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

Optional License Installation

- Execute GLHWLicenseInstaller.exe from the USB Installation Stick to install hardware licenses.
- Follow the onscreen instructions and complete the installation.
- It is recommended to reboot the system after the software installation. If you had problems with installation so far, refer to T1 E1 Hardware Quick Install Guide (or) contact GL Communication for assistance.
- You can verify if the required licenses are installed. Navigate to ***C:\Program Files\GL Communications Inc\GLDONGLE*** directory, execute ***appl_list.exe*** and confirm the following licenses:
  - XX649 (MAPS™ SS7 Emulator)

Note: The **XX** in the Item No. refers to the hardware platform, listed at the bottom of the Buyer's Guide, which the software will be running on. Therefore, XX can either be ETA or EEA (Octal/Quad Boards), PTA or PEA (tProbe Units), UTA or UEA (USB Units), HUT or HUE (Universal Cards), and HDT or HDE (HD cards) depending upon the hardware.

MAPS™ SS7 Application Verification

For functional verification, 2 instances of MAPS™ SS7 application can be configured on a single PC as source and destination SSP (Signaling Switching Point) nodes.

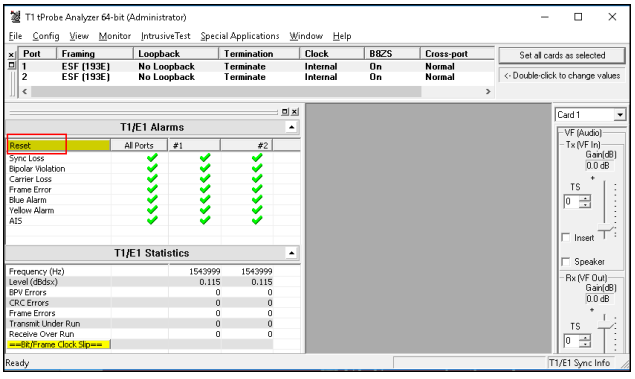
Cross-connect T1/E1 Port #1 and Port #2 of the Hardware unit back-to-back using RJ48c loopback cable.

RJ48c Loopback Cable

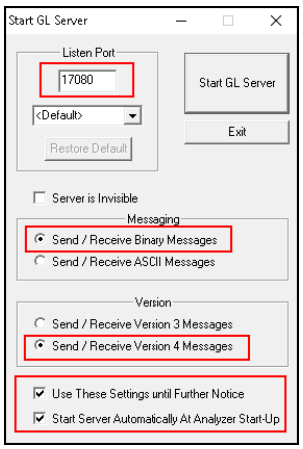
- Click on the **T1/E1 Analyzer** icon  or  created on the desktop (or) from the installation directory, click on **UsbNGT1.exe** or **UsbNGE1.exe** and launch T1/E1 Analyzer application.

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 = CCS, 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.

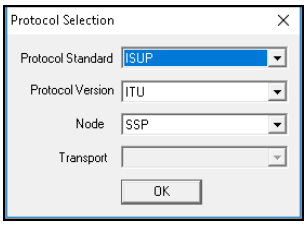


- From T1/E1 Analyzer main window, invoke the WCS Server: Special Applications > Windows Client Server (WCS) > WCS Server. Configure WCS as follows -
  - **Listen Port** = **17080** (for T1 systems); **17090** (for E1 systems)
  - **Messaging** = **Binary**
  - **Version** = **4**
- Click on **Start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

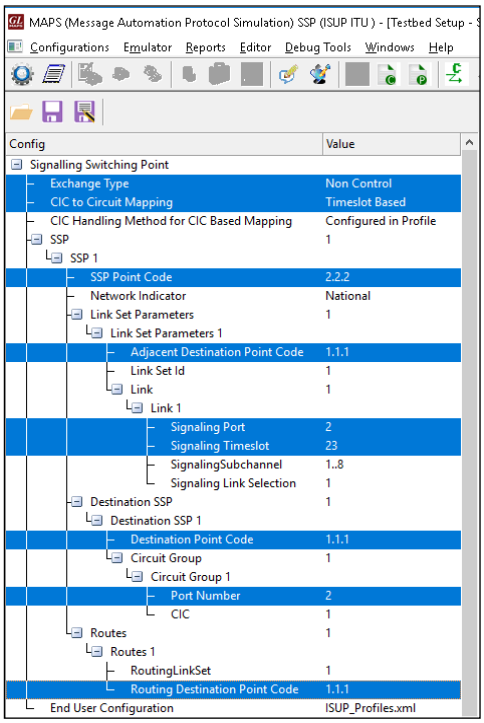


MAPS™ SS7 (GUI) on Card2

- This instance of MAPS™ is configured for **Call Reception**
- From T1/E1 Analyzer main window, from **Special Applications** menu > select **Protocol Emulation > MAPS™ SS7**
- While invoking this instance of MAPS™ SS7, choose the following in the **Protocol Selection** window –
  - **Protocol Standard = ISUP**
  - **Protocol Version = ITU**
  - **Node = SSP**
  - **Click Ok**



