QualiPoc Remote Control

NON-STOP SERVICE QUALITY MONITORING AND OPTIMIZATION

BENCHMARKING

OPTIMIZATION

SERVICE QUALITY MONITORING

TROUBLESHOOTING

ACCEPTANCE TESTING

DRIVE TEST

WALK TEST

CHANNELS MEASURED: SCALABLE (FLEET SETUP)
Non-stop Service Quality Monitoring and Optimization

QualiPoc Remote Control is a versatile, smartphone-based mobile network probe for unattended network-wide, non-stop service quality monitoring and optimization. It is remotely controlled and in real-time delivers a continuous stream of KPIs and insight into network quality just as the customer perceives it. This enables multiple applications in fixed or moving locations. These include targeted 24/7 service quality monitoring in real-time, or large-scale data collection on one or more mobile networks for the purpose of optimization.

A multi-functional back-end system offers tailored functionalities to control and monitor the network probes, including active alarm functions for seamless service quality monitoring.

QualiPoc Remote Control evolved from SwissQual's proven handheld troubleshooting solution QualiPoc Android and offers extensive active testing functionalities for automated service quality measurements of voice, data, video, and messaging.

QualiPoc Remote Control is an essential component to cost-effectively monitor service quality status in real-time, from a real end-user perspective; and helps to reduce operational costs in field. Ultimately, QualiPoc Remote Control ensures seamless quality of service.
KEY USE CASE

QualiPoc Remote Control can be installed as a local measurement probe in critical locations; or it can be deployed unattended in a fleet setup for large-scale operations enabling multiple applications.

Targeted, 24/7 and unattended service quality monitoring in hotspots
Thanks to its smart design and self-healing functions, QualiPoc Remote Control continuously reports the perceived end-user service quality in real-time. Installed in stationary and moving hotspots, such as shopping malls, airports, business districts, trains, metros etc., QualiPoc Remote Control enables mobile operators to ensure stable quality of service where it matters most. Network and service instabilities, or errors that have an adverse effect on end-user experience, are immediately detected; network and service operation centres are instantly alarmed so that they can take prompt action.

24/7 and unattended large-scale data collection for network optimization (drive test)
QualiPoc Remote Control deployed in fleets, for example taxis, busses, couriers, etc., offers a cost-efficient way to collect measurements for optimization, and enables mobile operators, infrastructure vendors, and testing service providers to continuously collect data from a real end-user perspective. The fleets are monitored via a web-based application that displays the status of the probes in cockpits and maps such as OpenStreetMap. Tests are remotely configured and scheduled; the performance of each service is visible in a dedicated dashboard displaying test results and alarms in real-time.

Find more use cases of QualiPoc Remote Control at www.swissqual.com

AT A GLANCE

- Smartphone-based (QualiPoc Android platform), remotely controlled network measurement probe for unattended network-wide, non-stop service quality monitoring and optimization
- Multi-application ready for desktop, wall, or in-car installation
- Ruggedized and future-proof hardware design with extra safety features for reliable and trouble-free 24/7 operation
PRODUCT HIGHLIGHTS

Designed for reliable, unattended, 24/7 operation

QualiPoc Remote Control uses the power of today’s Android smartphones.

SwissQual designed a ruggedized and future-proof shell to protect the integrated smartphone and to guarantee an uninterrupted and reliable 24/7 function for multiple applications.

Protective features
The shell is mountable with screws, lockable with a key, comes in an unobtrusive design, and can be discretely installed in public areas.

Multi-application ready
The ruggedized shell offers multiple applications such as desktop, wall installation, and in-car mounting (a special mounting kit and external antenna connectors to comply with vehicle-based test conditions).

Operational reliability
The Linux-based Android operating system and a dedicated multi-stage watchdog (self-healing function) ensure stable and trouble-free operation.

Energy and temperature management
The integrated back-up battery system (UPS) in combination with an active ventilation system ensures a continuous reliable performance.
QUALIPOC REMOTE CONTROL

Real-time quality supervision
KEY PRODUCT FEATURES

Comprehensive back-end solutions

SwissQual offers comprehensive and tailored back-end solutions to remotely configure, monitor, and control the QualiPoc Remote Control network probes, and to post process the collected data for quality analysis and reporting.

NQView
NQView is responsible for fleet control and enables test configuration and control, data live display and file replay.

NQWeb
NQWeb is one element of a powerful system to operate QualiPoc Remote Control. NQWeb offers several web applications with a common interface.

NQWeb Automation Agent
Allows automation of web-based data management, alarming, analysis, and report generation. Alarms can be configured and sent via SMS, e-mail, or SNMP traps.

NQWeb System Inspector
Enables real-time fleet and test result monitoring based on OpenStreetMap.

SwissQual – Experts in Mobile Network Testing
It is the attention to detail, the unique expertise, and the innovative mindset that distinguish SwissQual’s quality products. SwissQual, together with Rohde & Schwarz, is the preferred supplier of specialist equipment for global top-tier mobile operators, infrastructure vendors, testing service providers, regulators and authorities as well as multiple innovators in different industries.

