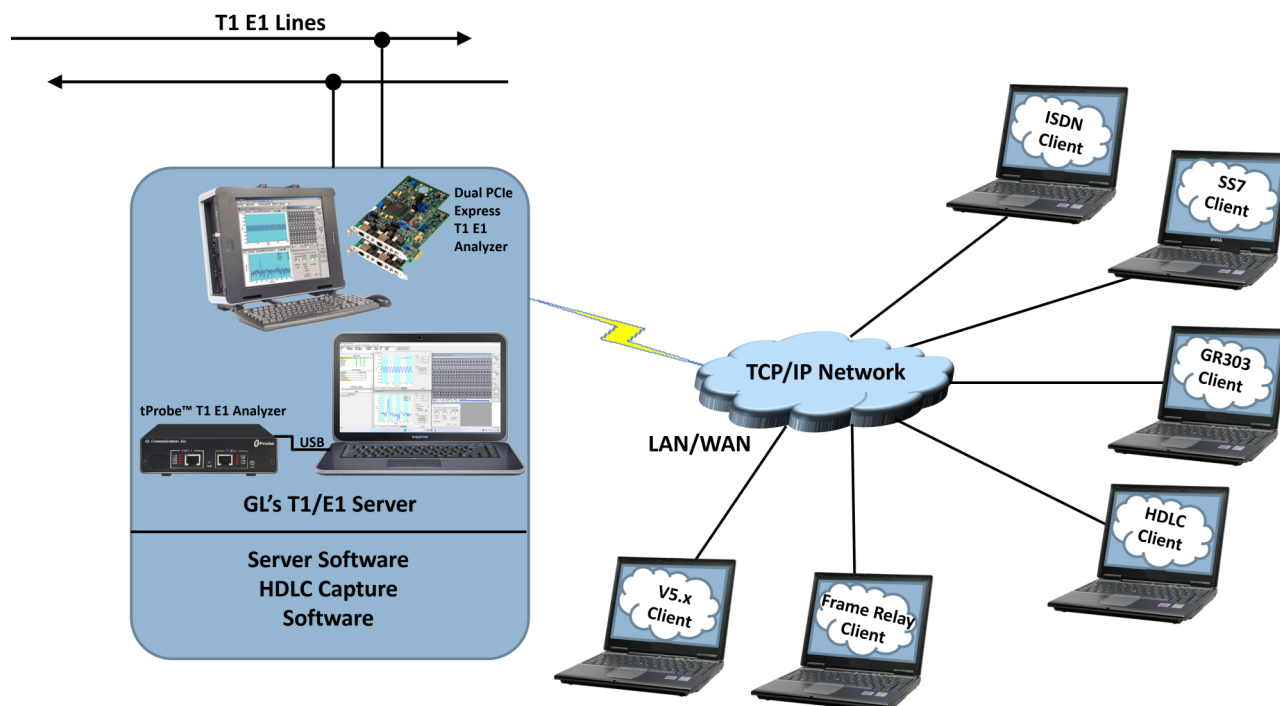# Remote Protocol Analyzers

Overview

"Remote Protocol Analyzer" or RPA functionality is an extension of the feature rich capability available with GL's GUI based Protocol Analyzers.

HDLC based protocols such as ISDN, SS7, GR303, Frame Relay, V5.x and others can be monitored remotely via a set of hardware and software features available with our T1 or E1 based protocol analyzers.

Pre-requisites of the remote functionality are:

At the site of monitoring

- Dual Capture T1 E1 Cards or USB Based T1 E1 Hardware
- T1 E1 Server software with HDLC capture software

At the client location

- Appropriate GUI based "Remote Protocol Analyzer" such as ISDN, SS7, and others – licensed via "Dongle"
- LAN / WAN TCP / IP network with sufficient bandwidth to transport HDLC frames

The RPA functionality permits:

- Unattended and 24/7 operation
- Remote accessibility for difficult connection situations
- Remote non-intrusive operation
- Remote detailed diagnostic capability

For more information, refer to Remote Network Protocol Analysis and Protocol Decodes and Analysis webpages.


Main Features

- Client side consists of a PC with Ethernet connectivity and GUI Remote Protocol Analysis software – no special T1 or E1 hardware is required

- Supports Real-time and Offline analysis at the Remote Client side

- Remote Analyzers support capturing of encapsulated protocols and long frames

- Streams can be captured on the selected time slots (contiguous or non-contiguous), sub-channels or full bandwidth

- Captured frames in any of these analyzers can later be used for traffic simulation using Transmit / Receive / Playback applications

- Common Filtering criteria can be set for T1 / E1 cards located on multiple servers

- Analyzer displays summary, detail and hex dump view in different panes

- Summary pane displays Frame Number, Time, Length, Error, Message Type and more. To analyze in detail, user can select a frame in summary view

Remote Client / Server

For HDLC based protocols, HDLC frames can be transported via TCP/IP and captured remotely with a GUI Protocol Analyzer Client. At the Client location the full capability of a real-time Protocol Analyzer is available for storing, analyzing, filtering, displaying, and processing the protocol information.

