ folder (including files in this folder) to ‘c:¥MX847010¥Scenario’.

2. Please move all header files in the ‘c:¥MX847010¥Scenario¥Source’ folder to ‘c:¥MX847010¥Scenario¥UserInclude’ folder.

3. Please drag the source file (.c file) and drop onto ‘Scenario’ shortcut located in ‘Desktop’, then you can see the executable scenario (.dll file) in the ‘c:¥MX847010¥Scenario’ folder. (Microsoft Visual C++ .NET 2003 is required for compiling)

How to compile and execute

Executing the scenario

1. Please refer to the readme file in the ‘Readme’ folder.

2. Please execute the MX847010 software

3. Please load the parameter file (G01.pmx or W01.pmx) and load the scenario (.dll file). Then start to execute the scenario.

Part 3: Additional Tool (Scenario Scheduler)

Additional tool (Scenario Scheduler)

Why Scenario Scheduler?

1. The following is an example of the Readme file (0021_ReadMe_Eng.txt)

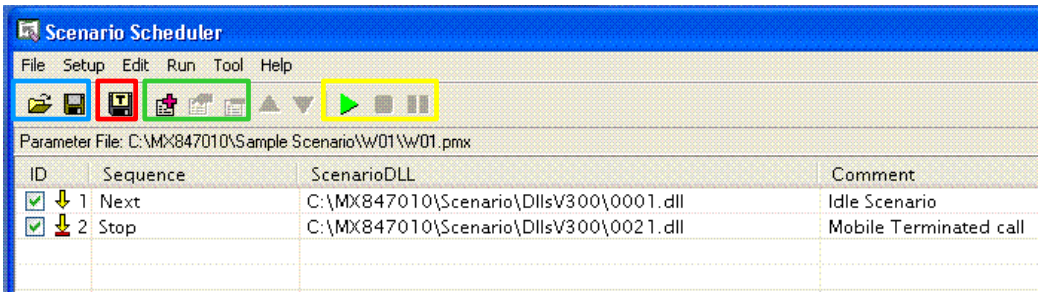
Initial state: No Service
1. Use 1001.dll and execute Combined Attach.
(Correspond to mobile with SS transmission after Attach)Use 1001m.dll and execute Combined Attach.
State: Idle
2. Execute 0021.dll without canceling on the DLL selection window after the procedure 1. ends.
3. Input CLI number in the dialog box.
4. Since mobile Terminated, push a mobile telephone call button.
State: Conversation
5. Click "Yes" button on the dialog box(Disconnect) and end call from the network.

We need to execute several scenarios in sequence (not so convenient) so we recommend using the 'Scenario Scheduler'.

Additional tool (Scenario Scheduler)

How to Execute

2. Please execute the scenario scheduler ‘Start Program’ -> ‘Anritsu’ -> ‘Scenario Scheduler’. Then you can see the following;

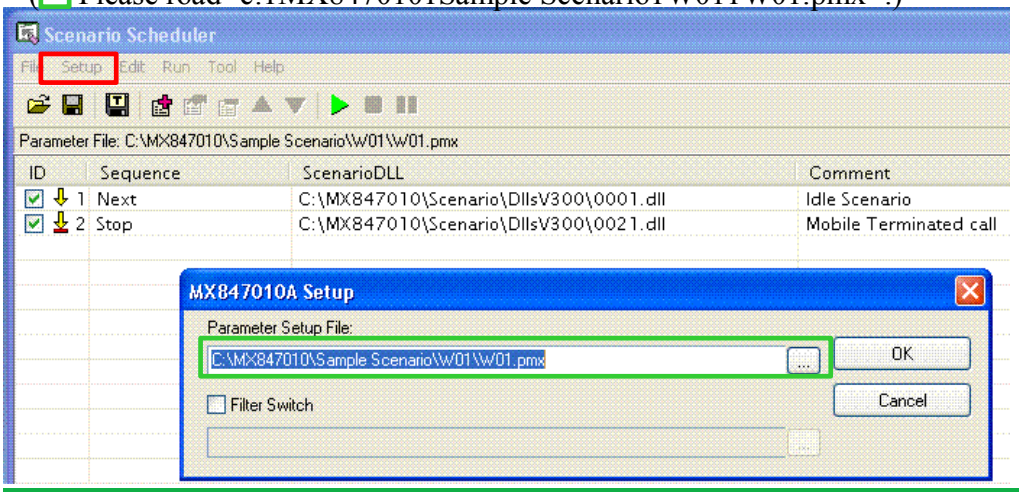


- Saving the MX847010 trace log file (.lgx or .pcap or .txt)
- Adding/Modifying/Deleting the sequence
- Start/Stop/Pause the scenario execution
- Saving/Roading the parameter of the Scenario Scheduler software

Additional tool (Scenario Scheduler)

