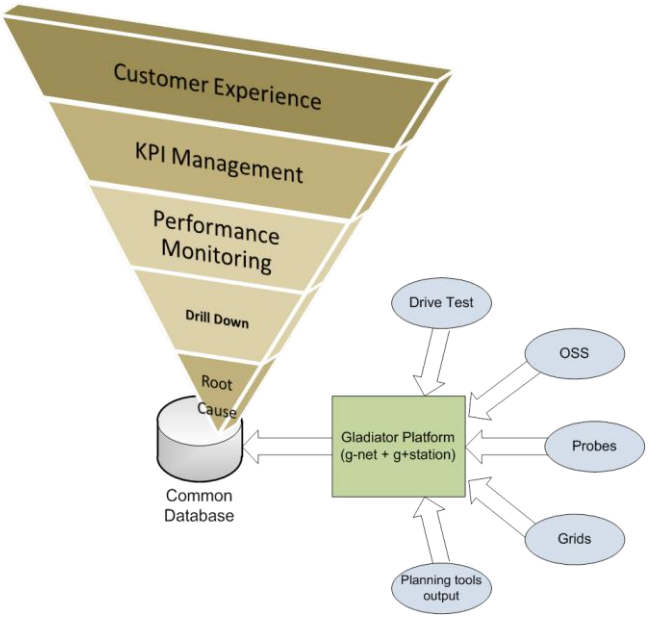
Gladiator Innovations
g-station
Solution Overview

GLADIATOR

ARMED TO TRANSCEND



Reduce operating expenses, standardize processes and encapsulate IP into customized applications.

Gladiator is a multi-threaded open architecture platform for network post processing, analysis and optimization. Through its revolutionary open architecture, ***g-station*** enables customers to reduce operating expenses, standardize business and engineering processes and encapsulate trade secrets and other intellectual property into customized software applications for automation.

GLADIATOR

g-station

Gladiator g-station is a desktop-based open platform tailored for the optimization of cellular networks. The solution suite comes with a comprehensive set of engineering tools for drill-down troubleshooting and reporting. The platform debuts the industry's first fully embedded customization and automation engine. Now, users are empowered to customize, automate, and streamline their engineering best practices into standardized and repeatable workflow. The platform features enabling applications and tools tailored to the specific needs of Network Operators, System Integrators, Engineering Services Providers, Test and Measurement Manufacturers, and Infrastructure Manufacturers.

