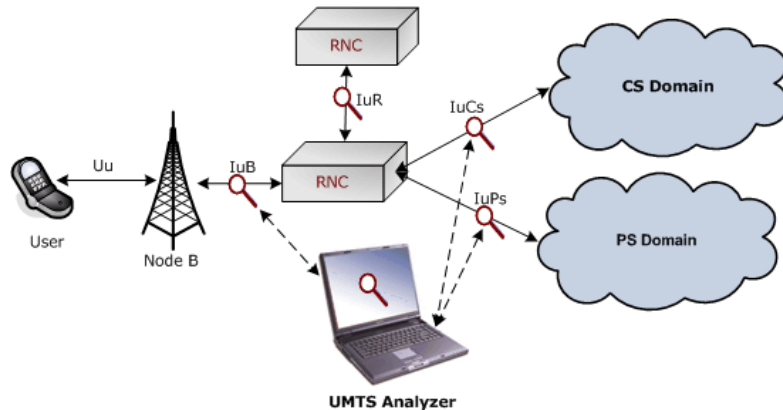


UMTS Protocol Analyzer for OC-3/STM-1 and OC-12/STM-4



Overview

UMTS (Universal Mobile Telecommunications System) being an access network in the mobile communication area provides a common interface to both GSM and GPRS core network. UMTS is capable of handling both Circuit-Switched (CS) as well as Packet-Switched (PS) data simultaneously through its UTRAN network.

GL's OC-3/STM-1 and OC-12/STM-4 UMTS analyzer is capable of capturing, decoding, and performing various test measurements across various interfaces i.e. Iub, Iur, IuCs and IuPs interfaces of the UMTS network based ATM transport layer. It helps in fault diagnosis and troubleshooting of UMTS network. Multiple instances of UMTS Analyzer can run simultaneously capturing data (real time and off-line) on multiple OC-3 or OC-12 interfaces.

Main Features

- Supports real-time as well as offline analysis.
- Performs numerous measurements across Iub, Iur, IuCs and IuPs interfaces.
- Search and filtering capabilities for both real-time as well as offline analysis.
- Decodes different control plane protocols i.e. NBAP, RNSAP, RANAP, ALCAP, SSCOP etc and user plane protocols i.e. Iu-UP, Iu-FP, AMR etc.
- Decode NAS (i.e. CC/MM/SM/SMS/GMM) along with the UTRAN specific protocols.
- User can configure VPI/VCI values for PVCs carrying NBAP, RNSAP, RANAP and ALCAP messages to enable decoding of the said protocols.
- Captures, decodes, filters, and reassembles AAL-2 and AAL-5 frames from within the ATM cells according to user-defined VPI/VCI.
- Ability to configure .ini file for VPI & VCI (for ALCAP, NBAP, RANAP, and so on).
- CRC verification for AAL5 carrying packet data.
- Call Trace capability over IuCs and IuPs interfaces.
- Displays summary, detail, hex-dump, statistics, and call trace views.
- Summary view provides the information about few important fields (Dev #, Time Slot, VPI/VCI, PT, OSF, AAL type, CID, ALCAP message) in a tabular format.
- Detail view displays decodes of a user-selected frame from the summary view.
- Statistics view displays statistics based on frame count, byte count, frames/sec, bytes/sec etc for the entire capture data.
- Hex dump view displays raw frame data as hexadecimal and ASCII octet dump.
- Capability to export summary view details to comma separated values (CSV) format for subsequent import into a database or spreadsheet.
- Capability to export detail decode information to an ASCII

For more details, visit our web page <http://www.gl.com/lightspeed1000-atm-protocol-analyzer.html>.

Supports Iub, Iur, IuCs and IuPs Interfaces

Decode NAS (CC/ MM/ SM/ SMS/ GMM) along with the UTRAN Specific Protocols

Supports Control Plane & User Plane Protocols

Supports AAL2, & AAL5

Supports Filtering and Reassembly Options

Summary, Detail, Hex-dump, Statistics, & Call Detail Views

Search & Filtering Capabilities

Statistics Based on Various Protocol Fields



GL Communications Inc.

818 West Diamond Avenue - Third Floor. Gaithersburg, MD 20878 • (V) 301-670-4784 (F) 301-670-9187

Web Page Address: <http://www.gl.com/> • E-Mail Address: gl-info@gl.com

Summary, Detail, and Hex Dump Views

The analyzer displays Summary, Detail, Hex Dump, Statistics, and Call Detail Views in different panes. The summary pane displays Frame Number, Time, Length, Error, VPI, VCI, PT, OSF, AAL Type, CID, LI, UII, CPI and Frame Type message. User can select a frame in summary view to analyze and decode each frame in the detail view. The Hex dump view displays the frame information in HEX and ASCII format.

