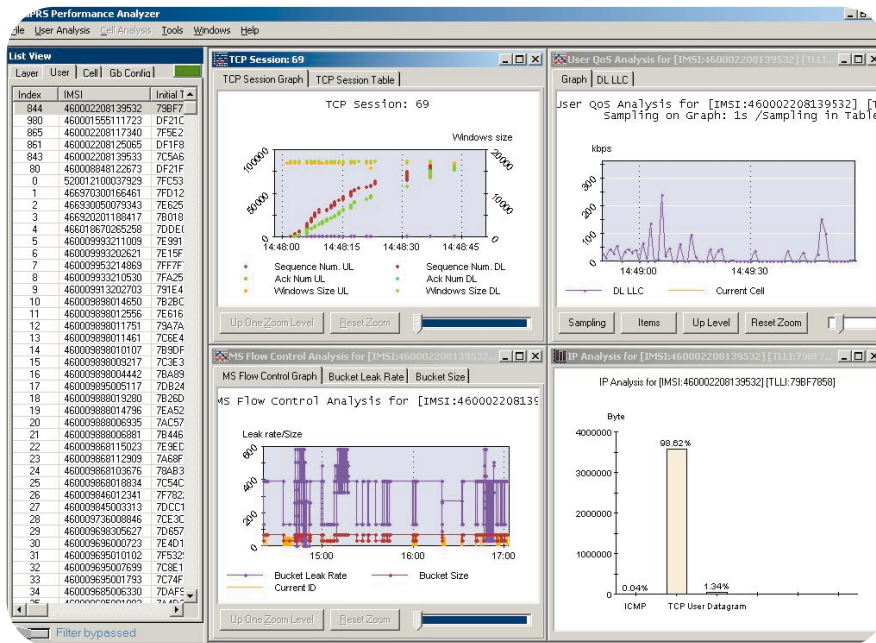


GPRS Performance Analyzer Offline Software

► For the K12xx/K15



Overview

“GPRS Performance Analyzer” is a stand-alone, offline software application for the analysis of protocol trace files (Tektronix RF5 format); it runs on any Windows PC (Windows NT SP5, 2000, XP) and on Tektronix protocol testers.

The application generates statistical measurements on signaling and user traffic. The graphical user interface provides different tabular and chart views, with user-definable grouping on different dimensions (Layer, Cell, User) and top-down analysis, from summary statistics to single-procedure trace.

Predefined reports on network Key Performance Indicators (KPI) and user-defined reports are available, and can be exported in different formats.

Function Description

The GPRS Performance Analyzer runs on any PC (128 Mbyte RAM and 800 MHz CPU are recommended for large recording files) running Windows NT SP5, 2000, or XP. License is protected with a hardware dongle (a parallel port is required for the dongle).

The application analyzes protocol trace files in Tektronix (.rf5) format. It supports GPRS Gb interface (Rel. 98 and Rel. 99 protocols).

The application processes decoded data from a Gb recording file and generates a database of statistical and detail measurements. Data are then offered for analysis in a feature-rich graphical user interface.

► Features & Benefits

- For Network Operators
 - Network QoS Analysis to Improve Customer Satisfaction
 - Troubleshoot Performance and Accessibility Problems to Reduce Cost and Effort for Operation & Maintenance
 - Analysis of Users Behavior to Tune Network Coverage and Marketing Offers

For Network Equipment Manufacturers

- Identification of Problems in Performance and Duration Test Results to Reduce Time and Effort for Analysis and Correction

For Every Customer

- Automatic Prioritization of Worst Performing Cells to Focus the Analysis
- Drill-down from Statistics to Call Trace, for Easy Identification of the Root Cause of Problems
- Reporting Tools to Compare Results Over Time (Trend Analysis) and to Share Results with Other Departments

► Applications

GPRS Radio Access Network Optimization

- Assessment of Network Performance
- Root Cause Identification of Performance Problems at the Cell Level and at the Subscriber Level

Analysis of Duration and Stress Test Results

- Identification of Failures on the Gb Interface
- Identification of Performance Degradation

COMPUTING
COMMUNICATIONS
VIDEO

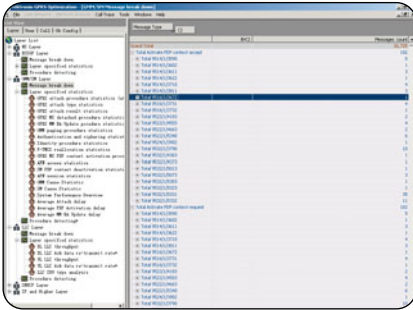
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Basic Statistics/Analysis based on each Routing Area (RA), Cell and Layer

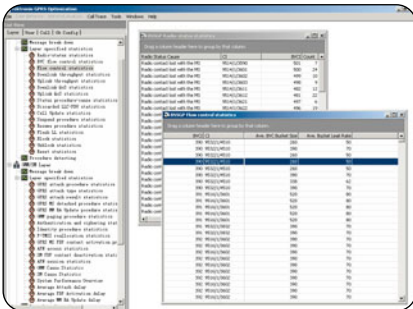
Message Breakdown

Message counts can be easily grouped by Layer, Message Type, Cell.



