



This Executive Summary was written by LCC.

The Quality of Experience Initiative

If you have ever downloaded a video clip or music file to your cell phone and been dissatisfied, you're not alone. Recent studies of live transactions reported that more than 20 percent of mobile multimedia transactions never complete¹ and that only 12 percent of customers profess to be completely satisfied with the experience, while 64 percent confessed that they would give up trying after one or two unsuccessful attempts².

Bad consumer experience affects the entire value chain, negatively impacting all the players. When customers notice poor quality, they tend to blame the mobile network; however, the real cause of the problem could just as likely have come from poor devices or the content itself. To drive consumer adoption of mobile content, unique cooperation across each member of the content delivery value chain is paramount. As such, improved end-user Quality of Experience (QoE) will be the single most important contributor to driving greater levels of mobile content adoption on a global basis.

The MEF QoE initiative led by LCC and Zandan focuses on the key performance indicators (KPI's) and metrics that will increase collaboration between parties in the mobile value chain so they can improve users' mobile content experience. Through a set of white papers that include inputs from members of the MEF, the initiative proposes the best practices needed to improve the mobile customer experience. These best practices define fundamental quality metrics and related thresholds to enable a systematic way to benchmark between services, operating companies, and competitors. The initiative is supported by Alcatel Lucent, Boungiorno, Celltick, Hungama mobile, mBlox, Motorola, Motricity, Musiwave, Orange, Telefia and Vodafone.

The first white paper³ reviews all the aspects of implementing a comprehensive process for objectively estimating the quality of subscribers' mobile content experiences. The paper proposes three fundamental quality metrics for determining the objective QoE; content availability (including discoverability, usability, etc.), content performance (time to download, quality of download, etc), and service conformance evaluated across services and devices.

The QoE Initiative team is in the process of conducting a global piece of research (funded by LCC) to find correlations between mobile content adoption and quality experienced by subscribers, including usability, customer support, billing and more.

¹ Zandan's results with more than 150,000 tests running per month on its ASP platform

² 2005 survey commissioned by Olista

³ To receive a copy of the White Paper, please contact MEF or LCC

Quality of Experience (QoE) White Paper - Executive Summary

Quality of Experience Drives Mobile Content Take-up

Consumer adoption and demand for content is growing exponentially. Forecasts are fuelled by the ever increasing utilization of the mobile phone as the primary source for consuming content for users, essentially replacing traditional media outlets. This includes news sources such as local and national news, business reports, weather, sports as well as primary entertainment sources such as music, movies, ring-tones/logos and mobile games. Along with these sources of content, user generated and community content such as personal video, online chat rooms, mobile social networks, and more are rapidly integrating into consumers' daily lives.

Mobile content has gained a lot of traction in the wireless industry, representing the key factor for increasing ARPU in an era with ubiquitous, low cost and high quality voice services. It involves the participation of many players -- device and equipment vendors, carriers, content providers/enablers – all of them interested in continuously monitoring the end-to-end quality experienced by subscribers. By monitoring quality of experience, service outages can be detected and fixed, as can poor quality, with the ultimate goal of increasing mobile content adoption rates.

The Customer Experience Is Vulnerable

Content quality problems arise throughout the consumer “purchase” and “use” value chains, and they are not easily solved. Many issues originate with the handset. Mobile carriers support hundreds of different phone models from multiple manufacturers, not to mention portable computing devices. Each handset has a limited lifespan, and must move through the testing process to hit the market before demand for it has peaked. The rate that devices change—and the range of different hardware and software upgrades within a product line—dissuade a carrier from testing extensively how each variation works with its network or services.

Many of the most popular handsets are also the most complex, and each must be updated regularly to ensure that its software contains the latest patches. Some updates are “pushed” over the network, but many require that the consumer access a web site, download a patch to a PC, and then transfer the solution to the handset. Many users simply don't bother.

Because content services are expanding at a logarithmic rate, carriers don't have time to test every one with each unique handset. Therefore, they can't ensure that they can deliver each service to consumers as intended every time. Even if they had time for such testing, it would be labor-intensive and expensive.

What's more, an increasing number of content services are coming from third parties, so carriers don't necessarily control them directly. The services or content may be stored and delivered from outside of the carrier's network, with limited visibility and control. Yet these services operate in a highly complex and volatile technical environment with many interdependencies among various networks, systems and devices. The many complexities and interdependencies must be managed better and monitored actively if mobile content is going to realize its market potential.

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What's at Risk

Consumers aren't aware that their frustrations are being addressed, and many may stop using a service without knowing the industry is trying to fix it. Test results enable a carrier to determine which of its customers were using the service when it failed, and which had an unsatisfactory experience. A carrier can ensure that its most valuable customers are aware that problems are being addressed.

A movement is growing within carriers to improve QoE by adopting end-to-end solutions that address problems from the consumer perspective. These may solve both user satisfaction problems as well as the carriers' internal audit and control problems. The most promising approaches combine active network probes, business analytics and existing carrier systems under a controlling framework of value chain optimization (VCO).

Driving Quality Through VCO

VCO programs have recently entered the communications services market and are critical to addressing and resolving QoE challenges in mobile content. The challenge involves solving two value chain problems simultaneously. Carriers must improve customers experience with the "purchase" (order through fulfillment and cash) and "use" (switch to billed) processes, while driving operational waste out of them.

Customer Experience Assessment

A baseline customer experience assessment is the first stage. Completed within weeks, this assessment can provide tremendous insight into a carrier's most compelling risk areas. Initial assessments typically include repetitively testing a subset of a carrier's handsets. The tests involve the handsets accessing a targeted set of content services in a given market for a concentrated period. The resulting information establishes an empirical snapshot of quality and delivery from the consumer's perspective. It also allows a carrier, without further analysis, to identify critical problems that must be addressed.

Cooperation Is Necessary

While the wireless networks tend to bear the brunt of blame for poor subscriber experiences, the problem is much more complex. The root causes can just as easily be found in a carrier's backbone network, a customer's handset, a component of the service delivery platform, a third-party supplier's environment or even the content itself.

Causes and solutions will change constantly, which means ensuring QoE is an ongoing need. The quality and reliability of mobile content services will not be improved using traditional approaches. What will be required is cooperation among carriers, handset manufacturers, content providers, MVNOs, third-party hosts and the other players who stand to benefit from mobile content's success. The QoE methodology is just one important aspect of the bigger content picture.

The full white paper is available from LCC by emailing QoE@lcc.com. If you would like to participate in the QoE initiative, please contact the Suhail@m-e-f.org.