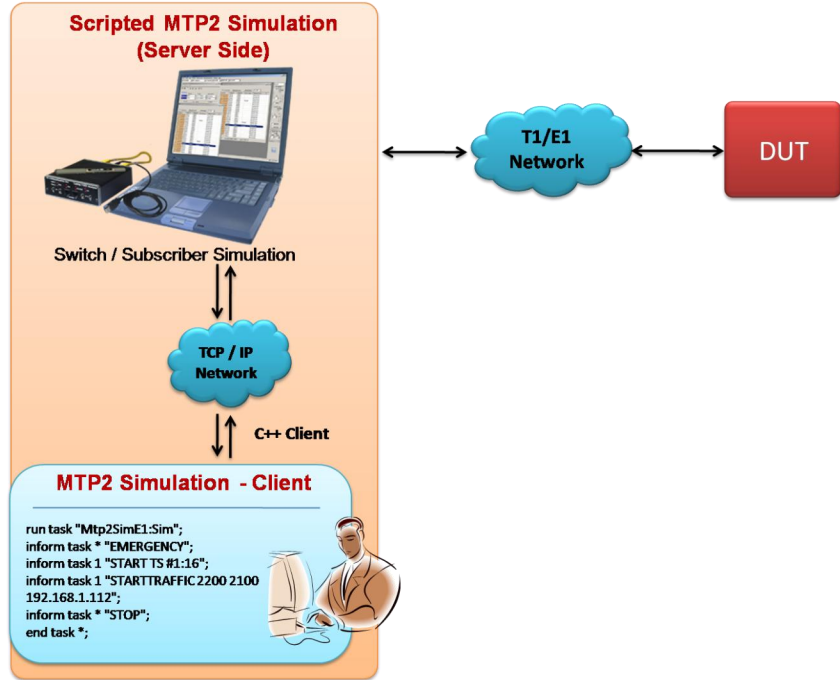


Windows Client Server MTP2 Simulator (Scripted MTP2 Simulation)



Overview

MTP2 (Message Transfer Part Level 2) protocol operates on layer 2 of OSI. In SS7 network, it is responsible for the reliable transmission of higher layer signal messages over an individual Signaling Link.

GL's **MTP2 Simulator** reads higher layer signal messages such as ISUP, and transmits over T1/E1 line. It can be used to simulate MTP2 of the SS7 stack. MTP2 is in compliance according to ANSI, ETSI, and ITU standards.

The Windows Client-Server application of T1/E1 Analyzer includes MTP2 simulator module (Mtp2Sim.dll). It can act as a peer end to test an SS7 stack.

For more details, visit <http://www.gl.com/wcs-mtp2-simulator.html>

Main Features

- Simulate MTP2 Data Link layer
- Displays MTP2 link status events.
- Normal and Emergency time alignment is supported.
- Sends LSSUs, FISU and MSU signal units.
- MTP2 commands can be sent from a remote client (C++/TCL).
- Point codes can be configured manually.
- Supports synchronous or asynchronous transmission of user defined data as ISUP information.
- ITU / ANSI / ETSI standards are supported.
- Supported Hardware platforms—Octal/Quad T1/E1 Boards, USB based tProbe™ units, Portable USB based T1/E1 units, and Universal HD T1/E1 Cards.
- Operating systems supported – Windows® XP or higher.

Simulate MTP2 Data Link layer

Easy Client Scripting and Batch Scripting

Shared Use of T1/E1 Test Gear via Multiple Clients

Central Client Access of Multiple Server Sites

Process Complex and Automated Tasks

Multi-Tasking Server Architecture

Optional WCS Server Side DLL

Sends LSSUs, FISU and MSU Signal Units

Supports ITU / ANSI / ETSI Standards



GL Communications Inc.

818 West Diamond Avenue - Third Floor, Gaithersburg, MD 20878, U.S.A

(Web) <http://www.gl.com/> - (V) +1-301-670-4784 (F) +1-301-670-9187 - (E-Mail) gl-info@gl.com

GL Server & Client Functions

The **Windows Client-Server** application of T1/E1 Analyzer includes MTP2 simulator module (Mtp2Sim.dll). It can act as a peer end to test an SS7 stack. WCS Client applications use simple commands to invoke MTP2 simulator module on server. Once the MTP2 simulator module is initialized, a task number will be assigned and the client can use further commands to perform additional tasks.

