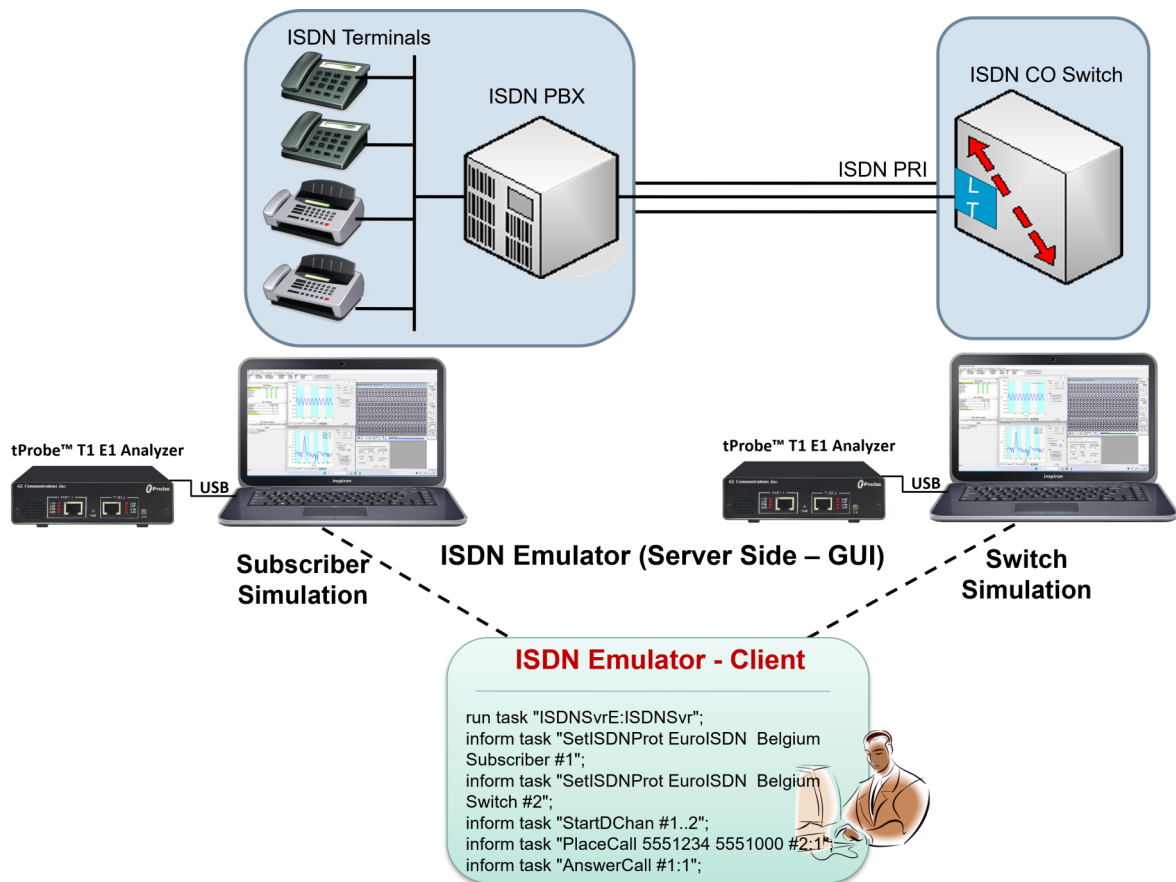


PRI ISDN Emulator



Overview

GL's ISDN emulator offers a complete solution for testing, troubleshooting, installation and maintenance of devices and networks implementing PRI ISDN. It is useful to test ISDN products designed for either U or S/T interface, including network terminations, Type 1 terminating equipment, and terminal adapters. The ISDN equipment includes telephones, switchboards, PBXs, PC cards, video conferencing equipment, interconnect systems, switches, and routers.

GL's flexible and versatile ISDN emulator is available as GUI based and scripted applications with T1/E1 Analyzer, through which the various ISDN configurations can easily be created. This ISDN configuration includes selection of various ISDN standards, variants and NFAS, etc. The ISDN Emulator also incorporates the flexibility to modify ISDN call parameters and message content. This flexibility ensures that the ISDN configurations will communicate with the system under test. It is possible to emulate a complete ISDN connection (switch to subscriber) all in the same PC.

Main Features

- Nearly all ISDN standards and variants are supported
- 1 to 4 configurable signaling links
- Switch and Subscriber emulation
- Provides various release cause codes such as rejected, no user response, user busy, and more
- Provides simple NFAS setup for T1
- Call records for complete or incomplete calls
- Place call or accept call for each timeslot or for the whole trunk

For more details, refer to [PRI ISDN Emulator](#) webpage.