At the monitoring site, the T1 E1 hardware, Server software, and HDLC capture software is all that is required irrespective of the protocol being monitored. At the Remote site, the appropriate GUI based PA receives HDLC frames and performs the PA function as if the remote link did not exist. The bandwidth of the LAN or WAN link transporting the HDLC frames should be adequate for the protocol being monitored.

Remote Client / Server

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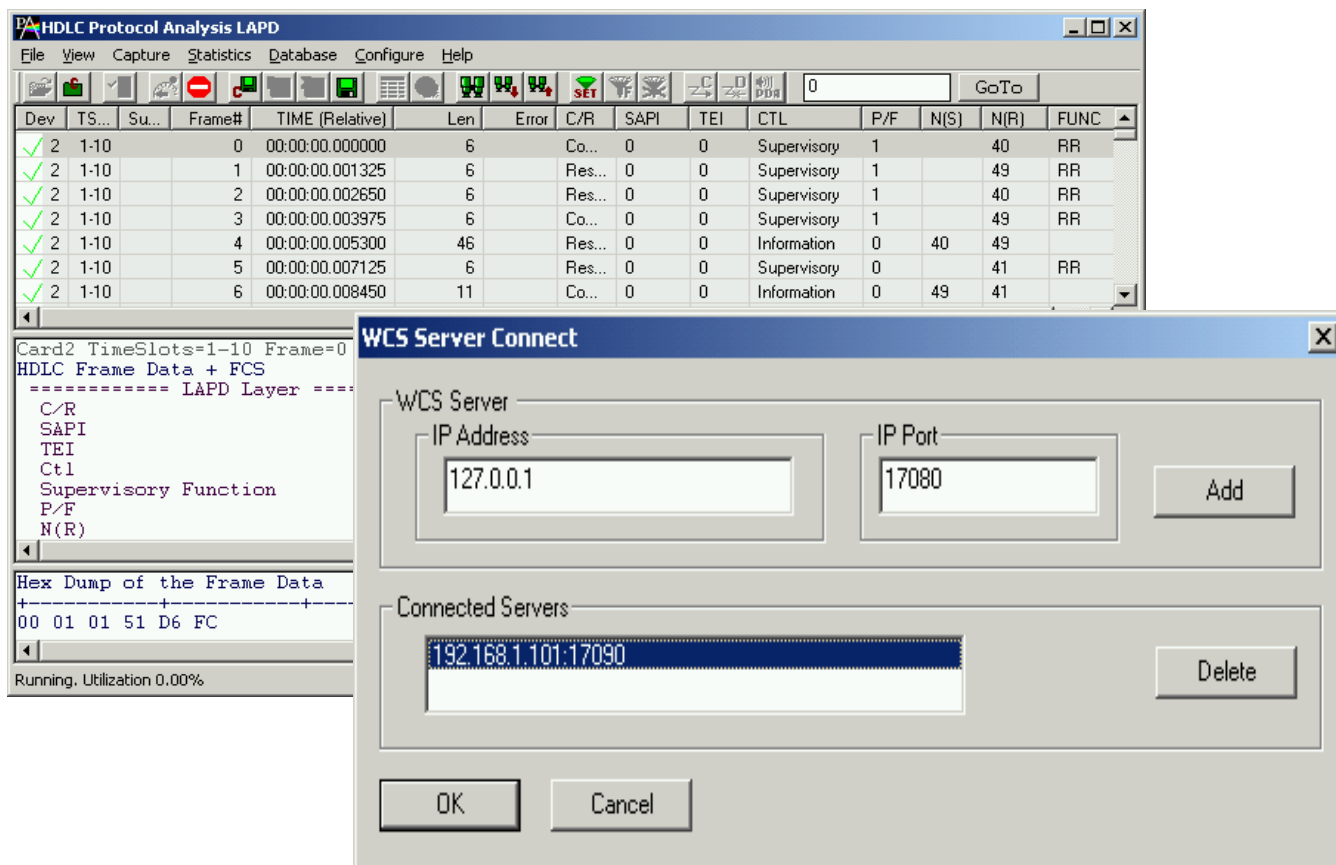
Filtering and Search

Filtering and search capability adds a powerful dimension to the Remote analyzers. Offline filter can isolate required frames from all frames in real-time / remote / offline. This allows filtering according to Frame Number, Time, Length, Error, Message Types, Type of calls, and more. The real-time filter isolates frames during capture based on the frame length and logic operators.