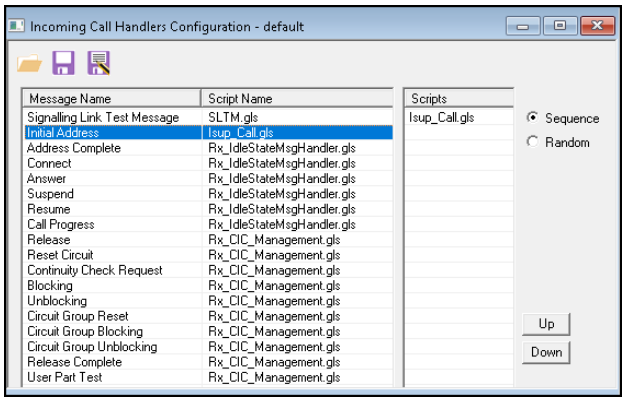
- By default, **Testbed Setup** window is displayed. Click and select **Sig-Card2_B-Port_2.** Verify the default parameter values as listed below:
  - **Exchange Type** = Non Control
  - **CIC to Circuit Mapping** = Timeslot Based
  - **SSP Point Code** = 2.2.2
  - **Adjacent Destination Point Code** = 1.1.1
  - **Signaling Port** = 2
  - **Signaling Timeslot** = 31 (for E1); 23 (for T1)
  - **Destination Point Code** = 1.1.1
  - **Circuit Group 1 - Port Number** = 2
  - **Routing Destination Point Code** = 1.1.1



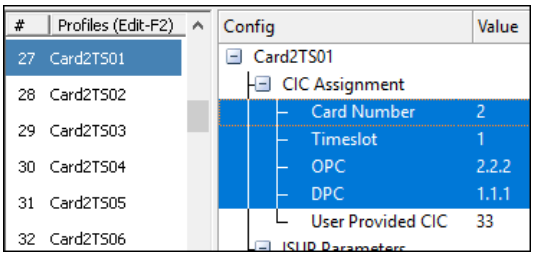
Note: In **Testbed**, User can enter **OPC** and **DPC** Point Codes in the **Dotted Decimal** or equivalent **Decimal/Hexadecimal** format.

For Example: If we are using **ITU Standard** the Equavalent **Point code** for **(Dotted Decimal)1.1.1**, can be written as **(Decimal) 2057** or in **(Hexadecimal) 0X809** (0X prefix is mandatory for Hex format).

- From MAPS™ SS7 main window, select Configuration > invoke Incoming Call Handler Configuration window
- Verify that the Isup_Call.gls script is loaded against the Initial Address message. Close the window



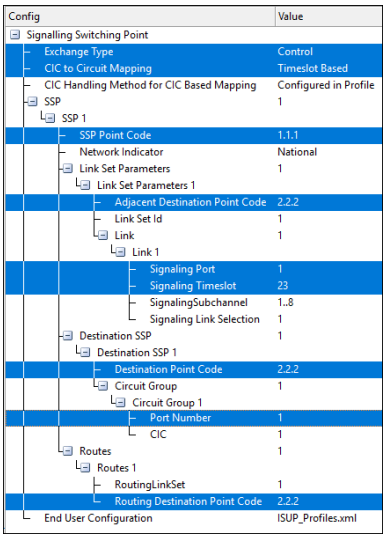
- From MAPS™ SS7 main window, select **"Editor"** menu -> invoke **Profile Editor** window and verify the following default parameter values:
  - Click and load "**ISUP_Profiles**" file. Scroll down the left pane, and select, **Card2TS01** profile from the left pane. Set Card number = **2**, Timeslot = **1**, OPC = **2.2.2**, DPC = **1.1.1** parameter values. Click Save button.
  - In the same **Profile Editor** window, click and select "**TrafficProfile**" file. Scroll down the left pane and select **Card2TS01** profile. Set Traffic Type to **AutoTraffic-File** and Traffic Direction for **AutoTraffic to Tx-Rx**. Click Save button and Close the window



