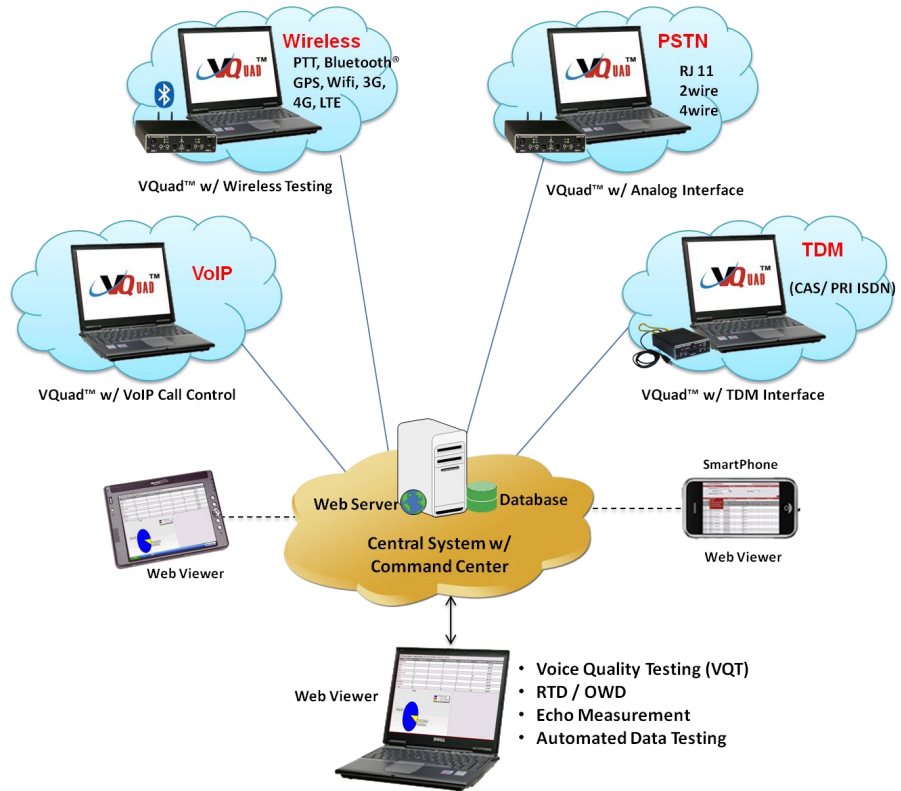


Intrusive Network Voice Quality Testing



The GL's **Network Monitor Voice Quality** testing solution provides a complete solution for the telecommunication operators to verify the quality of their service, therefore to provide a better service for the customer.

The solution consists of 4 parts:

- **Distributed VQuad™ Nodes** - These nodes control individual or multiple wireless, landline or VoIP telephony terminals.
- **Voice Quality Testing Software (VQT)** – provide PESQ LQ/LQO/WB results based on ITU-P.862.1/2 specifications. Fully automated and remotely accessible. All results are automatically transferred to the Central Database for access via the GL WebViewer™. Included with the PESQ results are Jitter, Clipping, Signal and Noise Levels.
- **VQuad™ Command Center** - remotely controls multiple Distributed VQuad™ Nodes (Network nodes or Distributed Degraded Voice Collecting Sites), performs voice quality analysis, RTD/ Echo Test/Data Test measurements, automation scripting, and scheduling daily tasks.
- **Remote Client WebViewer™** - remotely control any node within network, view status of entire network, and access all results associated with the VQuad™ test including Call Control (Call Failure and Call Dropped), Voice Quality, Round Trip Delay, One Way Delay, Echo Measurement, Data Testing from PC or Mobile Device.

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

Main Features

- Complete voice quality testing solution for wireless, PSTN, and VoIP networks while voice communications traverse between these networks.
- Each VQuad™ node site is equipped with Wireless, FXO Analog, VoIP Ethernet, and T1 E1 interfaces. Remotely controls far end Network Node.
- Remote Client WebViewer™ facilitates real-time call control information, voice quality scores and statistical information display using a simple web browser.

Send / Record Audio for Voice Quality & EC Testing

Data Testing, Round Trip Delay (RTD) & One Way Delay (OWD) Measurements

End-to-End Quality Metrics

Interfaces POTS, VoIP, Digital, Wireless Phones

PESQ LQ/LQO/WB, PAMS, PSQM

Centralized Control

Automated Script Control

Automated Call Control

Remote Access Query



GL Communications Inc.

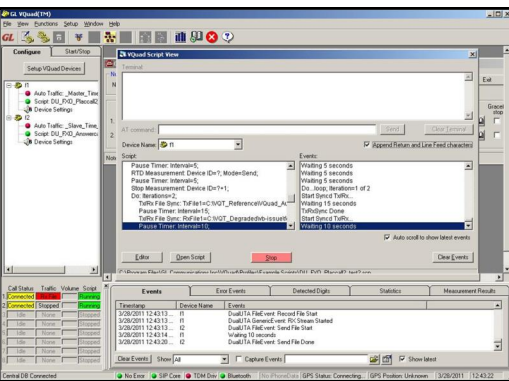
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(Web) <http://www.gl.com/> - (V) +1-301-670-4784 (F) +1-301-670-9187 - (E-Mail) gl-info@gl.com

Distributed VQuad™ Node

The VQuad™/VQT software combination, along with the GL's Dual Universal Telephone Adaptor (UTA) and the other hardware, provides voice quality, EC, and Data test results for wireless, PSTN, and VoIP networks.