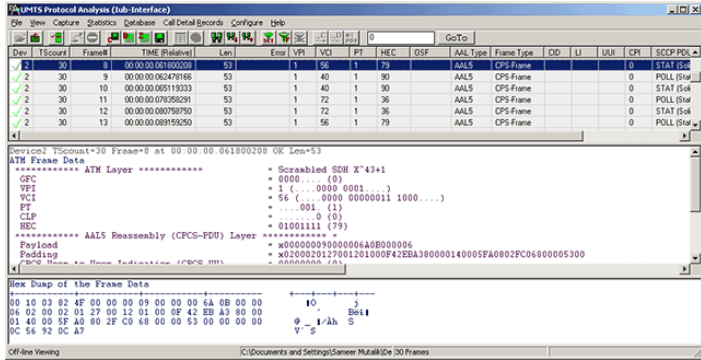


Figure: Summary, Detail, and Hex Dump Views

Call Detail Records & Statistics View

Call trace defining important call specific parameters like Call ID, Call disposition, Call duration, Mobile ID, Called/Calling Number, Call type (SMS/PDP/Setup/Location update etc) are displayed for IuCs and IuPs interfaces.

Statistics is an important feature available in UMTS analyzer and can be obtained for all frames both in real-time as well as offline mode. Various statistics can be obtained in statistics view to study the performance and trend in the ATM network based on different parameters e.g. Use Type, Statistic type (Frame count, Byte count, Frames/Sec) and patterns (Range List, Wild card).

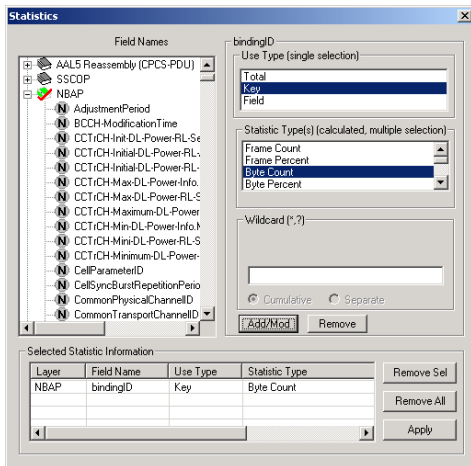


Figure: Define Statistics View

Real-time and Offline Analysis

Users can capture and analyze UMTS frames in real-time and record all or filtered traffic into a trace file. The recorded trace file can then be analyzed offline and exported to ASCII file, or printed. User can capture raw data and transmit using "Rx Packets to File" application.

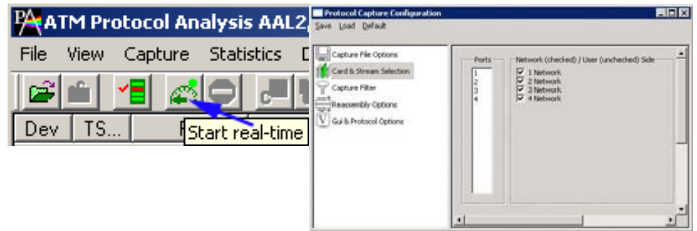


Figure: Port and Interface Selection

Filtering and Search

Users can record all or filtered traffic into a trace file. Filtering and search capability adds a powerful dimension to the UMTS Analyzer. This feature can isolate required frames from all frames in real-time, as well as offline.

Users can specify custom VPI, VCI, and PT type values to filter frames during real-time capture. The frames can also be filtered after completion of capture based on Frame Number, Time, Length, Error, VPI, VCI, PT, OSF, AAL Type, CID, LI, UII, and more. Similarly, Search capability helps user to search for a particular frame based on specific search criteria.

Reassembly

Using reassembly option user can specify VPI /VCI value to reassemble as per the Segmentation and Reassembly rules defined by the specified AAL type.

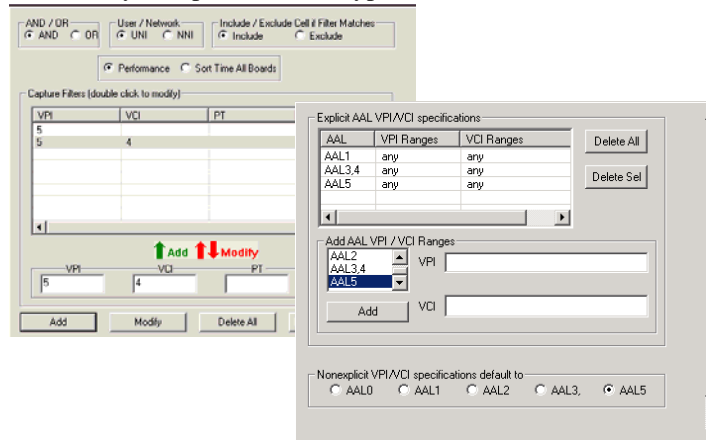


Figure: Filter and Reassembly Options

Buyers Guide:

- [LTS204](#) – OC-3/STM-1 UMTS Protocol Analysis
- [LTS304](#) – OC-12/STM-4 UMTS Protocol Analysis

Related Hardware

- [LTS100](#) - Dual OC-3/STM-1 OC-12/STM-4 PCI Express Card
- [LTS105](#) - Portable Dual OC-3/STM-1 OC-12/STM-4 Unit