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Specifications

ISDN Standards Compliance

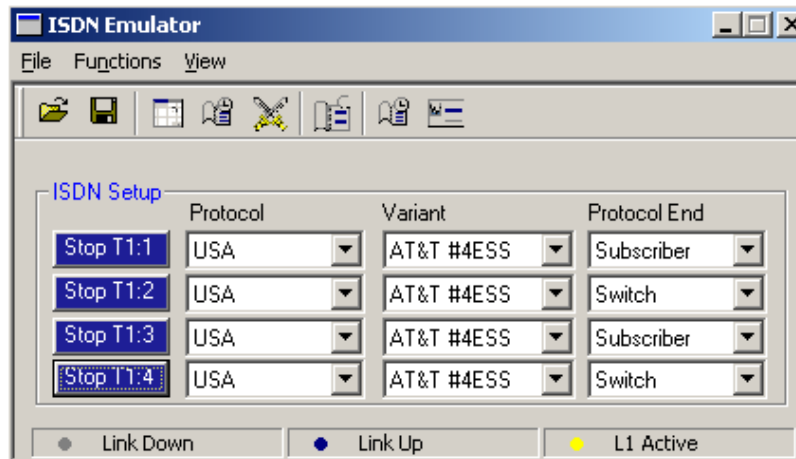
USA ISDN AT&T, Bellcore, National ISDN-2, Nortel, DMS-250, Siemens EWSD, Euro ISDN Belgium, China, Europe, France, Britain, Germany, Sweden, ASIA ISDN Australia, Hong Kong, Japan, Singapore, and QSIG.

ISDN Signaling

Available protocol layers LAPD, Q.931, and Maximum links 1 to 4.

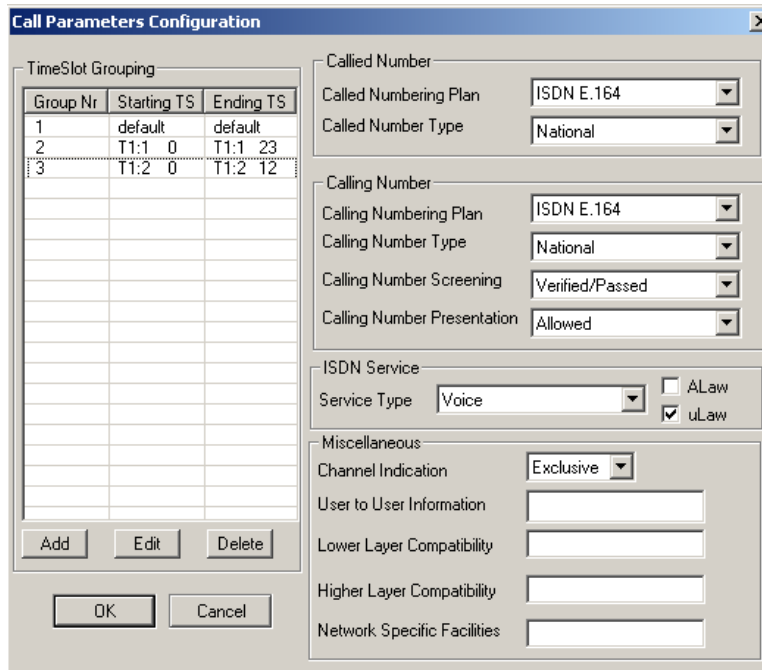
User-Friendly Interface

GL's ISDN emulator provides a user-friendly graphical user interface (GUI). T1 or E1 supports 1 to 4 trunks with a mixture of subscriber or switch emulation on different trunks. Nearly all protocol variants (such as AT & T, Nortel and so on) are supported. Link status (Lap D) is also indicated.