Filtering and Search

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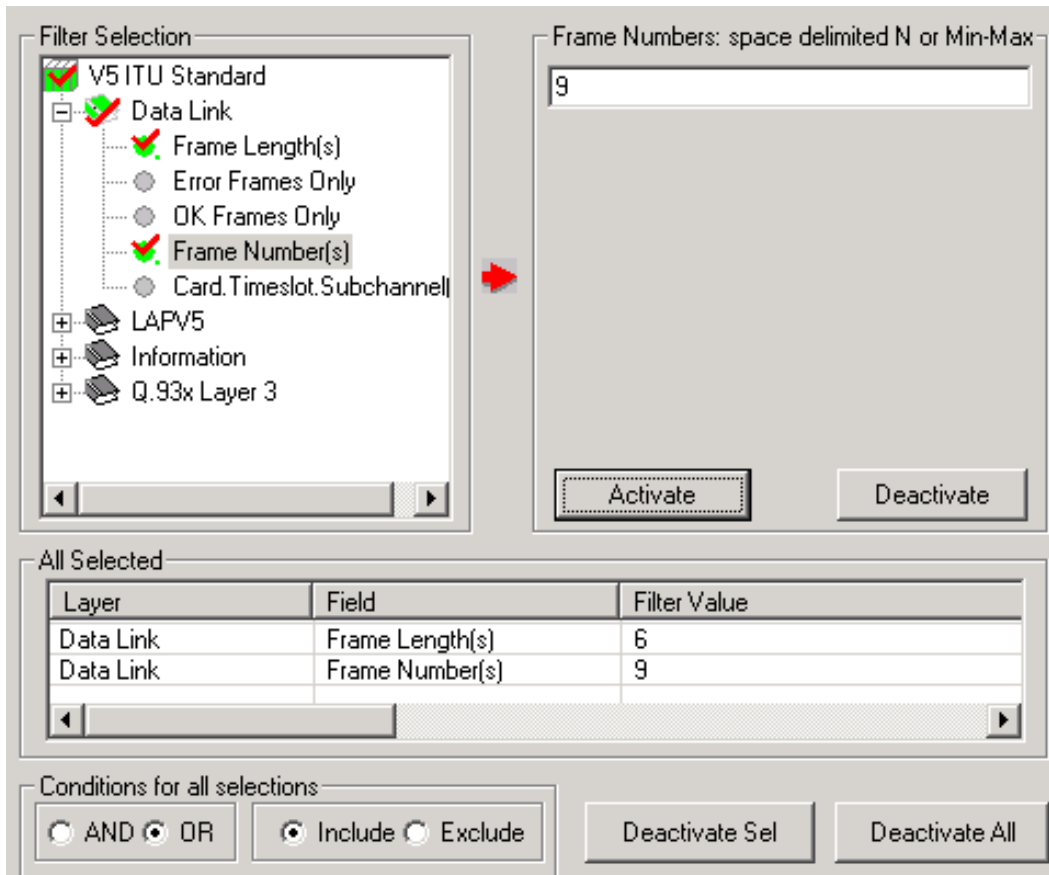
Call Detail and Statistics View

