

The Next Level - VoIP User Quality Management

By Scott Sobers

Service Quality Management (SQM) has become a necessity as VoIP providers today become increasingly challenged with several all-too-familiar issues: customer perception is not easily determined; most reported problems are post-event and go unsolved; intermittent equipment issues take a long time to pinpoint and resolve; and lastly, a majority of in-home equipment and infrastructure issues go undetected. As such, most mature and market-sophisticated service providers have placed service quality management (SQM) as the top market differentiator when offering new VoIP services.

However, the traditional SQM concept of monitoring from a network perspective is giving way to the more evolved concept of UQM (User Quality Management). UQM is the next level in management, extending service management and monitoring to the end-user experience-- monitoring in real-time the actual customer experience, not just within the core, to the 'edge' or across the network, but down to the actual users in their homes, offices, or anywhere they might be. Distinct differences in the service assurance level of UQM vs. SQM set them apart, and it won't be long before UQM becomes a key mantra in the executive offices of service providers around the globe.

The Need for Managing Service Quality at the Customer Level

While managing the underlying network components and services are critical, it's all moot if your users experience poor quality calls. The key word here is "experience." If a user picks up the phone and doesn't get a dial tone, or makes a call and hears an echo, low volume, or choppy speech, the user is going to form a negative opinion about the phone service at the time. It doesn't matter that there were no problems reported on the network, that a hundred other users made calls at the same time with no issues, or that someone was downloading several new mp3s for their iPod and caused network congestion. If you're lucky, the user will complain and you will be able to log a ticket and research the error. More likely, the user will just form a negative opinion of the service, use it less, and not complain until he or she has experienced a number of problems with a clear and demonstrable effect on productivity. Only then will you get a complaint, and there won't be exact times and dates attached as much as an understandable dissatisfaction and unhappiness with the service. Worst case scenario: you lose your customer and they complain to 15 other people (a marketing average for poor service quality).

The fact is today, traditional phone service works quite well and for users to want to switch to a new service it must be compelling. The compelling story includes a lower price, more features and guaranteed quality of service. If the quality of service fails to meet expectations, i.e. what a user is accustomed to on a traditional land line, the user

will simply switch services. Since QoS is critical and the final point in the network today is the phone in the customer's hand, what better place to monitor voice quality?

How are other service providers enhancing the customer experience today?

Generally, most services are deployed and then service management follows. Service providers are quite aware of what is at risk and the issues associated with IP-based services. Issues such as jitter, latency and packet loss can wreak havoc on IP services. Because of this, more emphasis is being placed on management and quality of service.

One way providers today are trying to enhance the customer experience is by using testing and diagnostic tools to measure the quality of service. Typically, this is accomplished by intrusively "testing" the network by forcing a call through to monitor the quality. This may also be referred to as "active monitoring" and placing synthetic calls across a network to generate periodic and on-demand calls. A number of vendors have monitoring tools available today, and most are evolving these technologies to work even better.

While these methods are quite useful, they do not tell you what level of service the customer is actually experiencing on the handset. An even better way is to leverage technology which allows actual monitoring of user calls, or at least a representation of them – this is generally called "passive monitoring" – at the customer level.

Achieving User Quality Management

Unlike other monitoring solutions, UQM provides a 'user view of the network' not a 'network view of the user.' This is an important distinction, for everything may look good on the network meanwhile, users are experiencing poor voice quality. Monitoring the user experience also means that the phone or the customer premises equipment (CPE) is the last part of the network.

With UQM, service providers will literally have a window into the actual customer experience. UQM monitors the quality of the voice service and can look at the amount of jitter, latency and packet loss, as well as produce a Mean Opinion Score (MOS)--a quality measurement--for the voice service. If MOS scores were to fall below a certain threshold, VoIP providers would immediately know about the issue and have the opportunity to proactively fix the issue before affecting potentially millions of customers. Combine this with an integrated fault and performance solution, and now you can not only see how your services are performing across the network, but how they are actually performing at the customer level. Knowing what is happening and where can help reduce truck rolls by being able to pinpoint the issue.

Pipeline

Knowledge is Power.



While some have raised privacy issues, UQM does not monitor what is being said, but only monitors the actual quality, enhancing the customer experience. This same technology can also be applied to data and video as well.

UQM can also be applied to other services such as wireless mobile services and IPTV. Not only does it allow operations to know what service quality is “actually” being delivered, but also allows marketing to understand the customer’s experience, a long and sought after goal. Call quality improves call times, helps to improve the brand of a service, helps to drive more revenue, and helps to reduce churn.

Combined with a fault, performance, security and diagnostic tools, UQM will provide an unparalleled management solution. This literal end-to-end understanding and visibility of services can allow service providers to identify and rectify problems before tens of millions of consumers are affected.