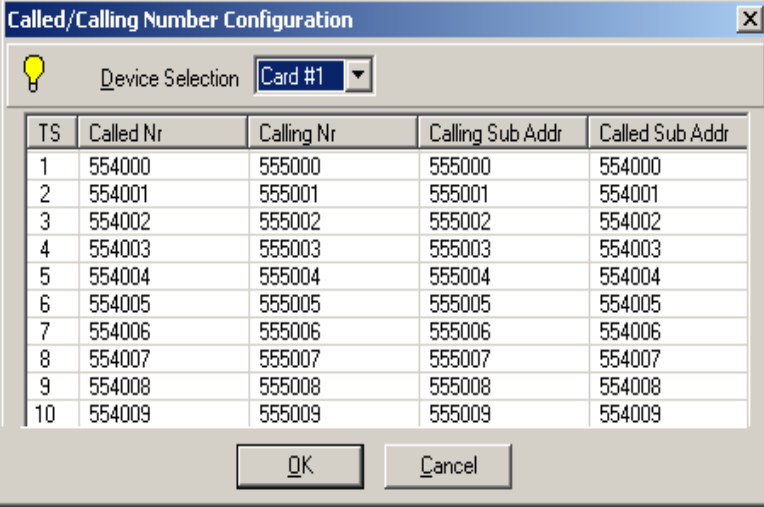
Call Parameters Configuration

The ISDN emulator's call parameters configuration screen (left) provides the user with all required ISDN parameters (such as called number type, service type and so on). These parameters may be saved to a file, after modification, for later retrieval.



Called/Calling Number Configuration

This screen allows the user to set the called and calling numbers on corresponding timeslots. The Called Number and Calling Number can be edited. ISDN sub-address can be used to address each device, when more than one ISDN devices are using the same ISDN line. Calling party sub-address is to identify a sub-address associated with the origin of a call. The Called party sub-address is to identify the sub-address of the called party.



Called/Calling Number Configuration

Device Selection: Card #1

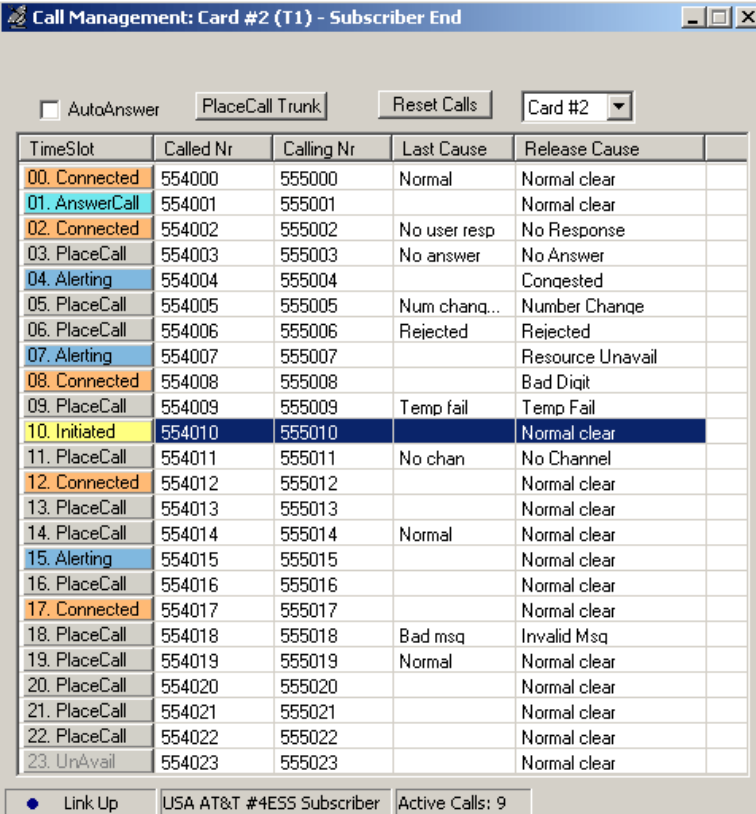
TS	Called Nr	Calling Nr	Calling Sub Addr	Called Sub Addr
1	554000	555000	555000	554000
2	554001	555001	555001	554001
3	554002	555002	555002	554002
4	554003	555003	555003	554003
5	554004	555004	555004	554004
6	554005	555005	555005	554005
7	554006	555006	555006	554006
8	554007	555007	555007	554007
9	554008	555008	555008	554008
10	554009	555009	555009	554009

OK Cancel

Call Management

The Call Management option allows the user to place calls on any timeslot/trunk manually. Once the calls are established, the user may send/capture PCM voice files, send/detect DTMF/MF digits, and send/detect Frequency tones. It can also insert user's voice through 'VF In.'

Users can set specific release cause codes for disconnecting a particular call. This feature will help in trouble shooting the problems in ISDN Network.