Parameter Setup

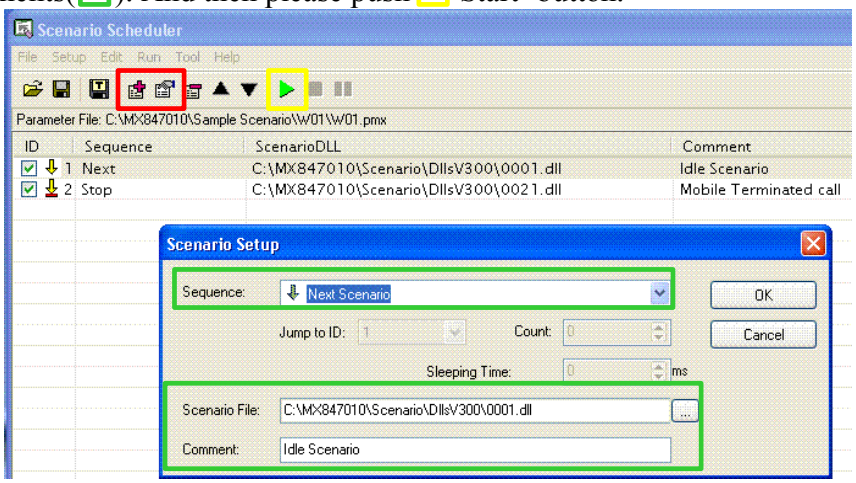
2. Please execute the MX847010A setup (‘Setup’ -> ‘MX847010A setup’) , you can see the ‘MX847010A Setup’ screen, then please road the parameter file. (Please road ‘c:¥MX847010¥Sample Scenario¥W01¥W01.pmx’ .)



Additional tool (Scenario Scheduler)

Scenario Scheduling

3. Please push ☐ 'Add' or 'Modify' button, you can see the 'Scenario Setup' screen. Then we can define the 'Sequence', selecting scenario and adding some comments(☐). And then please push ☐ 'Start' button.



Part 4: Scenario modification

Scenario Modification

General

1. We would like to recommend scenario modification only for the supplementary service (SS) part. In this case, modifying only the sending/receiving message (NAS layer) is enough, so this is easier. (In addition to the sending/receiving message, setting MD8470A changes are required in some RRC layer message cases)

2. The 'Message Coder' tool is very useful for modifying messages.

(Please refer to the Technical Note 'Scenario Test'.)

Scenario Modification

Structure of source code

1. There are 2 files: one is .c source; the other is .h header file. (examples: 0001.c and 0001.h)

2. The .c file is the main body of this scenario and includes the header file.

3. Only Layer3 message HEX data (MD8470A to UE) and message length (bit unit: only the message with integrity) are described in the .h file.

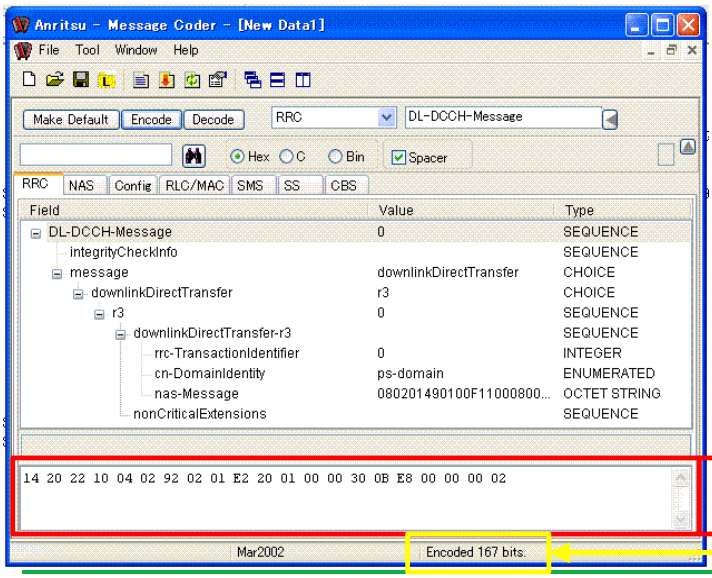
Scenario Modification

How to modify (file name)

1. Please select a similar test case from the sample scenarios.
2. Please rename both .c and .h files.
3. In the .c and .h files we can see the file names, so please change these names.

Scenario Modification

How to modify (.h file)



4. Please modify, add and delete layer3 message HEX data and length in the .h file. (Message Encode tool is very useful)

HEX data

Length

Scenario Modification

How to modify (.C file)

5. Please modify, add and delete in the ‘SetPDU’ function in the .c file based on the changes in the .h file.

6. Please modify, add and delete in the protocol sequence part in the .c file based on the changes in the .h file.

Anritsu

Specifications are subject to change without notice.

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