

Remote Monitoring Capability for HDLC Based Protocols

Permits Remote Accessibility for Difficult Connections

Remote Non-intrusive Operation

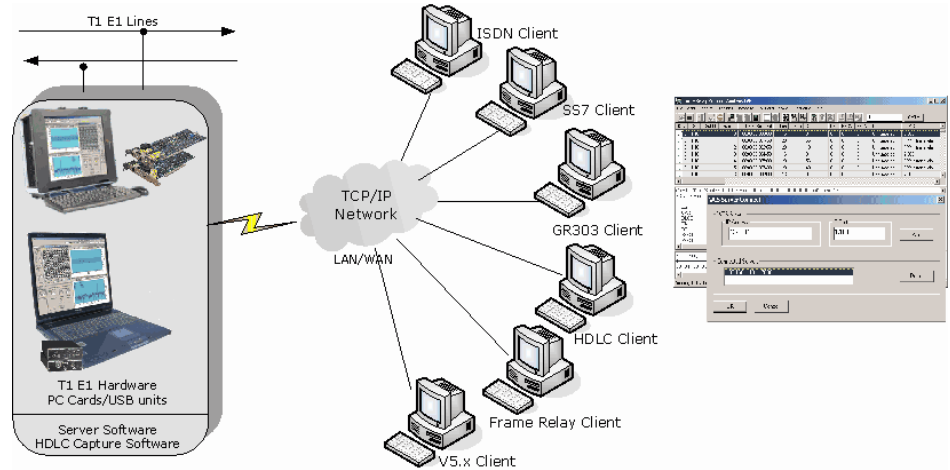
Frame Tx / Rx in Contiguous / Non-contiguous sub-channels or Full Bandwidth

Real-time & Offline Analysis at the Remote Client Side

Supports Capturing of Encapsulated Protocols and Long Frames

Common Filtering Criteria on Multiple T1/E1 Servers

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 T1/E1 PCI, or PCIe cards, or USB based portable T1/E1 units
- 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 details about protocol decodes & analysis, visit http://www.gl.com/protocol_analysis.html

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 View displays Frame Number, Time, Length, Error, MessageType and more. To analyze in detail, user can select a frame in summary view.



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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.

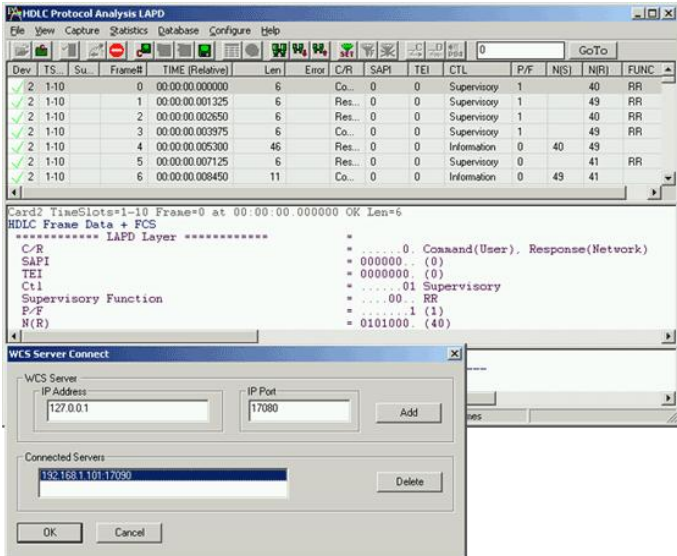


Figure: Remote Client / Server

Filtering and Search

Filter and search capabilities adds a powerful dimension to the Remote analyzers. Offline filter isolates 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.

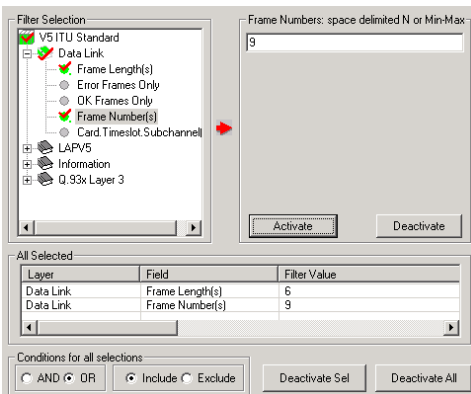


Figure: Filtering and Search

Call Detail Record & Statistics View

Call trace defining important call specific parameters like 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. Various statistics can be obtained in statistics view to study the performance and trend based on protocol fields and parameters.

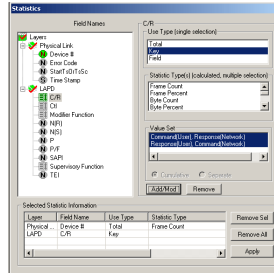


Figure: Call Detail Records and Statistics View

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 & 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** - supports capturing and decoding of LAPV5, ISDN Call Signaling - Q.93 as layer 3, Link Control Protocol (LCP), Protection Protocol (PP), Bearer Channel Connection (BCC), & PSTN
- **HDLC** - LAPD, LAPF, LAPD+IP, and LAPX+IP

Buyer's guide

- [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

Related Software

- [XX090](#) - HDLC Capture and Playback Software (T1/ E1)
- [XX130](#) - Frame Relay Protocol Analyzer (T1/ E1)
- [XX155](#) - GPRS Analysis Software (T1/ E1)
- [XX150](#) - GSM Analysis Software (T1/ E1)
- [XX100](#) - ISDN Analysis Software (T1/ E1)
- [XX153](#) - TRAU Analysis Software (T1/ E1)
- [XX120](#) - SS7 Analyzer Software (T1/ E1)

*Specifications and features subject to change without notice.



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