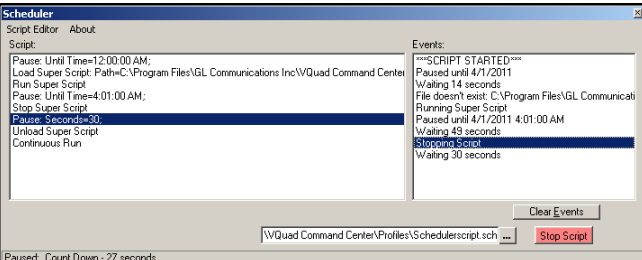
- Each VQuad™ Node remotely controls far end Network Node.
- Provides automated call control through scripting
- Simulates voice communications and collects degraded voice for each network node for voice quality testing.
- GL VQT Automatic Mode allows automatic execution of the VQT algorithms (PESQ LQ/LQO/WB, PAMS, PSQM+)
- Echo Measurement and Analysis (using EMU)
- Data testing available for Mobile devices (i.e. iPhone, Android) along with Ethernet connection (wired, WiFi, 3G/4G Broadband card) associated with the PC.
- GPS and ITS location tracking with results overlay.



VQuad™ Command Center

VQuad™ Command Center controls all network node locations, with each node location comprising of VQuad™ devices (Mobile Bluetooth® / landline phones / VoIP Terminal / FXO / TDM), or DCOSS APS. The Command Center controls all distributed sites, including actions such as:

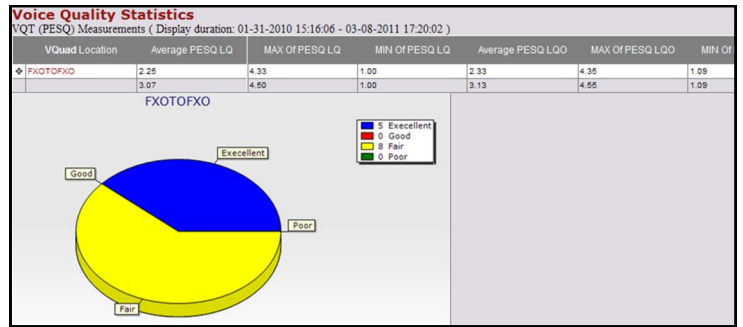
- **Central Monitoring** - Controls and checks the status of all distributed network nodes in real-time and remotely controls each Network Node
- **Automation** - Provides automation with flexible and easy to use scripting
- **Scheduling** customizes daily tasks or repeatable tasks for each VQuad™ Node) along with the entire region
- **E-mail Support** - is the ability to provide user-defined automated email associated with VQuad™ errors as well as VQT failed results. The email alerts are user-defined and supports multiple email addresses.



Remote Client WebViewer™

GL's VQT WebViewer™ facilitates VQT, Call Control, Data Test results, Echo Measurement, and all VQuad™ associated results display using a simple web browser. The WebViewer™ can search the database based on a variety of user-defined parameters and display all returned events per timestamp or per Call. WebViewer™ is a simple, easy to use Web browser which can operate on both PC and Mac systems (including iPhone and iPad).

- Multiple VQT applications automatically save all results to a centralized VQT database.
- VQT WebViewer™ queries the VQT central database and displays the results in both tabular and graphical formats.
- Multi-user support, and user-friendly interface is remotely accessible via browser based clients.



Buyer's Guide

- [VQT010](#) - VQuad™ Base Software
- [VQT004](#) - Voice Quality Testing (PESQ, PAMS, PSQM)
- [VQT030](#) - Network Command Center
- [EMU037](#) - Echo Measurement Utility (EMU) Software
- [VQT002](#) - Voice Quality Testing (PESQ only)
- [VQT1051](#) - Mobile Device Controller (MDC) Software

Related Hardware

- [VQT241](#) - VQuad™ Dual UTA with Balanced, Analog FXO, PTT, and Phone Handset Interfaces
- [VQT242](#) - VQuad™ Dual UTA Bluetooth® option for controlling any Bluetooth® device (Call Control and Audio)
- [VQT442 \(cable\)](#) - Mobile Audio Interface for Smartphones
- [VQT443 \(cable\)](#) - 3-wire Headset Interface Adaptor for Smartphones

Related Software

- [VQT204, VQT204u, VQT204e](#) - GPS for Dual UTA
- [VQT013](#) - SIP (VoIP) Call Control
- [VQT015](#) - T1 E1 Call Control Additional Options
- [VBA032](#) - Near Real-time Voice-band Analyzer
- [VQT040](#) - VQuad™ Webviewer™



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