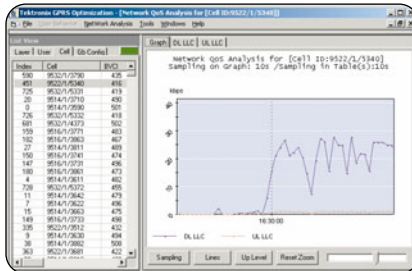
Layer-specified Statistics/Analysis Based on Routing Area (RA), Cell

- Radio status cause
- Error cause for each Layer
- Failure rate and cause for each procedure
- Call/procedure trace on the single occurrence of each procedure



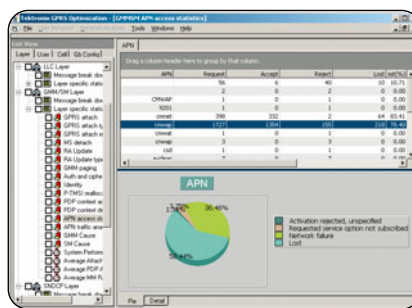
Network QoS Analysis

- BSSGP, LLC, IP layer throughput
- LLC discard analysis
- Easy identification of Peak Uplink (UL) and Downlink (DL) traffic and of radio problems
- Easy comparison among the Cells to find the Cell with a problem
- Sampling time can be set by the user. Can be as low as 10 seconds



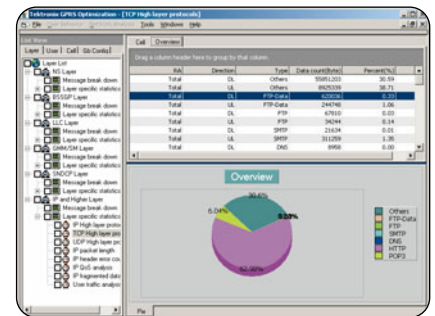
GPRS Mobility Management/Session Analysis

- Procedure response time
- Attach/PDP context activation failure rate
- Cell reselection analysis
- Radio problem
- Session count and traffic statistics by APN (Access Point Name)



IP and Upper Level Protocols Analysis

- IP protocol analysis
- IP protocol type
- IP header error
- IP fragmented data analysis
- TCP/UDP port analysis
- TCP window Size, throughput, round-trip time



Users' Behavior Analysis

- Throughput analysis for each user, at BSSGP, LLC, IP layer
- IP analysis
- MS (Mobile Station) flow control analysis
- TCP session analysis



KPI Analysis

KPI reports help the user to identify “worst” performing network cells and to prioritize problems. Different scenarios (Procedure Success Rate, Procedure Response Time, Throughput) extract and display the first “n” cells that perform worse than the average of other cells or worse than user-defined thresholds.

Powerful Filter

Filters include Cell, User (IMS), Message Type and Cause Value. Wild card searching is supported.

► Characteristics

Three-dimension Statistics and Analysis

Conduct the data statistics for:

Each Cell

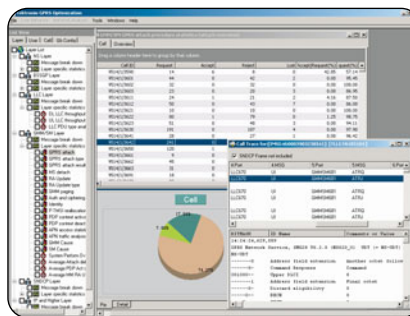
Each Layer

Each User

Gradually explore the failure cause from Cell, Layer and User.

Drill-down to Detail

Navigate via mouse clicks from statistical overview of signaling procedures, down to single procedure/single user (IMS) and down to procedure tracing, with accurate and complete decoding of every protocol message.

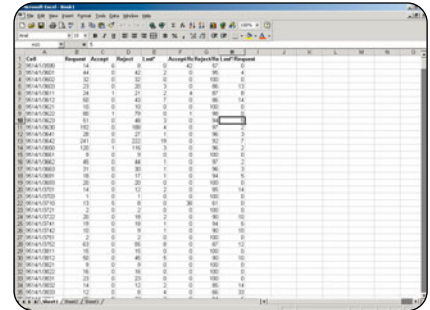


Powerful Visualization Tools

Tables and charts (X-Y diagrams, pie charts) open with a single click.

Generate Customer-specific Report

Report tables can be exported in standard Microsoft Excel Format



GPRS Performance Analyzer Offline Software

► For the K12xx/K15

► Ordering Information

7KK1229-1BB11

Offline SW application GPRS Performance Analyzer.

Includes: CD-ROM with application and user manual, dongle for parallel port.

7KK1229-1BD11

Offline SW application GPRS Performance Analyzer.

Includes: CD-ROM with application and user manual.

This code does not include a dongle; it is meant for customers that already have a dongle for K12xx/K15 offline SW.

Minimum System Requirements: Any PC running Windows NT service pack 5 or above, Windows 2000, Windows XP, or K12xx/K15; no base K12xx/K15 SW is required.

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Our most up-to-date product information is available at:
www.tektronix.com

Product(s) are manufactured in ISO registered facilities.



Product(s) complies with IEEE Standard 488.1-1987, RS-232-C, and with Tektronix Standard Codes and Formats.

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