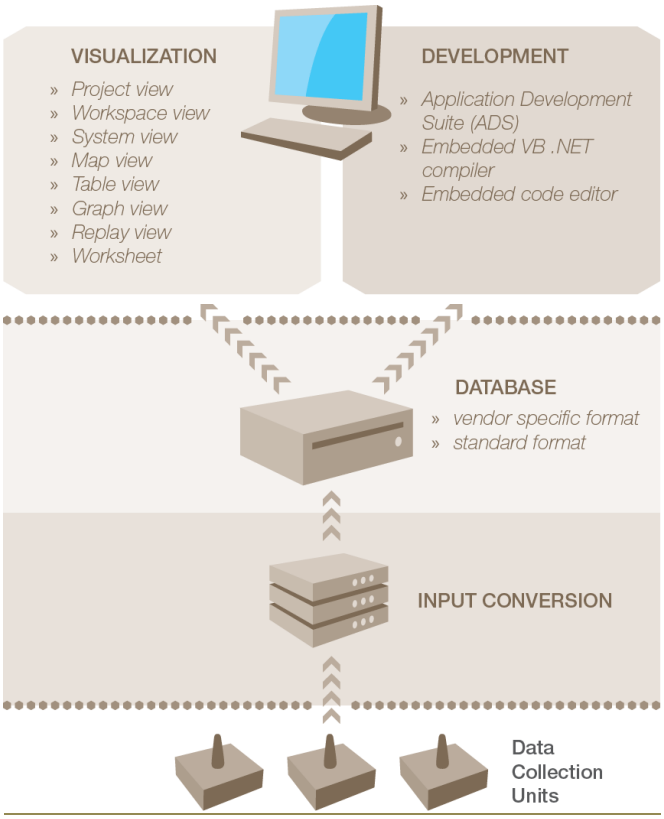


Figure 1: g-station Architecture

Key Features of g-station

- Imports and Correlates Supports data collected from a wide range of drive test, AFP/ACP and OSS vendors
- Contains built-in technology-specific **Analysis Toolboxes** for Drive Test and OSS data
- Enables integrated, multi-dimensional, synchronized analysis visualization through a common GUI
- Generates standard and custom reports
- Encapsulates best practices and IP and create new data interfaces through the **Application Development Suite (ADS)** and **Custom Design Center (CDC)**
- Analyzes Key Performance Indicators (KPIs) and multiple events from multiple sources over time through the **KPI Trend Viewer (KPI TV)** and **Event Display Center (EDC)**
- Analyzes and reports on benchmarking data through the **BM Flex** module
- Fixed and Flexible License Options with Administrative control of Flex Licenses

Key Benefits of g-station

- Reduce time spent on processing and analyzing OSS, DT and planning data, including KPIs, from multiple points of view to more quickly arrive at the root cause of network issues
- Standardize and automate engineering practices for optimization and monitoring across the entire engineering organization
- Centrally manage usage and information dissemination across the entire engineering organization
- Reduce “Time to Market” to implement process, KPIs and other customer-driven changes
- Reduce training costs by centrally capturing and disseminating best practices and IP
- Leverage Gladiator’s embedded expert knowledge to tailor outputs to match your company’s processes

Operation of g-station

The Gladiator g-station platform is used for analysis of data coming from various interfaces of a mobile wireless network. Data from varied sources like OSS measurement reports, OSS performance reports Drive test log files, MSC/BSC dumps, AFP/ACP Planning tools, etc. are easily fed into the Gladiator database and processed concurrently in the Gladiator optimization platform. The Main Platform performs the following basic tasks:

- Display data in various views (**Figure 2** Table, **Figure 3** Map and **Figure 4** Graph)
- Troubleshooting and manual optimization using dashboard utilities
- Replay of data (**Figure 5**)
- Conversion of measured data to the database (**Figure 6** below)
- Import, export and merging files
- General reporting