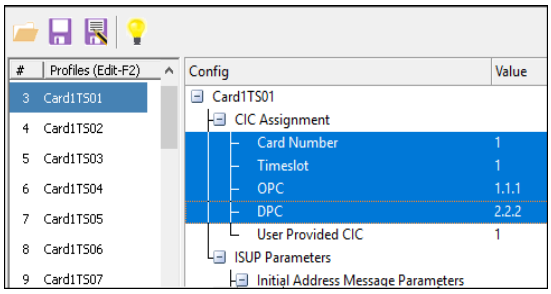
MAPS™ SS7 (GUI) on Card1

- This instance of MAPS™ SS7 is configured for **Call Generation**
- From T1/E1 Analyzer main window, from **Special Applications** menu > select **Protocol Emulation > MAPS™ SS7**
- While invoking MAPS™ SS7, choose the following in the Protocol Selection window -
  - **Protocol Standard** = **ISUP**
  - **Protocol Version** = **ITU**
  - **Node** = **SSP**
  - Click **Ok**

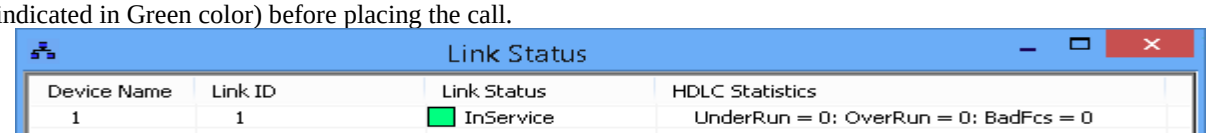
- By default, Testbed Setup window is displayed, click and select **Sig-Card1_B-Port_1** and check for the configuration settings as below:
  - **Exchange Type** = Control
  - **CIC to Circuit Mapping** = Timeslot Based
  - **SSP Point Code =** 1.1.1
  - **Adjacent Destination Point Code =** 2.2.2
  - **Signaling Port** = 1
  - **Signaling Timeslot =** 31 (for E1); 23 (for T1)
  - **Destination Point Code =** 2.2.2
  - **Circuit Group 1 - Port Number** = 1
  - **Routing Destination Point Code =** 2.2.2



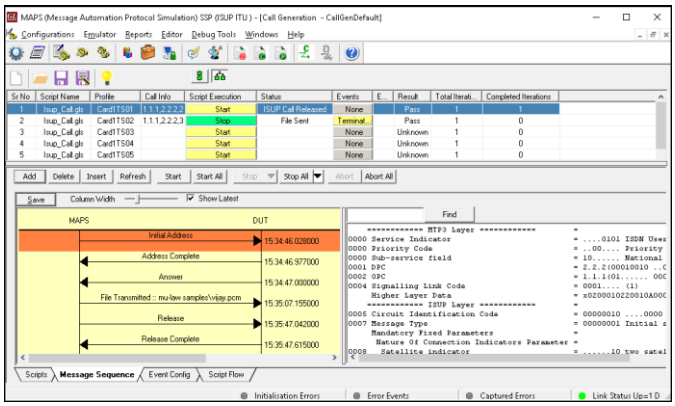
- From MAPS™ SS7 main window, select **"Editor"** menu -> invoke **Profile Editor** window and verify the following default parameter values:
  - Click and load **"ISUP_Profiles"** file. Scroll down the left pane, and select, **Card1TS01** profile from the left pane. Verify **Card number = 1, Timeslot = 1, OPC = 1.1.1, DPC = 2.2.2** parameter default values. Click **Save** button.
  - In the same Profile Editor window, click and select **"TrafficProfile"** file. Scroll down the left pane, and select **Card1TS01** profile. Set **Traffic Type** to **AutoTraffic-File** and **Traffic Direction for AutoTraffic** to **Tx-Rx**. Click **Save** button and close the Window.



- **Start** the testbed on both the MAPS™ instances
- From MAPS™ SS7 main window, select **Reports** menu > invoke **Link Status** window. Verify that the **Link Status** is **UP** (indicated in Green color) before placing the call.



- On the same MAPS™ SS7 instance (Card1), select **Emulator** menu **> Call Generation** window
  - By default, multiple call instances loaded with **Isup_Call.gls** script and **Card1TS**** profiles respectively are displayed. Select the instance loaded with Card1TS01 profile and click on the yellow Start button.
- Wait for the call to terminate, and verify the **Message Sequence** flow at both generation and reception end.
- Select any message in the ladder diagram and observe the respective decode message on the right pane for the respective message.



- Return to first instance of MAPS™ SS7 (Card2), click icon and open **Call Reception** window**.** Observe that the calls are automatically received at the **Call Reception (SSP)** Window.