“Actions” are performed immediately in response to the “commands” from the clients. The Server informs the Client on tasks: started, status, complete. Typical tasks include traffic/protocol frames playback and recording, and more.

Client programs communicate with the GL Server via TCP/IP-encapsulated commands and responses. Clients are compatible with any OS, including UNIX, Linux and Windows. Other environments commonly used for client development include Perl, MatLab, Visual Basic, and LabView.

WCS Module XX643 - Transmit & Receive MTP2 Frames

The script transmits and receives MTP2 frames on E1 signaling timeslot over a specified UDP port and IP address.

Sample script for Transmit/ Receive traffic:

```
run task "Mtp2SimE1:Sim"; //defines task for MTP2
simulation
inform task * "EMERGENCY"; //defines alignment mode as
emergency
inform task 1 "START TS #1:16"; //defines signaling
timeslot
inform task 1 "STARTTRAFFIC 2200 2100 192.168.1.112";
//defines UDP ports and IP address for transmitting and
receiving MTP2 frames
inform task * "STOP"; //command to stop the task
end task *; //terminates the task
```

Buyer's Guide

[XX643](#) - MTP2 Simulator (requires xx600)

[XX600](#) - Windows Client Server

Optional Modules

[XX647](#) - MAPS™ SS7 for ISUP Conformance Scripts

[XX649](#) - MAPS™ SS7 for ISUP Simulation

[XX649](#) - MAPS™ SS7 for MAP Simulation

[XX120](#) - SS7 Analyzer Software

[PKS130](#) - MAPS™ SIGTRAN

Related Hardware

[PTE001](#) - tProbe™ Dual T1 E1 Laptop Analyzer

[HTE001](#) - Universal T1/E1 Card

[UTE001](#) - Portable USB based Dual T1/E1 Laptop Analyzer

[FTE001](#) - QuadXpress T1/E1 Main Board (Quad Port– requires additional licenses)

[ETE001](#) - OctalXpress T1/E1 Main Board plus Daughter Board (Octal Port– requires additional licenses)

Visit http://www.gl.com/client_server.html for complete WCS Buyer's Guide list.

The screenshot displays the mtp2-gls - GLClient application window. The left pane shows a list of tasks being executed, including link status checks, traffic start/stop commands, and emergency mode settings. The right pane shows the SS7 Protocol Analysis window, which contains a table of captured frames and a detailed view of the MTP2 layer data for a specific frame.

Dev	TSlot	SubCh	Frame#	TIME (Relative)	Len	Error	BSN	BIB	FSN	FIB	SLC	DPC	OPC	SCCP Mess.
1	30		322568	00:02:12:007500	5		106	1	127	1				
2	30		322569	00:02:12:007625	...		127	1	110	1	4	0.104.2	2.162.1	
1	30		322570	00:02:12:008250	5		106	1	127	1				
1	30		322571	00:02:12:009000	5		106	1	127	1				
1	30		322572	00:02:12:009675	5		106	1	127	1				
1	30		322573	00:02:12:010625	5		106	1	127	1				
1	30		322574	00:02:12:011375	5		106	1	127	1				
2	30		322575	00:02:12:011625	...		127	1	111	1	4	0.104.2	2.162.1	
1	30		322576	00:02:12:012125	5		106	1	127	1				

The detailed MTP2 layer data for Frame 322569 is as follows:

```

***** MTP2 Layer *****
= 1111111 (127)
= 1..... (1)
= 1101110 (110)
= 1..... (1)
= ..011010 NSU Format
***** MTP3 Layer *****
Service Indicator
= ...0001 Signalling network testing and maintenance mes
Priority Code
= ..00.... Priority Code 0
Sub-service field
= 01..... Spare (for international use only)
DPC
= 0.104.2(01000010 .000011)
OPC
= 2.162.1(01..... 01000100 ....0101)
Signalling Link Code
= 0100.... (4)
***** Reg Testing Messages Layer *****
Heading Code H0
= ..0110 Reserved
Heading Code H1
= 0100.... Reserved
Length indicator
= 0100.... (4)
Test pattern
= x4849444B

```



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