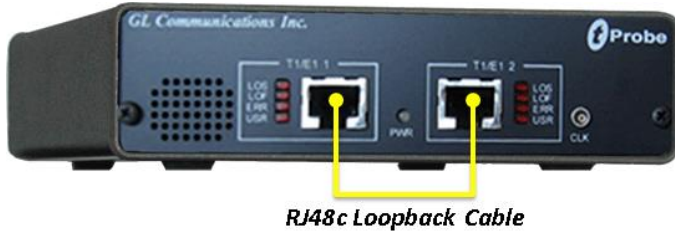


*It is assumed that the T1/E1 Analyzer Hardware, Software and License installations are already performed referring to the purchased Hardware Installation Guide.*

**MAPS™ CAS Application Verification**

For functional verification, MAPS™ CAS application is configured on Card #1 and Card #2 in loopback mode on a single PC. The following steps explain MAPS™ CAS configuration to simulate CAS R1 Wink call scenario using T1 Analyzer.

**Cross-connect T1/E1 Port #1 and Port #2 of the Hardware unit back-to-back using RJ48c loopback cable.**

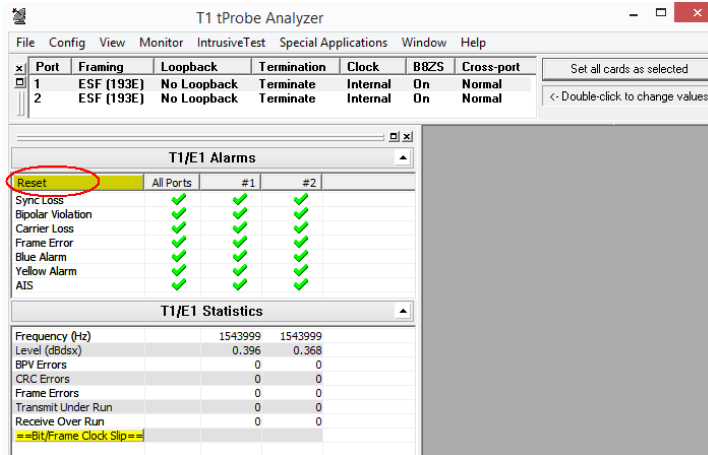


**RJ48c Loopback Cable**











- Click on the **T1/E1 Analyzer** icon created on the desktop (or) from the installation directory, click on **UsbNGT1.exe** and launch T1/E1 Analyzer application.

