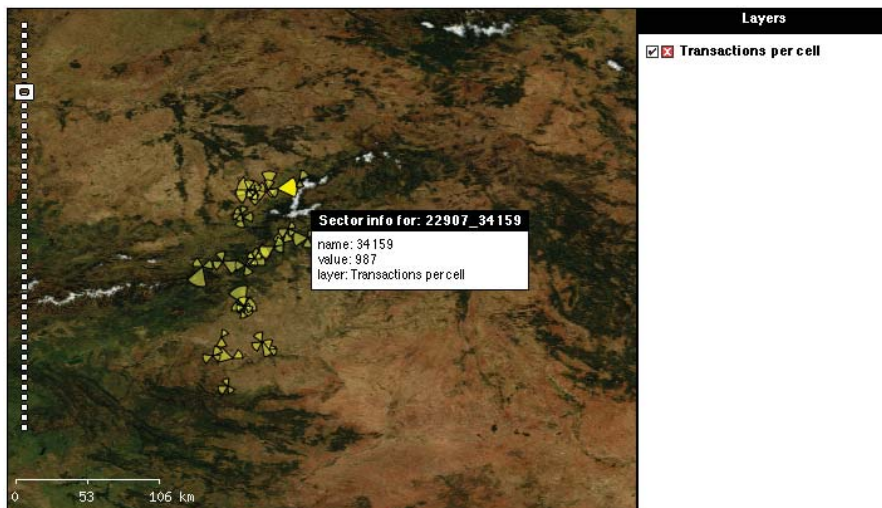


Tektronix Monitoring and Protocol Test

► GSM/GPRS Optimization Expert

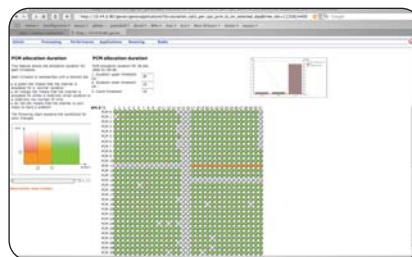


► Transactions per Cell – Geographical Map.

Product Description

The GSM/GPRS Optimization Expert is built out of four modules corresponding to different departments in the operators' structure. Application Expert provides a clear understanding of the QoS offered to the users. It brings a view of the user's experience of the services used, beneficial information for the Quality and Marketing teams. It includes statistics on:

- Call behavior (call duration, blank calls, looped PCM)
- Voice mail, special numbers, Toll-Free, etc.
- MMS usage
- SMS usage
- IP usage
- HTTP loading time
- WAP



► PCM allocation overview.

A new "Performance Expert" feature provides a picture of the performance and network elements to support the needs of Operations and Maintenance departments. Transaction count and transaction failure statistics are visible at the click of a button. The module contains statistics on:

- Transactions counts (MOC, MTC, LU, Data volumes, etc.)
- Transactions failures
- Equipment failures
- Handovers
- Codec usage

► Features & Benefits

Usability: The GSM/GPRS Optimization Expert with Its Intuitive User Interface Accelerates the Learning Curve; the Cartography Enables a Geographical Representation of the Measurements Like the Cells that Induce a Bad Hand-over Quality

Performance: The Optimized Protocol Engine Shortens the Analysis Time; Results are Stored in a Database to Enable a Direct Access to the Results Later On. **Reporting:** All Measurements Can Be Exported to Excel for the Generation of Reports, Including Comments, Graphics, Etc.

The "Optimization Expert" Is Composed of Four Models Tailored to Suit Individual and Specific Network Operators' Needs

► Applications

Dashboard View

A Dashboard is a Set of Aggregated Measurements Allowing Users to Have an Overview of Their Data

Various Different Counters Are Integrated in the Dashboard:

- Transaction Volume Counters, such as:
 - Volume of calls
 - Volume of bytes transferred
 - Volume of SMS
- Failure Rate Counters
 - Dropped Call Rates
 - Access Failure Rates

If the Proportion of Different Parameters is Important, a Pie Chart is Used

Synthesis View

These Views are Oriented Towards Technical Management Level to Distribute Work Load Among Teams with the Right Level of Focus

It Shows Where in the Network the Problem Occurs. Generally These Representations Display Either a Cartographic Map of the Area or a Time-based View of the Counter

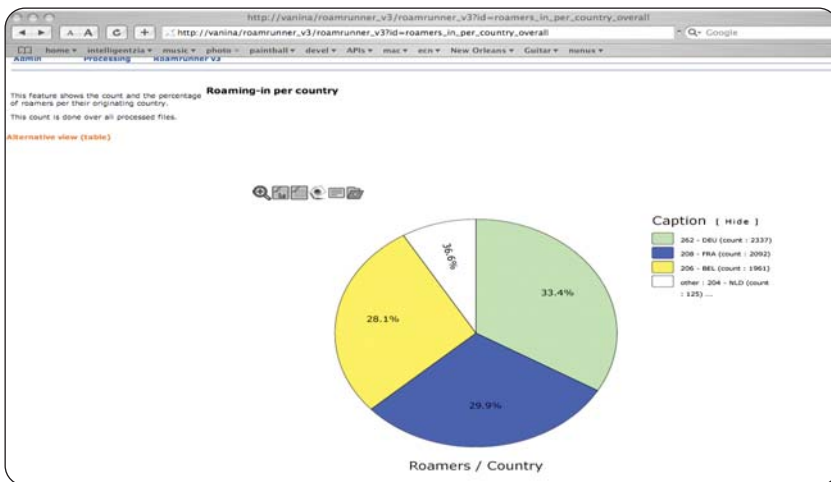
Technical Analysis View

The Technical Analysis Is Targeted to Engineers Responsible for Quality of Service or Operations. It Provides the Ability to Understand the Root Causes of a Problem via Drill-down Features

Technical Staff will Start from a Synthesis View of the Quality of Service Offered and in Three or Four Mouse Clicks Will Have Access to Call Trace of Any Call Responsible for a Problem

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► Roamers in network per origin country.

