

Identifies HDLC based, ATM, TRAU and Frame Relay Protocols over T1/E1

Graphically Displays the Protocols on Tx/Rx Channels

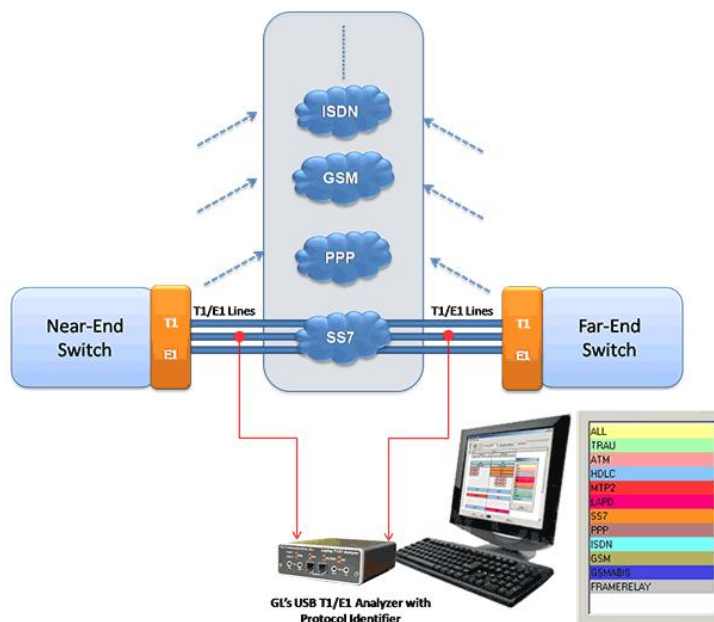
Statistical View for Individual Channel & Protocol Info

Stream Statistics View for Overall Channel & Protocol Information

Logging Information into a Text File with Protocol, Device & Channel Information

Filtering to Display the Unique Selected Protocol

Protocol Identifier



Overview

The Protocol Identifier application can identify various protocols carried on T1 or E1 lines. It is capable of detecting protocols such as ISDN, ATM, HDLC, MTP2, LAPD, SS7, PPP, GSM, GSM Abis, TRAU and Frame Relay. The timeslots and the subchannels within timeslots are also identified. Once identified, detailed analysis can be carried out by individual Protocol Analyzers. This application is helpful in identifying traffic types at a concentrated point, DSX patch panel, or multiplexed facility.

For more details, please visit our web page <http://www.gl.com/protocol-identifier.html>

Main Features

- Capable of identifying and classifying signaling over T1E1 lines based on HDLC, ATM, and TRAU protocols.
- Classification of HDLC based protocols such as ISDN, SS7, PPP, MTP2, Frame Relay, and GSM.
- Detects protocols based on pre-defined configurations files for hyper-channels, subchannels, and data rates.
- Graphical view displays the timeslots and subchannels of the identified protocols.
- Statistical view displays the different protocols with the details of port, timeslots and subchannels
- Stream Statistics view shows the count of total number of timeslots, subchannels, and hyper-channels used by each protocol
- Provides an option to log the protocol detected with device and channel information into a text file
- Supports filtering to display the unique selected protocol
- Supports custom configuration of the colors to easily distinguish protocols

Applications

- **Snapshot:** Obtain a real-time snapshot of protocol traffic on T1E1 lines
- **Surveillance:** Identify protocol traffic on all the timeslots/sub channels simultaneously on multiple T1E1 lines
- **Maintenance:** Helps technicians to quickly identify the content of any T1 or E1.
- **Troubleshooting:** Signaling (SS7, ISDN,...) can be detected on any T1/E1 timeslots; this helps technicians to quickly identify the timeslot of signaling links for further protocol analysis

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Working Principle

- GL's Protocol Classifier works with three basic protocol capture modules ATM, HDLC, and TRAU.
- Provides ready configurations for selecting various combination of channels, such as single timeslots, full rate hyper channels, multiple hyper-channels of different data rate – 64 kbps, 56 kbps (bits 2-8), 56 kbps (bits 1-7), or sub-channels of 8k to 56k combinations.
- Each capture module will process the first configuration file until the specified scan time (ex 10 sec).
- During this scan time, the captured module will forward the detected protocols to the respective protocol analysis modules.
- Further the protocol analysis will decode as per the headers and classify them as SS7, ISDN, GSM, PPP, Frame relay, LAPD, ATM, TRAU etc.

Graphical View

Graphical view displays the timeslots and subchannels of the identified protocols. The colors can be customized for different protocols as per user requirement.