Expertise
SwissQual employs specialists for applied research for voice and video quality assessment and for fundamental QoE/QoS testing methods. Our specialists are active members in international standardization bodies, such as ITU, ETSI, and VQEG, and help to define industry standards for HD voice and video quality testing.

Swiss Engineering
SwissQual products are known for their future-proof and ruggedized design, their ease-of-use and versatility, and for their system stability and accuracy. This results in more efficient operation and ensures a maximum level of Qos/QoE data quality and conformity at lower total cost of ownership.
Active testing and systematic problem isolation

With QualiPoc Remote Control, the data collection is controlled, active, and systematic; measurements are reproducible making it easier to identify necessary actions for improvement. The data collected by QualiPoc Remote Control contains the full range of information – from the application layer down to layer 1. This is crucial to not only display voice and video quality issues, but also to systematically identify root causes for isolation and elimination of such issues.

SwissQual’s QualiPoc platform supports extensive functionalities for voice, data, video, and messaging to measure QoS and QoE:
– GSM, GPRS, EDGE, WCDMA, HSDPA, HSUPA, HSDPA DC, LTE-FDD & TD-LTE, CDMA2000®, EVDO Rev.0/A.
– full recording and decoding of protocol layers on the supported technologies: 3GPP, L2, L3, TCP/IP, IMS, SIP.
– direct decoding of L3 text messages and TCP/IP, RTP packets on smartphones.
TECHNICAL SPECIFICATIONS

Software specifications

Technologies
Extensive technology test support including: GSM, GPRS, EDGE, WCDMA, HSDPA, HSUPA, HSPA+, CDMA, EVDO, LTE, LTE-A (Cat6)

Devices
Support of a wide range of the latest Android smartphones, including Samsung Galaxy S5, S4, LG G2 and G3 as well as Sony Xperia Z2.

System Architecture
QualiPoc Android smartphones in remote control mode are controlled by a central fleet control application. Web-based fleet monitoring offers a fleet overview in real-time.

Protocol Layers
Full logging and decoding of multiple protocol layers on all technologies: 3GPP L1, L2, L3, TCP/IP, IMS SIP, text decoding of L3 messages, TCP/IP, and RTP packets.

Fleet Control
Intuitive and easy to operate fleet control application NQView that allows to fast and efficiently define test campaigns in a modular way.

Fleet Monitoring
Web-based fleet monitoring NQWeb offers high-level test result information and probe status in real-time.

Service Testing Options
Benchmarking or service testing with wide range of services:
- Voice telephony (CS and VoIP):
  - call to any number, speech MOS
- Data: Ping, FTP DL/UL, HTTP DL/UL, PING, Capacity DL, Iperf UDP/TCP
- Browsing: HTTP
- Messaging: SMS, MMS, e-mail (SMTP, POP3, IMAP)
- Video streaming (YouTube)

Speech Quality (MOS)
Speech quality testing to Diversity or QualiPoc Android answering stations. Standard algorithms integrated for intrusive voice MOS assessments on narrowband and wideband channels:
- ITU-T P.863 (POLQA)
- ITU-T P.862 (PESQ)
- SwissQual SQquad

VolTE
Speech Quality using POLQA along with many VolTE specific KPIs are supported on VolTE capable devices.

Video Quality (VMOS)
Video Quality testing for multimedia IP-based video services (e.g. YouTube) in the presence of encrypted bitstream data using the J.343.1 algorithm.

Positioning
A built-in GPS receiver or an external Bluetooth GPS receiver provides an accurate position of the probe.

Data Management
Data collection performed directly on the smartphones, scheduled data upload to the back-end followed by an automatic import into the post processing data base.

Measurements Events
Standard and configurable real-time status information and measurement related events available on controlling device.

KPI Analysis
More than 250 key performance indicators (incl. ETSI) available in real-time as well as in post processing.

Post Processing Platform
NetQual NQDI with in-depth data analysis, network troubleshooting, report generation, and historical performance trending. Flexible and customizable data selection and filtering capabilities, including time and data; network technology; operator; device type; map polygon regions; service quality threshold; layer 3 messages; and more. Customizable Excel reports based on KPI with a powerful report generator.

Post Processing Compatibility
Compatibility with major third party post processing vendors.

Hardware specifications

Dimensions
20 x 19.5 x 8 cm (7.88 x 7.7 x 3.15")

Weight
Weight without device 800 g (1.77 lb)

Built-in Batteries
Cover power breakdowns for approx. 3h

GPS
Built-in or external Bluetooth GPS

Temperature
IEC/EN 60068-2-14, temperature operation range: -10 to 50 °C (14-122 °F)

Humidity
Operating relative humidity: 0-95%

Elevation
Operating elevation: 0-2000 meters (0-6500 ft)

SwissQual AG
Riverside Business Park
Allmendweg 8
CH-4528 Zuchwil
Switzerland

For more information
call +41 32 686 65 65
or e-mail info@swissqual.com

www.swissqual.com