The “Radio Expert” provides a clear view of the radio profile and quality of a cell. This module targets Radio Engineering or Optimization departments and includes statistics on:

- Radio measurements
- Radio channel management
- Handovers
- Coverage

The “Roaming Expert” provides information regarding roamers in the network. Typically the transverse task force responsible for roaming revenue needs this kind of input. The module includes statistics on:

- Roaming in
- Quality offered to roamers
- Roamers behavior
- Competitors’ network coverage

The “GSM/GPRS Optimization Expert” adds advanced QoS, service level, application level, network performance and roaming analysis capabilities on top of the

industry’s leading protocol analysis and decoding solution K15 and K12. The Optimization Expert is used to isolate the root causes of problems and to optimize network operation in 2G, 2.5G and EDGE environments. The networks can either be homogeneous 2G/2.5G/EDGE networks or networked with 3G networks. A companion product to the Tektronix family of protocol test systems K15 and K12 series, the Optimization Expert analysis is based on RF5 format protocol traces. It can be used with real-time or post-processing parameters for advanced problem isolation, root-cause identification, and performance optimization calculations. The GSM/GPRS Optimization Expert provides detailed information about the quality of service offered over the networks whether they are GSM or GPRS (including EDGE). It is a powerful set of troubleshooting tools allowing technical staff to detect and correct network malfunctions at different levels. It provides very deep drill-down capacities enabling engineers to start from general overview down to a mapped, correlated view of the statistics and finish with the subscriber activity and the call trace.

The GSM/GPRS Optimization Expert has the ability to process groups of contiguous files in order to enable radio and optimization teams to measure the effect of network changes.

The software features:

- Unique synthesized views and displays enabling fast problem resolution
- Unique cartographic views combining location information with analysis results
- Proprietary parameter extraction algorithms enabling high speed processing and real-time reporting
- Problem-oriented GUI, intuitive to use, easy to learn
- Direct correlation to second-to-none protocol decodes in number, depth and quality

Workflow

Users record files using their K15 or K12 on GSM A or Abis¹ interfaces, or Gb interface containing control and user plane. The trace can combine all those interfaces if the network configuration allows it. Users operate the GSM/GPRS Optimization Expert with their standard Web Browser. There, they select either a directory containing all the contiguous recorded files or a set of files, and choose to process them. The GSM/GPRS Optimization Expert will then process all the relevant information from the trace files and provide a database, where the user can access the information.

¹ The GSM/GPRS Optimization Expert supports 3GPP Abis only.

▶ Characteristics

▶ Recommended PC Requirements

	Portable PC	Desktop PC
Processor	Pentium M 1.7 GHz	Pentium 3.0 GHz
RAM	1 GB RAM	
Screen Resolution	1024x768	
Operating System	Windows XP Pro SP2	
Web Browser	Internet Explorer 6 or superior	

Ordering Information

MPTSW-0001: GSM/GPRS Optimization Expert Software

Includes: This product includes initial delivery of GSM/GPRS Optimization Expert Software Complete Package, which contains Application Expert, Roaming Expert, Radio Expert, and Network Performance Expert.

MPTSW-0002: GSM/GPRS Application Expert Software

Includes: Initial delivery of GSM/GPRS Optimization Expert Software; Application Expert; provides information on the performance, QoS and User Experience of the services: voice, SMS, MMS, WAP, IP, HTTP.

MPTSW-0003: GSM/GPRS Roaming Expert Software

Includes: MPTSW-0003: Initial delivery of GSM/GPRS Optimization Expert Software; Roaming Expert; provides information about Roaming Performance and Roaming Problems.

MPTSW-0004: GSM/GPRS Radio Expert Software

Includes: MPTSW-0004: Initial delivery of GSM/GPRS Optimization Expert Software; Radio Expert; provides information on the Radio Performance: Cause of connection failures, channel management, radio measurements, handovers.

MPTSW-0005: GSM/GPRS Network Performance Expert Software

Includes: MPTSW-0005: Initial delivery of GSM/GPRS Optimization Expert Software; Network Performance Expert; measures and analyzes the Network Performance.

Support Pack

Support Packs contain the delivery of all available updates and upgrades plus TAC (Technical Assistance Center/Hotline) Support for SW under this subscription during the contract period.

Options

Opt. MPTSUP-0001 – GSM/GPRS Optimization Expert Software Support Pack SW subscription contract of Expert Software Application; Application Expert, Roaming Expert, Radio Expert, Network Performance Expert. Prerequisite: MPTSW-0001.

Opt. MPTSUP-0002 – GSM/GPRS Application Expert Software Support Pack SW subscription contract of Expert Software Application; Application Expert. Prerequisite: MPTSW-0002.

Opt. MPTSUP-0003 – GSM/GPRS Roaming Expert Software Support Pack SW subscription contract of Expert Software Application; Roaming Expert. Prerequisite: MPTSW-0003.

Opt. MPTSUP-0004 – GSM/GPRS Radio Expert Software Support Pack SW subscription contract of Expert Software Application; Radio Expert. Prerequisite: MPTSW-0004.

Opt. MPTSUP-0005 – GSM/GPRS Network Performance Expert Software Support Pack SW subscription contract of Expert Software Application; Network Performance Expert. Prerequisite: MPTSW-0005.

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► GSM/GPRS Optimization Expert

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