**Note:** The application may take some time to get started due to hardware and software initializations.

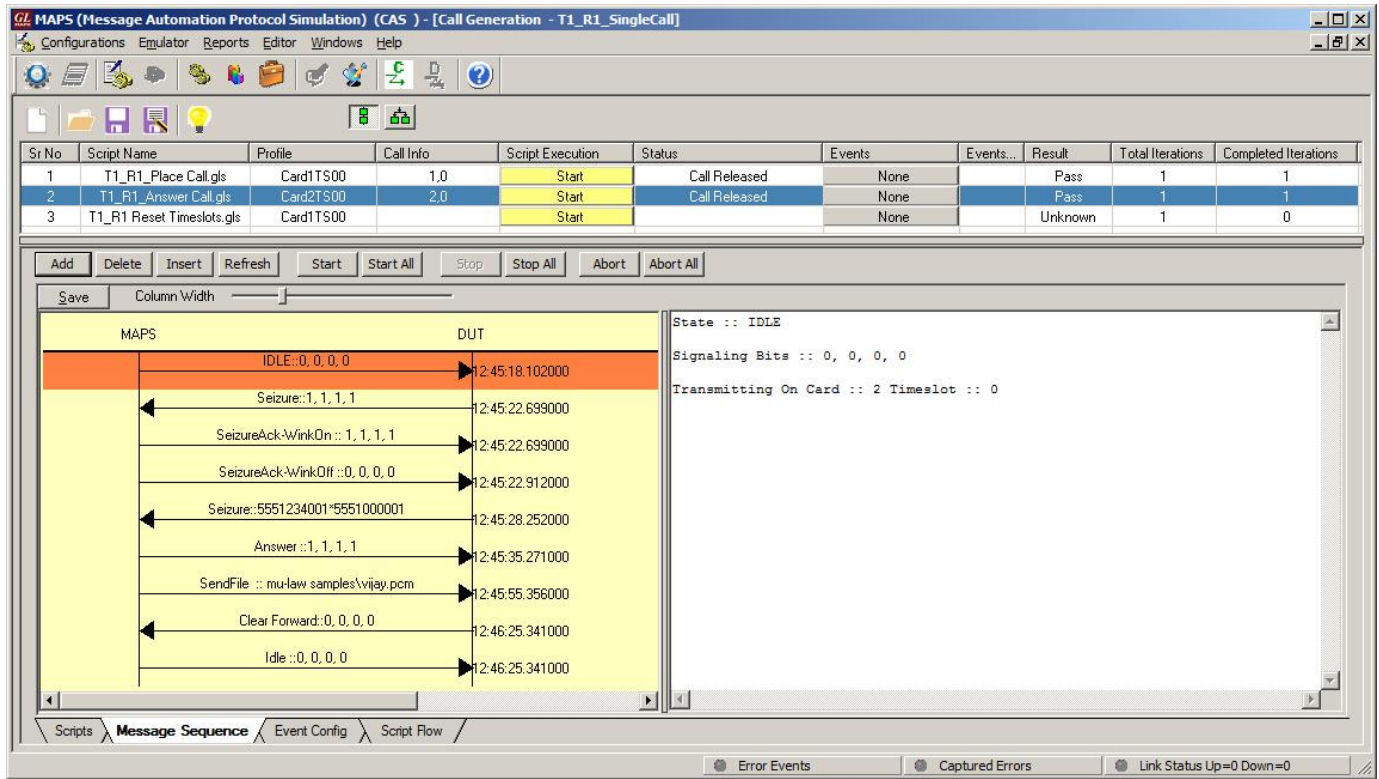
- Verify the following **Interface** settings in the T1/E1 main GUI
  - For **T1 Analyzer**, configure Port #1 and Port #2 with the following  
Framing = ESF, Loopback = No Loopback, Termination = Terminate, Clock = Internal, Cross Port = Normal
  - For **E1 Analyzer**, configure Port #1 and Port #2 with the following  
Framing = CAS, Loopback = No Loopback, Termination = Terminate, Clock = Internal, Cross Port = Normal



- Verify the **Sync and Alarm Status** between the ports are indicated in **Green** ✓ in **T1/E1 Alarms** pane. Click **Yellow Reset** button to reset the alarms.
- From T1/E1 Analyzer main window, invoke the **WCS Server: Special Applications > Windows Client Server (WCS) > WCS Server**.
- Configure WCS as follows -
  - Listen Port = 17080 (for T1 systems); 17090 (for E1 systems)
  - Messaging = Binary
  - Version = 4
  - Click on **Start GL Server** button.

- From T1/E1 Analyzer main window, select **Special Applications** menu > select **Protocol Emulation** > invoke **MAPS CAS Emulator**
- In the MAPS™ CAS window, on the default **Testbed Setup** window, click  and select **R1\_TestBedSetup** and check for the following settings:
  - **Interface** = T1
  - **WCS Listener Port** = 17080 (for T1)
  - **Server IP Address** = 127.0.0.1
- From MAPS™ CAS main window, select **“Editor”** menu -> invoke **Profile Editor** window and verify the following parameter settings:
  - Click  and load **“CAS\_Profiles”** file,
  - Select the **Card1TS00** profiles from the left pane.
  - Verify the **Card number = 1, Timeslot = 0**, and the default **ANI, DID** parameter values already set in the window.
  - Click  **Save** button.
  - Similarly, scroll down the left pane and select the **Card2TS00** profile, and repeat the above steps verifying the settings for the profile.
  - In the same Profile Editor window, click  and load **“TrafficProfile”** file,
  - Select the **Card1TS00** profiles from the left pane,
  - Set **Enable Traffic** to **AutoTraffic-File** and **Traffic Direction for Auto Traffic** to **Tx-Rx**.
  - Click  **Save** button.
  - Similarly, scroll down the left pane and select the **Card2TS00** profile, and set the same traffic settings as above. Click  **Save** button.
- Click **Start** and initialize the Testbed setup.
- From the MAPS™ CAS window, select **Emulator** menu > invoke **Call Generation** window
- Click  **Open Configuration** icon available on the **Call Generation** window, select **T1\_R1\_SingleCall** pre-saved configuration file.
- This configuration loads 3 call instances with **T1\_R1\_Place Call.gls**, and **T1\_R1\_Answer Call.gls** scripts with **Card1TS00** and **Card2TS00** profiles respectively. The third call instance is loaded with **T1\_R1\_Reset Timeslots.gls** script.
- Verify that **Sequential Execution**  button is enabled in the Call Generation window. Also verify, if **Total Iterations** column is set to **1**.
- Select the third call instance loaded with **T1\_R1\_Reset Timeslots.gls** script and click the area in the Profile column. From the drop down list select **Card1TS00** profile. Click the yellow  **Start** button and run the **T1\_R1\_Reset Timeslots.gls** script.
- Once **T1\_R1\_Reset Timeslots.gls** script is terminated, select the call instance loaded with **T1\_R1\_Answer Call.gls** script and click the yellow  **Start** button. Similarly, select and execute the place call script.
- Observe the script **Status and Events** in the respective columns. Wait for the call to terminate, and verify the **Message Sequence** flow.