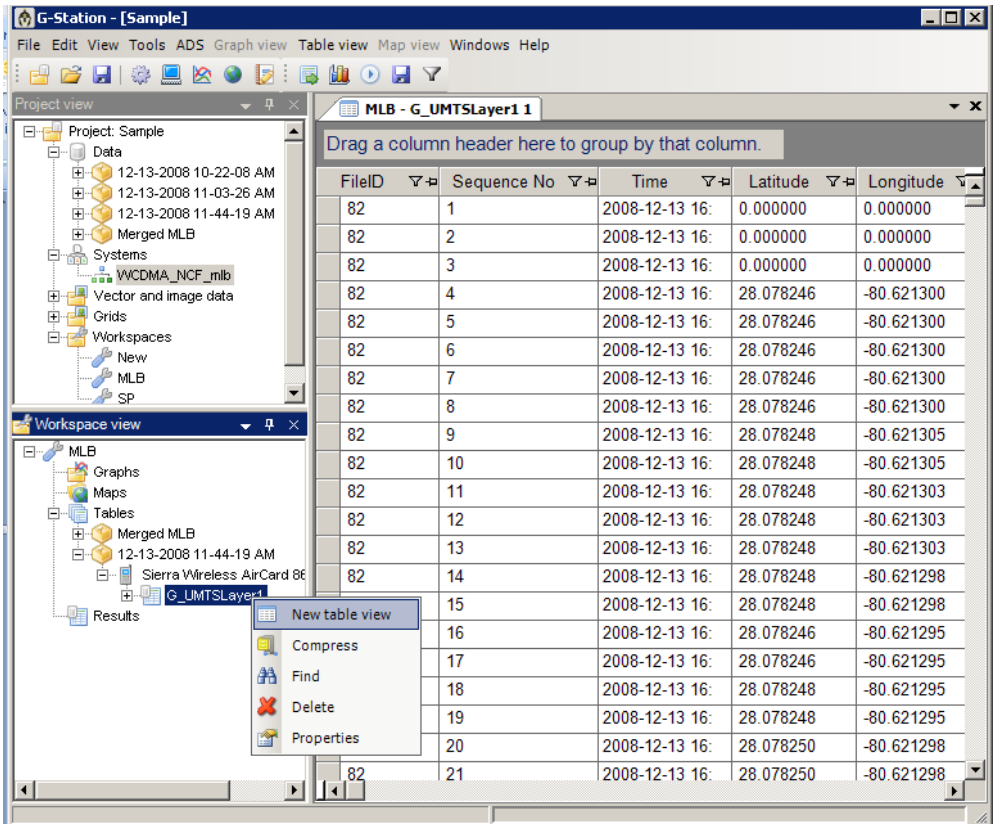


Figure 2: G-Station Table View

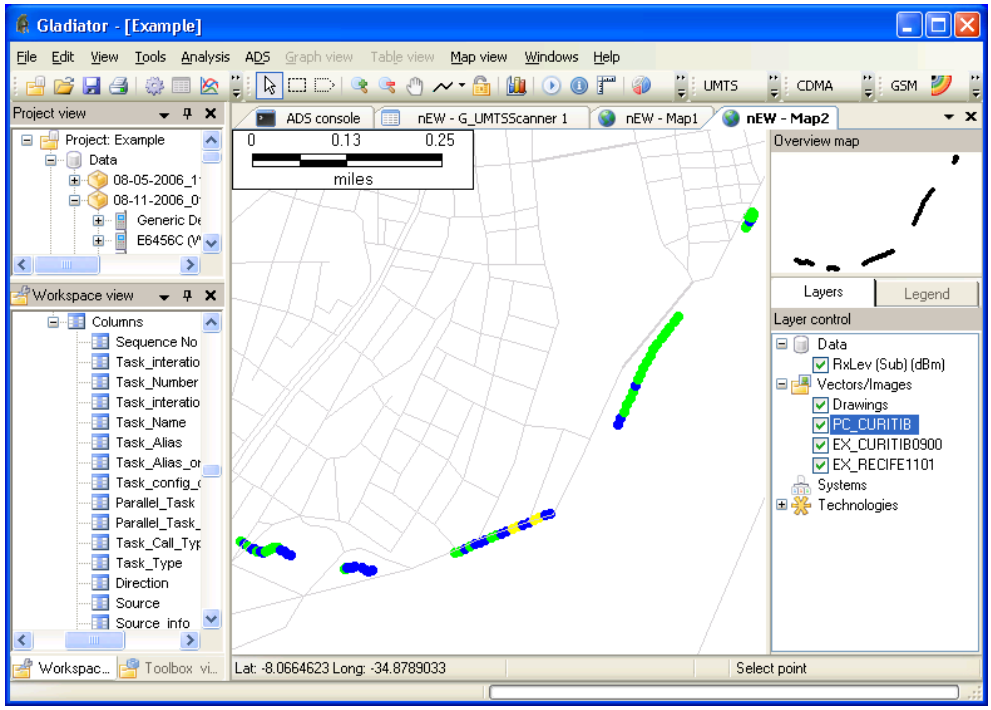


Figure 3: G-Station Map View

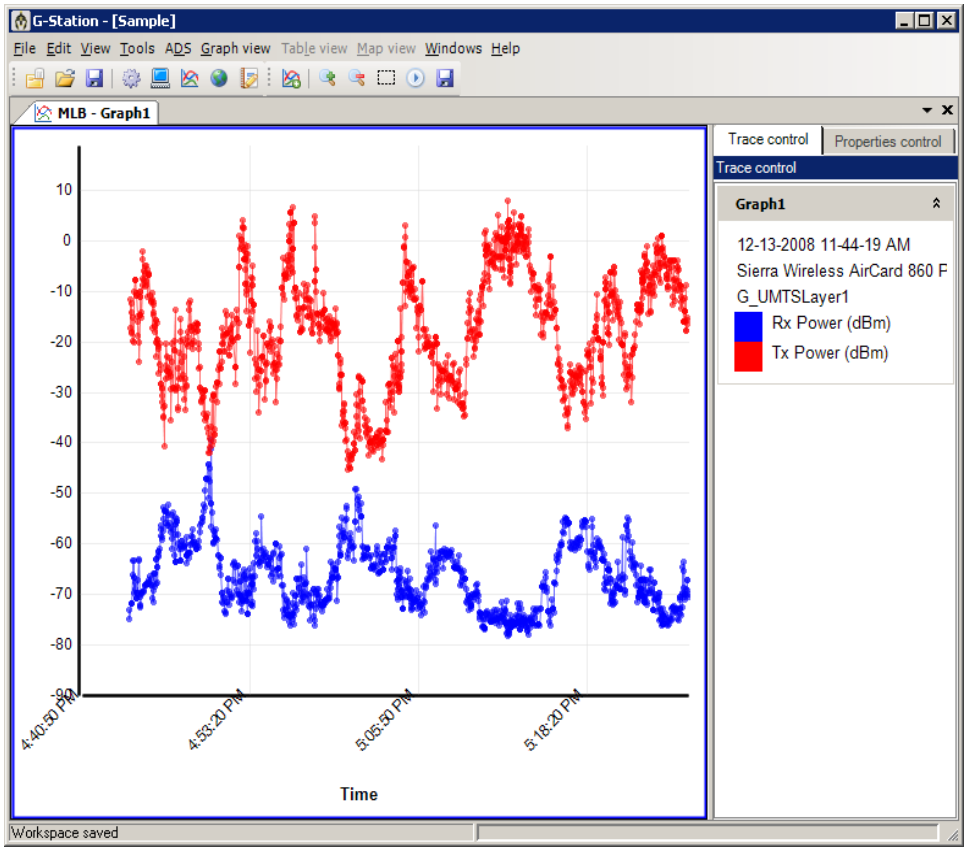


Figure 4: G-Station Graph View

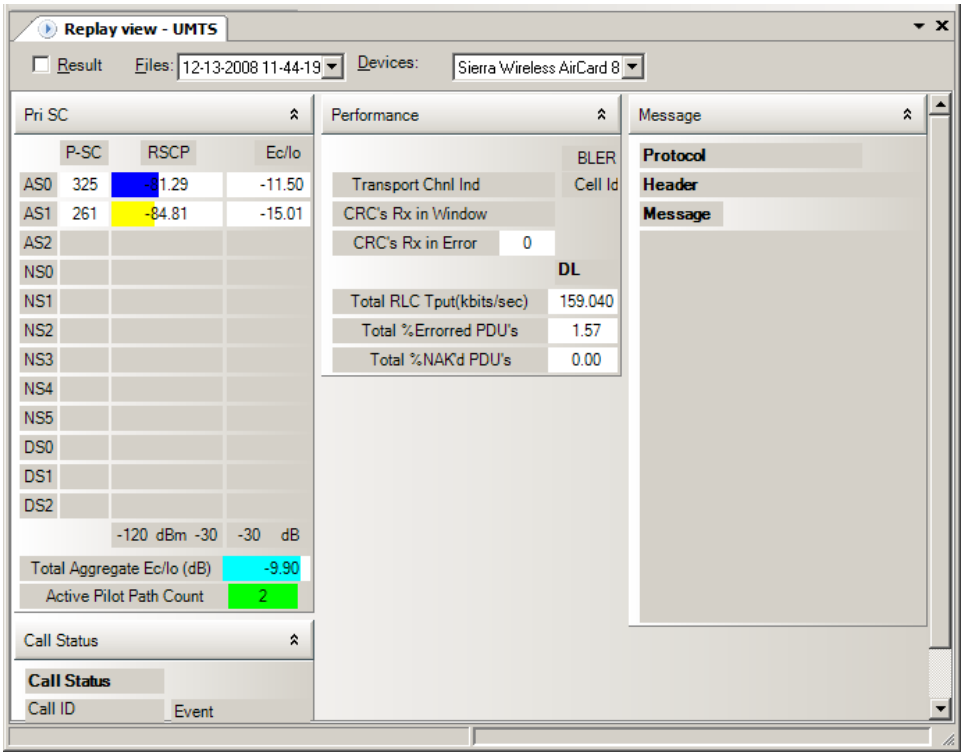


Figure 5: G-Station Replay Tool

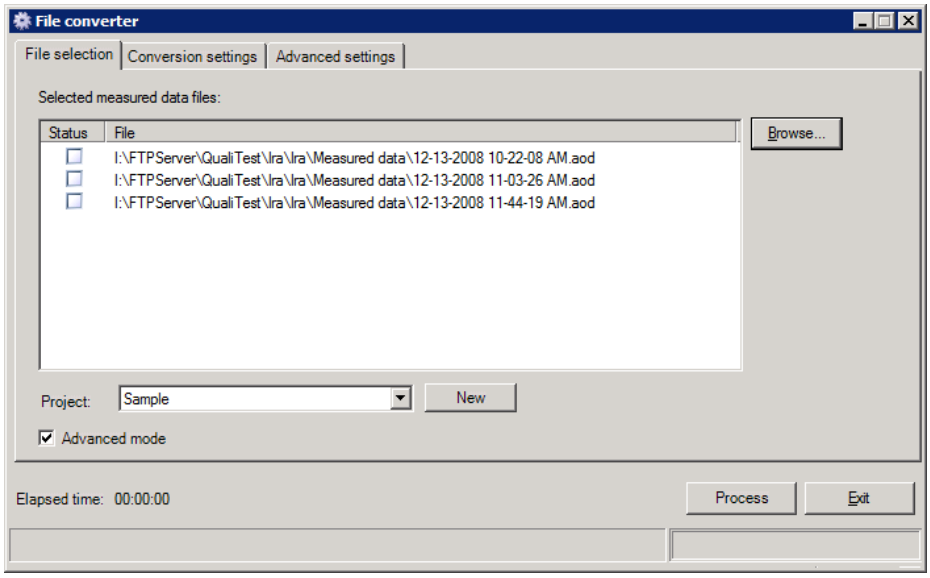


Figure 6: G-Station File Converter

The g-station platform can be augmented with different technology-specific **Analysis Toolboxes** for both Drive Test and OSS data that encompass a comprehensive set of utilities supporting needs of the network rollout, swaps, optimization and performance management. The functional diagram of the toolbox is shown in **Figure 7**. As depicted, toolbox features are subdivided into three functional entities: *Data source, Analysis and Course of action*. The Data source block provides collection of data from select data sources used for analyses and reporting process. The predominant data sources will be the autonomous drive test data (phone and scanner) and OSS data (system information, network stats, call trace and neighbor information). The Analysis functional group processes the data provided by the Data source group with the goal of localizing the network problems and facilitating drill down troubleshooting.