Call Management: Card #2 (T1) - Subscriber End

AutoAnswer PlaceCall Trunk Reset Calls Card #2

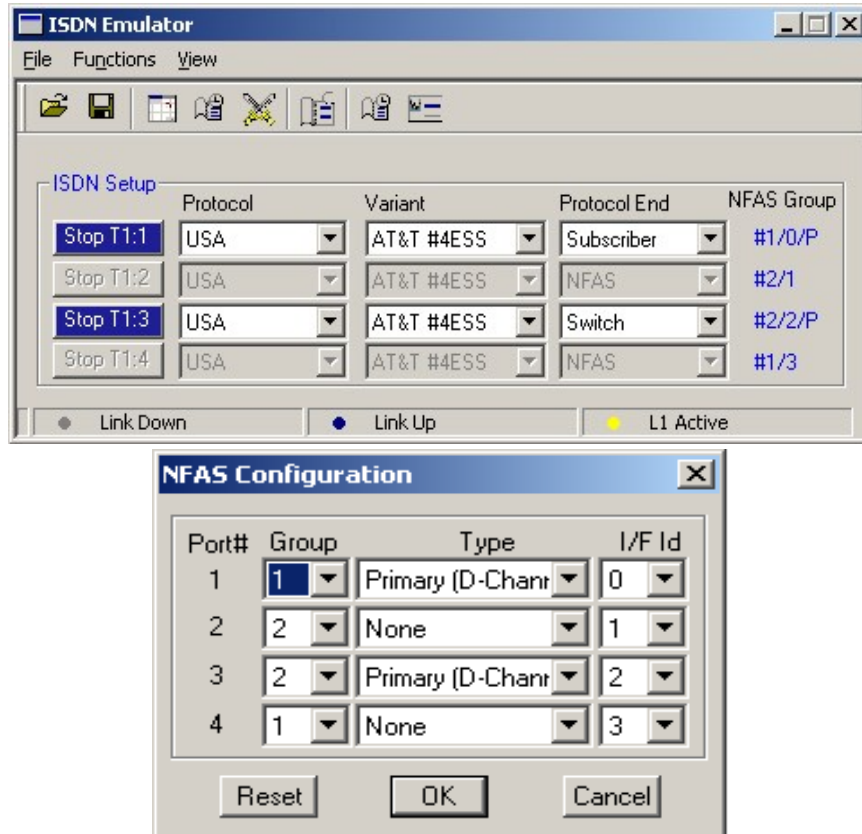
TimeSlot	Called Nr	Calling Nr	Last Cause	Release Cause
00. Connected	554000	555000	Normal	Normal clear
01. AnswerCall	554001	555001		Normal clear
02. Connected	554002	555002	No user resp	No Response
03. PlaceCall	554003	555003	No answer	No Answer
04. Alerting	554004	555004		Conquested
05. PlaceCall	554005	555005	Num chanq...	Number Change
06. PlaceCall	554006	555006	Rejected	Rejected
07. Alerting	554007	555007		Resource Unavail
08. Connected	554008	555008		Bad Digit
09. PlaceCall	554009	555009	Temp fail	Temp Fail
10. Initiated	554010	555010		Normal clear
11. PlaceCall	554011	555011	No chan	No Channel
12. Connected	554012	555012		Normal clear
13. PlaceCall	554013	555013		Normal clear
14. PlaceCall	554014	555014	Normal	Normal clear
15. Alerting	554015	555015		Normal clear
16. PlaceCall	554016	555016		Normal clear
17. Connected	554017	555017		Normal clear
18. PlaceCall	554018	555018	Bad msq	Invalid Msq
19. PlaceCall	554019	555019	Normal	Normal clear
20. PlaceCall	554020	555020		Normal clear
21. PlaceCall	554021	555021		Normal clear
22. PlaceCall	554022	555022		Normal clear
23. UnAvail	554023	555023		Normal clear

Link Up USA AT&T #4ESS Subscriber Active Calls: 9

NFAS Grouping (Non-Facility Associated Signaling)

NFAS is a standard option available for ISDN PRI call processing system. However, with NFAS option, a single D-channel can control a maximum of 479 B-channels, i.e. up to 20 trunks (or a maximum of 478 with one B-channel as a backup). In case of GL's Dual T1/E1 Analyzer, a maximum of 95 B-Channels, i.e., up to 4 trunks are supported.

NFAS Group-configuration allows number of trunks to be classified into groups, with each group having a unique and identifiable D-Channel.



Buyer's Guide

Item No	Product Description
XX105	ISDN Emulator (T1 or E1)

Item No	Related Software
XX100	ISDN Analysis Software (T1 or E1)
XX629	Server Client ISDN Emulator (T1 or E1)

Item No	Related Hardware
PTE001	tProbe™ Dual T1 E1 Laptop Analyzer (Require Basic Software)
FTE001	QuadXpress T1 E1 Main Board (Quad Port)
ETE001	OctalXpress T1 E1 Daughter boards (Octal Port)
XTE001	Dual Express (PCIe) T1 E1 Boards
TTE001	tScan16™ T1 E1 Boards

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