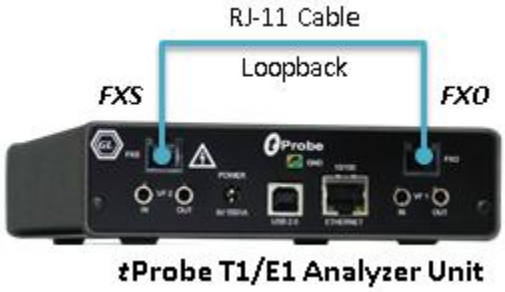
***It is assumed that the T1/E1 Analyzer Hardware, Software and License installations are already performed referring to the purchased Hardware Installation Guide.***

## MAPS™ FXO FXS Application Verification

For functional verification, single instance of **MAPS™ FXO FXS** application is configured in loopback mode to simulate Fax traffic scenario from FXO to FXS terminal and vice versa.

***Cross-connect FXO and FXS ports on the Hardware unit back-to-back with RJ-11 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.

- From T1/E1 Analyzer main window, invoke the **WCS Server: Special Applications → Windows Client Server (WCS) → WCS Server.**
- Configure WCS as follows -
  - Listen Port = 17090 (for E1 systems); 17080 (for T1 systems)
  - Messaging = Binary
  - Version = 4
  - Click on **Start GL Server** button.

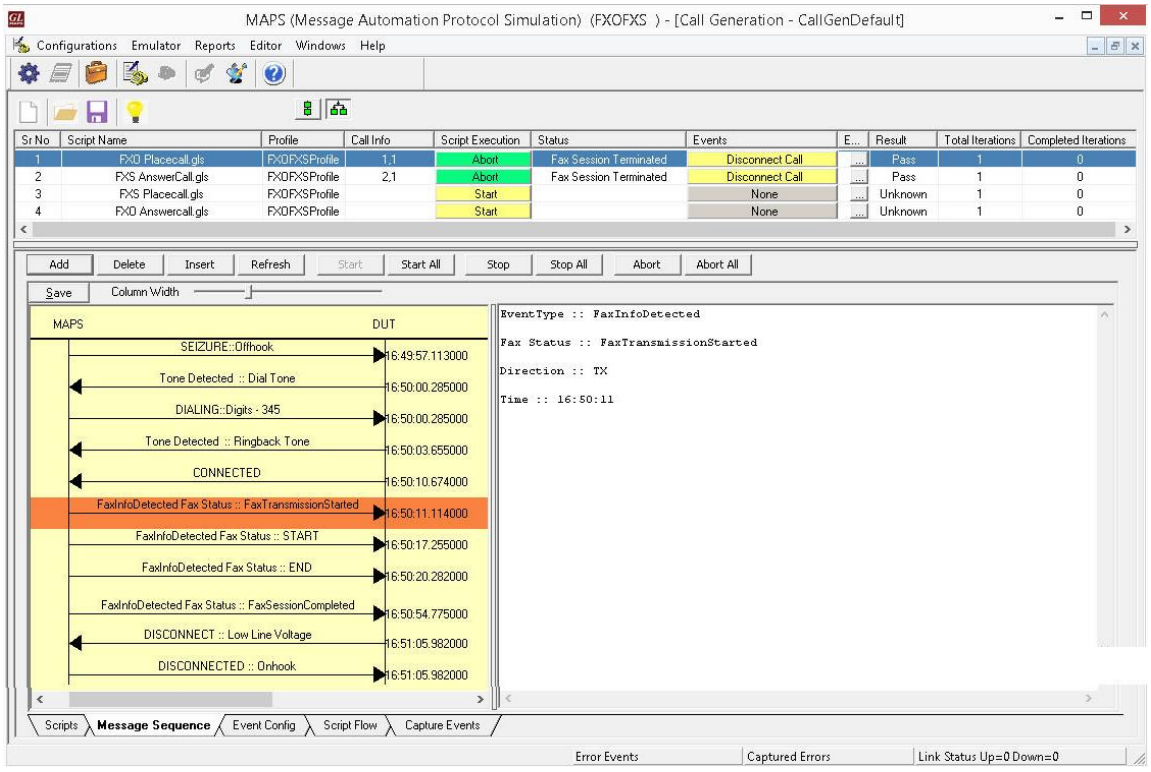
- From T1/E1 Analyzer main window, from **Special Applications menu →** select **Protocol Emulation → MAPS™ FXOFXS Emulator**

- By default, Testbed Setup widow is displayed. Click and select '**USATestBed'** and verify the following parameters default values::
  - FXO → Termination = **USA**
  - Start Protocol = **Loop**
  - FXO Multi Tone Detection File = **northamerica.mtd**
  - End User Configuration = **usa.xml**

- From MAPS FXOFXS main window, select **"Editor"** menu → invoke **Profile Editor** window:
  - Click and select **USA** profile. Verify the following parameter default values:
    FXO Card Number = 1
    FXS Card Number = 2
    Rx Timeslots = 1
    Tx Timeslots = 5
  - Click **Save** button.

- In the same Profile Editor window, again click and select **TrafficProfile**. From the LHS list, select **FXOProfile**. Set **Enable Traffic** to **AutoTraffic-Fax** and **Traffic Direction for AutoTraffic** to **Tx-Rx**. Click **Save** button.
- Similarly, in the same Profile Editor window, from the LHS list, select **FXSProfile**. Set **Enable Traffic** to **AutoTraffic-Fax** and **Traffic Direction for AutoTraffic** to **Tx-Rx**. Click **Save** button. Exit from the Profile Editor window.

- **Start** the test bed setup
- From MAPS™ main GUI, click **Call Generation** icon and invoke the call generation window
- By default, you will observe multiple call instances loaded with **FXOPlacecall.gls, FXSAnswerCall.gls** scripts and **FXSPlacecall.gls, FXOAnswerCall.gls** scripts with **FXOFXSProfile** profiles.
- Verify that **Parallel Execution** is enabled in the Call Generation window to execute the scripts simultaneously
- Click yellow Start button to initiate the call sessions. **Note:** Initiate the **FXS AnswerCall.gls** script first followed by the **FXO Placecall.gls** script.
- Wait till the calls are completed and terminated, and verify the **Message Sequence** flow for both the call instances in the GUI.
- Select any message in the ladder diagram and observe the respective decode message on the right pane for the respective message.




- Also, verify the received FAX (*.tif) file saved in the installation directory.