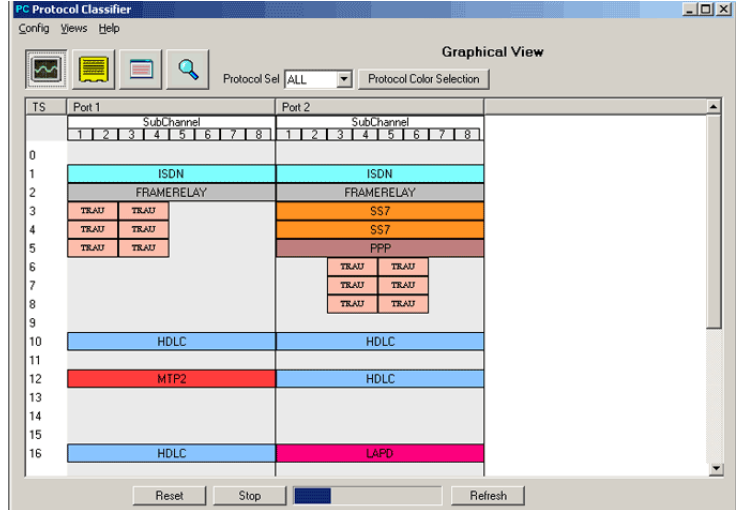


Figure: Graphical View

Statistical View

This reports the protocols identified on each timeslot and sub channels row-wise. For example, the screen below shows that the TRAU frames are identified on Port 1, timeslots 3 – sub channel 1-2 , timeslot 3 – sub channels 3-4, timeslot 4 – sub channel 1-2, and timeslot 4 – sub channel 3-4.

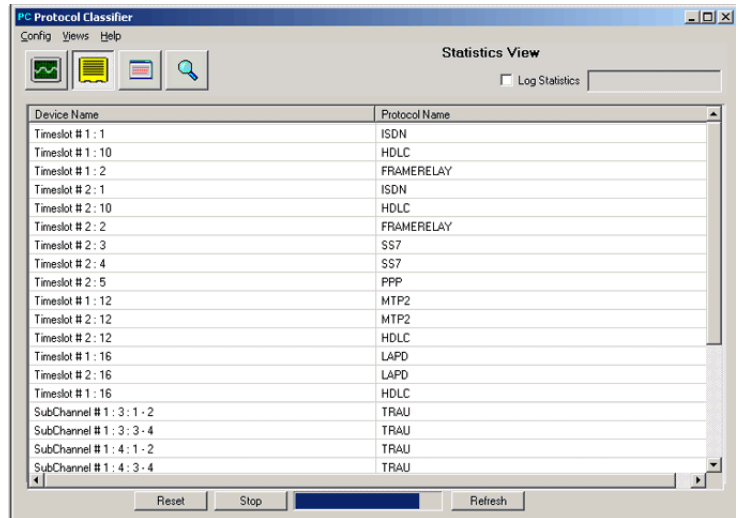


Figure: Statistical View

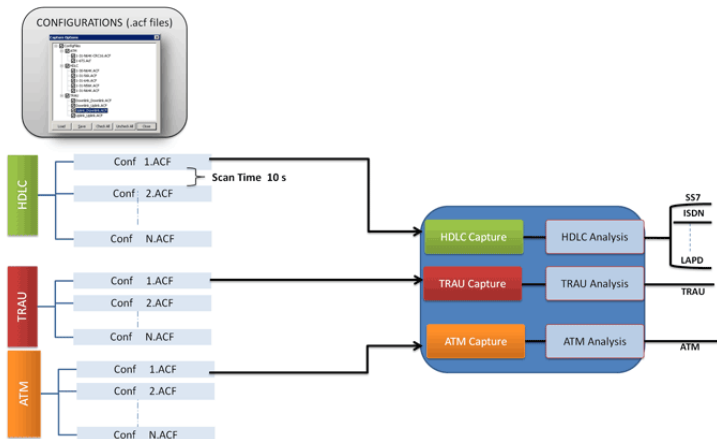


Figure: Working Principle

Multi-Threading for HDLC Protocol

Provides multi-threading options for HDLC protocol, where in, multiple HDLC configurations are scanned simultaneously as per the thread count specified in Parallel Detection.

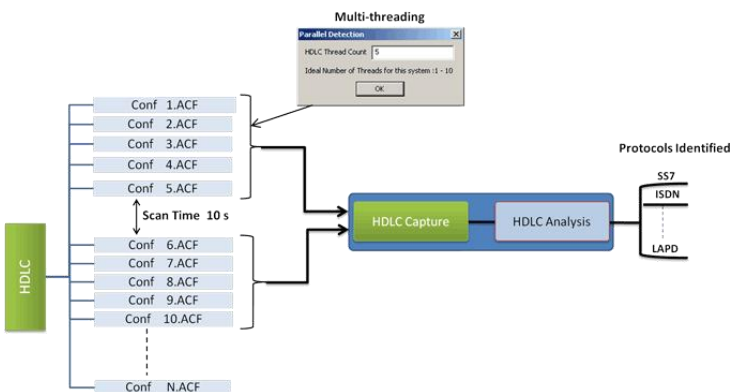


Figure: Multi-Threading Options



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Protocol Filtering

From the identified protocols, it is possible to select and filter out the protocol of interest using the **Protocol Sel** feature. For example, TRAU protocol is selected to view only its traffic flow over the streams.

