

Clearly Speaking

Enterprise Voice Quality Monitoring Solution

Case Study

This £9bn FMCG company has become a global success by delivering quality brands that consistently meet customer expectations.

How did they manage the risk of VoIP voice quality?

Challenge

Roll out a global VoIP network to over 220 offices in 50 countries with the confidence to deliver a guaranteed level of voice quality to employees, customers and suppliers.

Solution

Proactively monitor voice quality with EpiTiro's Enterprise VoIP Quality Monitoring technology; establish quality thresholds, identify problem areas across the network, and alert engineers to proactively resolve voice quality issues and ensure consistent service levels.

Benefits

- Seamless introduction of VoIP services
- Consistent VoIP QoS across this company's global offices and locations
- VoIP faults cause zero impact to business operations
- Company values of quality and consistency maintained



The Background

To be successful in the highly competitive fast moving consumer goods (FMCG) market companies must be able to offer products that consistently meet customer expectations.

When this FMCG company made a decision to implement VoIP across its world-wide network it maintained its key business principles - consistency and quality - as its network management principles.

The VoIP rollout was part of a strategic “next generation network” evolution spanning 220 offices in 50 countries. The plan called for a phased approach and was led by the company’s very capable IS division.

The VoIP solution pitched by Avaya and Cisco was supported by an ROI model predicting operational savings in the long run, and the potential for increased productivity through convergence of the phone and PC. Many of the leading international carriers - BT, Verizon, Global Crossing and others - would form the international VPN backbone that linked the locations together.

However, there remained a business concern that implementing VoIP, as part of a next generation strategy, carried a risk of inconsistent voice quality.

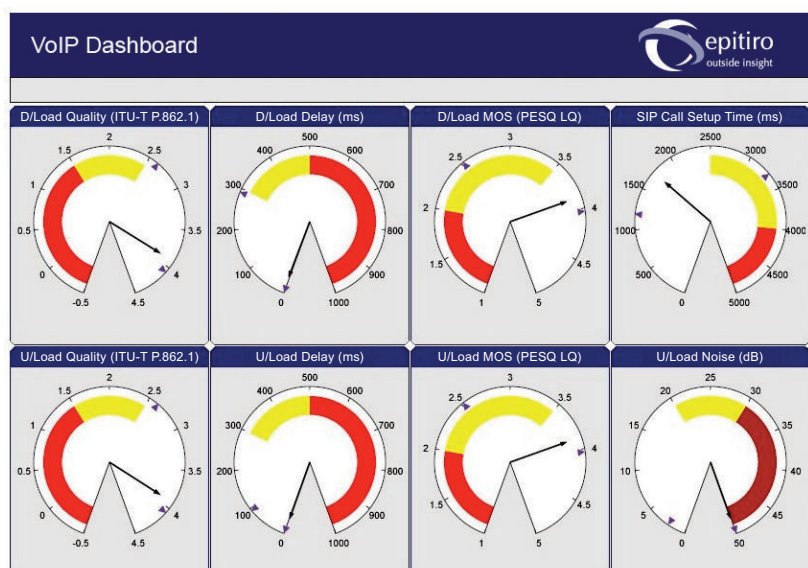
The Challenge

The unavoidable truth with multi-site, multi-vendor VoIP projects is that there are many circumstances that could compromise voice quality. Besides actual faults, issues such as product incompatibility, variations in carrier service levels, adding applications, or software upgrades to switches and IP phones could adversely impact voice quality. Further, VoIP voice quality faults are notoriously difficult to pinpoint due to their intermittent nature.

How would the ROI model hold up if engineers were chasing now-you-see-it, now-you-don’t faults whilst end-users suffered?

None of the vendors or suppliers could offer a solution that would ensure end-to-end voice quality issues were quickly identified and addressed. For an FMCG company known for the quality of its products around the globe, unmanaged and inconsistent voice quality was unacceptable. Voice quality was not going to be sacrificed - it was simply against this company’s business principles.

The company’s IS division came up with a strategy that would have VoIP cut-over to a reliable TDM service should there be prolonged or unacceptable voice quality issues. On paper it seemed straight forward however sourcing a solution that could quickly identify and isolate voice quality problems proved to be more difficult. Off-the-shelf voice quality test solutions were financially prohibitive in terms of equipment and support costs, considering the plan called for over 220 sites to be monitored worldwide.



The Solution

Epitiro proposed its Enterprise VoIP Quality Monitoring technology, a customisable software-based solution consisting of “agents” dispersed throughout the network that make active test calls using the industry standard for voice quality measurement ITU-T P.862 PESQ. The results of regular, automated test calls are forwarded to a central database and made available for on-line reporting. Epitiro proposed the solution be configured such that the company could set minimum thresholds for acceptable voice quality and other parameters, and the IS team be alerted of breaches via its network management software (HP Openview and IBM/Micromuse NetCool). Support staff anywhere in the world could be notified and take immediate action.

The Results

The company has used Epitiro’s VoIP Quality Monitoring technology to ensure Phase I of the VoIP rollout (25 locations, across 2 continents) was successful. Confident with successful voice quality monitoring to date, the company is now implementing Phase II and Phase III in the remaining locations across 5 continents. In-line with the company’s communications aspirations, Epitiro’s multi-media quality measurement technology is now being considered for use as this next generation network evolves.

About PESQ

PESQ is the industry and ITU standard software algorithm for measuring customer listening experience. Though many test measurements provide technical data, PESQ provides a customer experience score on a simple 1 to 5 scale. The scores represent the “mean opinion” of a wide section of society.

Mean Opinion Score (MOS)	Customer Experience
Excellent	5
Good	4
Fair	3
Poor	2
Bad	1

Customers expect about a MOS 4.3 from the fixed network or a company’s PBX system whilst cell phone calls are noticeably lower at about MOS 3.5. Customers would consider any experience below MOS 3.7 as less than toll quality.

About Epitiro

Epitiro provides customer experience intelligence of multimedia services including VoIP, video and data for companies around the globe. Founded in 2001, the company provides testing, monitoring and diagnostic solutions for leading telcos, ISPs, and multi-national enterprises. Epitiro is based in Cardiff, Wales, UK.