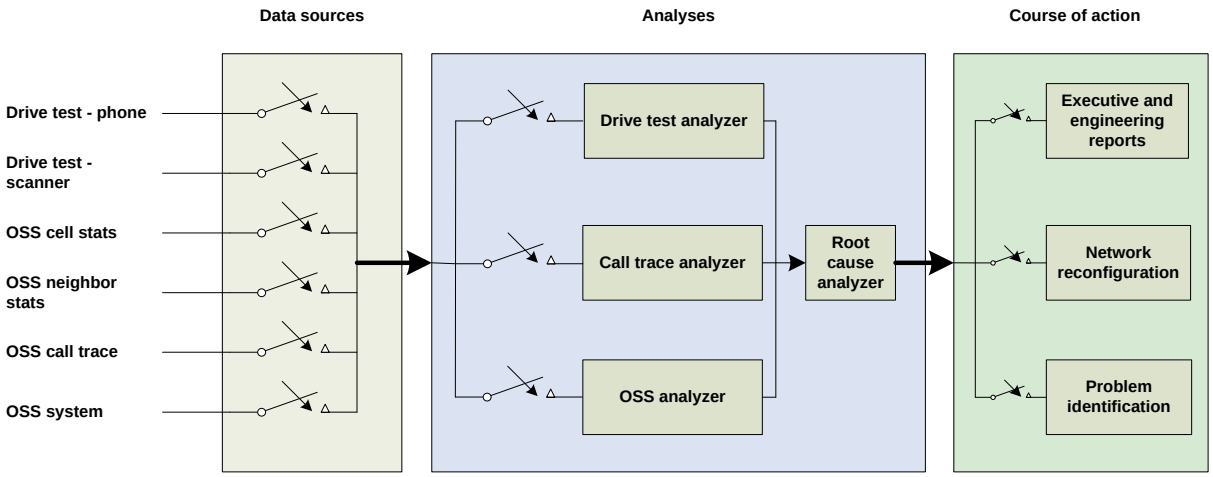


Figure 7: Functional diagram of the Analysis Toolboxes

There are three blocks in the Analysis group: Drive test analyzer (analysis of the phone and scanner data), OSS analyzer (analysis of the OSS statistics, alarms, neighbor list data and cell logs of the measurement reports), and Call trace analyzer (joint analysis of the phone and call trace data). The outputs of individual analyzers are fed into a root cause analyzer block which correlates the data and determines the likely cause of a given network problem. Finally, the Course of action functional group produces a prescribed set of engineering and executive reports on the network's performance.

The **KPI TV** and **EDC** add-on modules shown in **Figure 8** can be used for KPI monitoring and rollout compliance cluster testing. They include numerous pre-defined KPIs and powerful engines for creating custom KPIs.

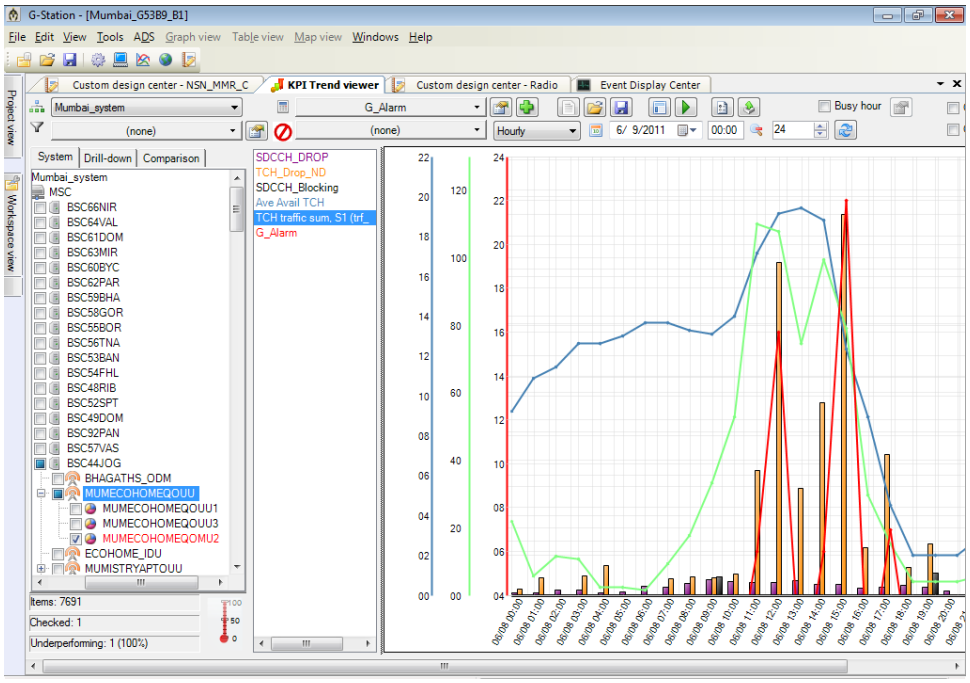


Figure 8: KPI TV and EDC

The utilization of g-station can be customized and automated with Gladiator's **ADS** and **CDC**. Both provide efficient ways of streamlining the rollout process and increasing the productivity and workflow efficiency.

This information is subject to change without notice.

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