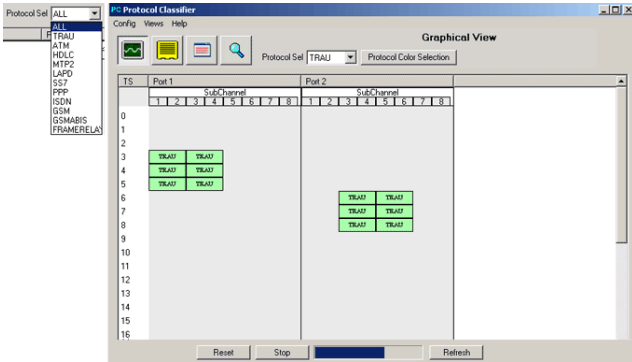


Figure: Protocol Filtering

Traffic Flow View (Stream Stats View)

This displays the stream statistics such as the total count of hyper channels, timeslots, and sub channels used by individual protocols in a tabular format. It is an indication of the overall bandwidth consumption by the monitored traffic.

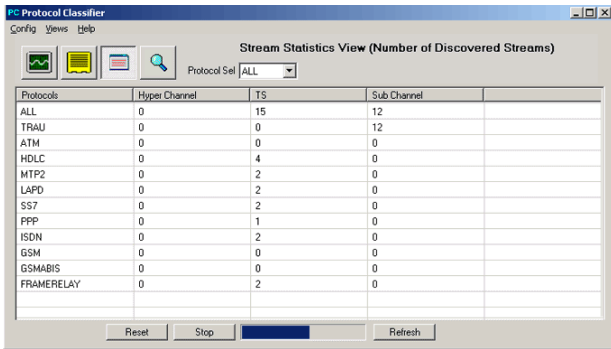


Figure: Stream Stats View

Log Statistics

The details of the protocols identified, time, timeslots, sub-channels, hyper-channels, and device name can be logged into a text file in the desired location for further analysis.

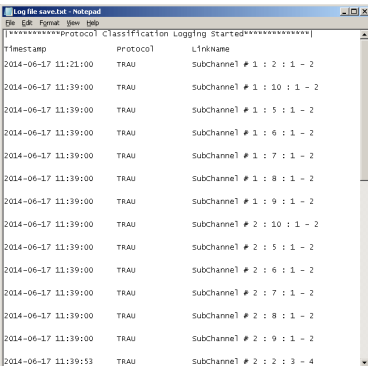


Figure: Log File

Stream Scan View

Display **Detected** and **Not Detected** protocols while scanning as per the selected configurations for every 10sec, 20sec, 30sec, or more as specified in the **Scan Time**.

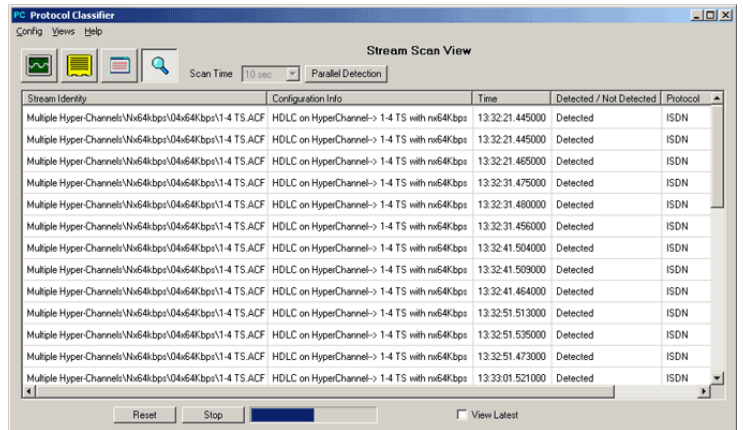


Figure: Stream Scan View

Buyer's guide

- [XX089](#) - Protocol Identifier

Related Hardware and Software

- [UTE001](#) – USB Based T1 or E1 Analyzer Unit
- [HTE001](#) – Dual Universal HD T1/E1 Cards
- [PTE001](#) – tProbe™ Dual T1 E1 Laptop Analyzer (Require Basic Software).
- [HDT001/HDE001](#) – Legacy HD T1 or E1 (PCI) Cards with Basic Analyzer Software

For more information on T1/E1 Protocol Analyzers visit: http://www.gl.com/protocol_analysis.html



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