- Select any message in the ladder diagram and observe the respective decode message on the right pane for the respective message.



The screenshot shows the MAPS (Message Automation Protocol Simulation) (CAS) interface. The main window displays a call sequence diagram with the following data:

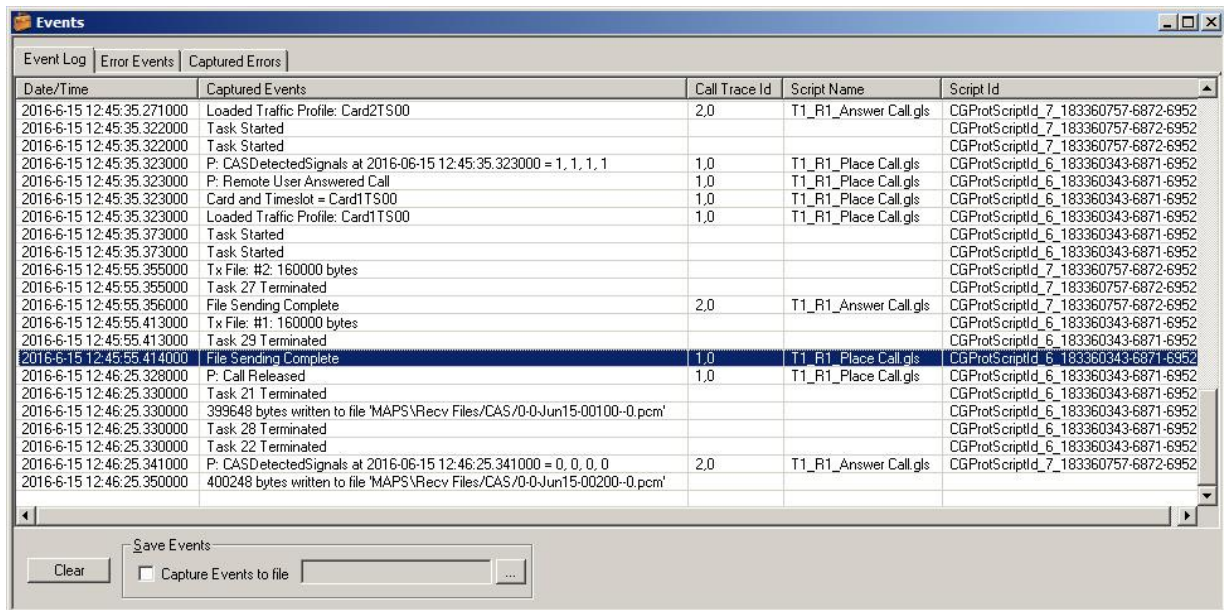
Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Events...	Result	Total Iterations	Completed Iterations
1	T1_R1_Place Call.gls	Card1TS00	1,0	Start	Call Released	None		Pass	1	1
2	T1_R1_Answer Call.gls	Card2TS00	2,0	Start	Call Released	None		Pass	1	1
3	T1_R1_Reset Timeslots.gls	Card1TS00		Start		None		Unknown	1	0

The diagram shows a sequence of messages between MAPS and DUT:

- MAPS to DUT: IDLE::0, 0, 0, 0 (12:45:18.102000)
- DUT to MAPS: Seizure::1, 1, 1, 1 (12:45:22.699000)
- MAPS to DUT: SeizureAck-WinkOn::1, 1, 1, 1 (12:45:22.699000)
- MAPS to DUT: SeizureAck-WinkOff::0, 0, 0, 0 (12:45:22.912000)
- DUT to MAPS: Seizure::5551234001\*5551000001 (12:45:28.252000)
- MAPS to DUT: Answer::1, 1, 1, 1 (12:45:35.271000)
- MAPS to DUT: SendFile::mu-law samples\vijay.pcm (12:45:55.356000)
- DUT to MAPS: Clear Forward::0, 0, 0, 0 (12:46:25.341000)
- MAPS to DUT: Idle::0, 0, 0, 0 (12:46:25.341000)

The right pane shows the state: IDLE, Signaling Bits: 0, 0, 0, 0, and Transmitting On Card: 2 Timeslot: 0.

- From the MAPS™ CAS main window, select **Report** menu -> invoke **Events** and observe the occurring call events in the log



The screenshot shows the Events window with the following log entries:

Date/Time	Captured Events	Call Trace Id	Script Name	Script Id
2016-6-15 12:45:35.271000	Loaded Traffic Profile: Card2TS00	2,0	T1_R1_Answer Call.gls	CGProtScriptId_7_183360757-6872-6952
2016-6-15 12:45:35.322000	Task Started			CGProtScriptId_7_183360757-6872-6952
2016-6-15 12:45:35.322000	Task Started			CGProtScriptId_7_183360757-6872-6952
2016-6-15 12:45:35.323000	P: CASDetectedSignals at 2016-06-15 12:45:35.323000 = 1, 1, 1, 1	1,0	T1_R1_Place Call.gls	CGProtScriptId_6_183360343-6871-6952
2016-6-15 12:45:35.323000	P: Remote User Answered Call	1,0	T1_R1_Place Call.gls	CGProtScriptId_6_183360343-6871-6952
2016-6-15 12:45:35.323000	Card and Timeslot = Card1TS00	1,0	T1_R1_Place Call.gls	CGProtScriptId_6_183360343-6871-6952
2016-6-15 12:45:35.323000	Loaded Traffic Profile: Card1TS00	1,0	T1_R1_Place Call.gls	CGProtScriptId_6_183360343-6871-6952
2016-6-15 12:45:35.373000	Task Started			CGProtScriptId_6_183360343-6871-6952
2016-6-15 12:45:35.373000	Task Started			CGProtScriptId_6_183360343-6871-6952
2016-6-15 12:45:55.355000	Tx File: #2: 160000 bytes			CGProtScriptId_7_183360757-6872-6952
2016-6-15 12:45:55.355000	Task 27 Terminated			CGProtScriptId_7_183360757-6872-6952
2016-6-15 12:45:55.356000	File Sending Complete	2,0	T1_R1_Answer Call.gls	CGProtScriptId_7_183360757-6872-6952
2016-6-15 12:45:55.413000	Tx File: #1: 160000 bytes			CGProtScriptId_6_183360343-6871-6952
2016-6-15 12:45:55.413000	Task 29 Terminated			CGProtScriptId_6_183360343-6871-6952
2016-6-15 12:45:55.414000	File Sending Complete	1,0	T1_R1_Place Call.gls	CGProtScriptId_6_183360343-6871-6952
2016-6-15 12:46:25.329000	P: Call Released	1,0	T1_R1_Place Call.gls	CGProtScriptId_6_183360343-6871-6952
2016-6-15 12:46:25.330000	Task 21 Terminated			CGProtScriptId_6_183360343-6871-6952
2016-6-15 12:46:25.330000	399648 bytes written to file 'MAPS\Recv Files\CAS\0-0-Jun15-00100-0.pcm'			CGProtScriptId_6_183360343-6871-6952
2016-6-15 12:46:25.330000	Task 28 Terminated			CGProtScriptId_6_183360343-6871-6952
2016-6-15 12:46:25.330000	Task 22 Terminated			CGProtScriptId_6_183360343-6871-6952
2016-6-15 12:46:25.341000	P: CASDetectedSignals at 2016-06-15 12:46:25.341000 = 0, 0, 0, 0	2,0	T1_R1_Answer Call.gls	CGProtScriptId_7_183360757-6872-6952
2016-6-15 12:46:25.350000	400248 bytes written to file 'MAPS\Recv Files\CAS\0-0-Jun15-00200-0.pcm'			