Call trace define important call specific parameters Such as Call ID, Call Status, Call duration, Called / Calling Number, CRV, Release Cause and so on. Further in SS7 analyzer, call traces can also be logically grouped with each group comprised of unidirectional (either 'Forward' or 'Backward') data links. Numerous statistics can be obtained to study the performance, which is based on protocol fields and different parameters for example, Use Type (Key / Total / Field), Statistic type (Frame count, Byte count, Frames / Sec) and patterns like Range List, Wild card.
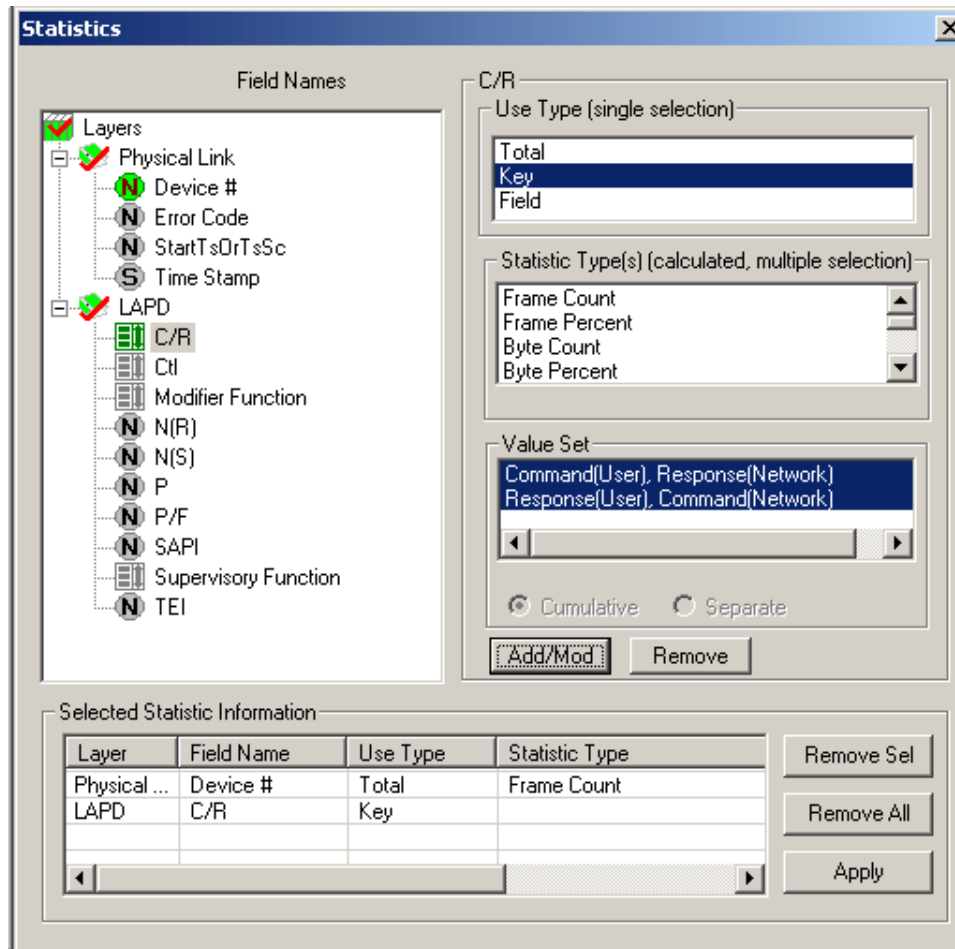
Call Detail Records and Statistics View

Supported protocols

- **Frame Relay**- Q.921, Q.922, LAPF, Multi-protocol encapsulation, FRF.9, FRF.12, SNAP, PPP, link control protocol RFC 1661, Q.933, SVC, and LMI signaling. IP, TCP, UDP, SMTP, POP3, STUN, DNS, DHCP, HTTP, FTP, SNMP, RIP

- **GR-303** - LAPD, Series X (Data networks and open system communication), TMC and CSC, and EOC

- **ISDN** – Q.93x, 4ESS, 5ESS, ETSI 300-102, DMS 100, DMS-250, and QSIG ETSI

- **SS7** - MTP2, MTP3, SCCP, MAP, INAP, CAMEL, ISUP, TUP, and TCAP (IS 41)

- **V5.x** – Support capturing and decoding of LAPV5, ISDN Call Signaling - Q.93 as layer 3, Link Control Protocol (LCP), Protection Protocol (PP), Bearer Channel Connection (BCC), and PSTN

- **HDLC** – LAPD, LAPF, LAPD+IP, and LAPX+IP

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Buyer's Guide

Item No	Product Description
OLV130	Remote /Offline Frame Relay Analyzer
OLV140	Remote /Offline GR-303 Analyzer
OLV090	Remote /Offline HDLC Protocol Analyzer
OLV100	Remote /Offline ISDN Protocol Analyzer
OLV120	Remote /Offline SS7 Analyzer Software
OLV110	Remote /Offline V5.x Protocol Analyzer
XX600	Basic Windows Client/Server Scripted Control

Item No	Related Software
XX090	HDLC Capture and Playback Software (T1 or E1)
XX130	Frame Relay Protocol Analyzer (T1 or E1)
XX155	GPRS Analysis Software (T1 or E1)
XX150	GSM Analysis Software (T1 or E1)
XX100	ISDN Analysis Software (T1 or E1)
XX153	TRAU Analysis Software (T1 or E1)
XX120	SS7 Analyzer Software (T1 or E1)

Item No	Related Hardware
PTE001	tProbe™ Dual T1 E1 Laptop Analyzer with Basic Analyzer Software
XTE001	Dual T1 E1 Express (PCIe) Boards (requires additional licenses)
FTE001	QuadXpress T1E1 Main Board (Quad Port– requires additional licenses)
ETE001	OctalXpress T1E1 Main Board plus Daughter Board (Octal Port– requires additional licenses)

Note: PCs which include GL hardware/software require Intel or AMD processors for compliance.

For more information, refer to Remote Network Protocol Analysis and Protocol Decodes and Analysis webpages.

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