Clearing the Confusion Around LTE

By Becky Bracken

Keeping your customers happy can be an expensive proposition. But happy customers, and the ability to know what makes customers happy, is the key to an operator's ability to elevate service beyond a commodity and retain customers as a result. With the rollout of LTE networks, customer education and troubleshooting of LTE devices has become exponentially more complex, costly, and created an enormous amount of confusion for their customers. The opportunity for operators that are able to deliver a high quality, consumer-centric, transparent service is huge. The cost on the operator side of mismanaging LTE rollouts could rack up losses into the millions.

In specific terms, LTE data service issues require tier 2/3 technicians and take hours to resolve. According to JDSU, teams of tier 2/3 technicians providing data troubleshooting for a mere .1 to .5 percent of subscribers monthly, and could cost a medium- to large-sized operator millions each year. In order for operators to realize the revenue promise of LTE, support costs must be managed through clear communication and even education.

With exploding smartphone uptake and data traffic, operators are rushing to deploy LTE networks. In fact, after trailing behind the EU 3G build-out, all four leading U.S. mobile operators will have commercial LTE available by the end of 2013, years ahead of previous projections. And now that the 4G, LTE iPad has hit the scene, customers will be clamoring for the new gadget that's boasting its super, lightning-fast connection. But, the reality of 4G is lagging significantly behind the perception of 4G. As a member of Pipeline's staff put it, "I think I was on 4G on a drive to Michigan, once." He put an emphasis on "once."

According to Maravedis' 4G Subscriber Forecast, the 35 commercial LTE networks today account for approximately 6.25 million LTE subscribers worldwide. "Maravedis anticipates that 469 million LTE subscribers will be active by 2016 of which 25 percent, or 118 million, will be TD-LTE users and the rest (75 percent or 350 million) will be FDD-LTE," Cintia Garza, 4GCounts team leader said.

Operators delivering data over LTE are experiencing

the following pains, according to JDSU:

- Verifying new LTE network element interoperability to minimize service disruption

- Monitoring LTE QCI to verify data throughput to subscribers paying for a premium service

- Introducing and troubleshooting new data services and data-capable smartphones

- Identifying network element configuration errors impacting data services

- Ensuring delivery of seamless service irrespective of whether customers are on 2/3G or LTE networks

- Identifying rogue users who consume huge amounts of bandwidth and diminish service quality for other customers

- Rapidly identifying simple issues, such as misspelled APNs, resulting in fewer escalations to tier 2/3 resources

"As bandwidth itself becomes a commodity enabler, the real value moves to the services, their quality and the experience that customers expect," Miguel Carrero, director, WW Actionable Customer Intelligence, Communications, Media & Entertainment, HP Enterprise Services said. "This change also requires adjustments to customers' perception. Customers need to adopt the notion of paying for the level of services and the quality of experience that they need."

The promise of LTE has been barely scratched. Most LTE networks launched to date are primarily used for pure data transmission without standard measures of quality assurance. But quality of service will become paramount as more subscribers are pushed to LTE for other services like voice and video.

"Quality sensitive services such as voice or video over LTE are typically only available at a 'best effort' quality, thus, they merely meet customers' expectations," Carrero said. "Looking further, as the huge variety of LTE services becomes ubiquitous, operators can help their mainstream customers choose from this variety. Operators need solutions that allow them to personalize the offerings they promote to their subscribers."

Operators should aim for LTE CRM solutions that:

- Unify the view of customer profiles and preferences

- Capture analytics of customer usage patterns, demography characteristics and consumption habits

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- Promote of new offerings in real-time contexts

- Provision network policy rules and charging plans

Actionable Customer Intelligence

As LTE continues to take hold, and an increasing number of OTT services are available, operators will face a conundrum. On one hand, they do want their customers to take full advantage of this variety, but at the same time, they are at risk of disintermediation and being relegated to a "commodity provider." The most obvious way for operators to move away from a commodity business is to focus on their customers; there is a need to truly understand the customer and provide a personalized user experience that is by definition "non commodity." This personalized user experience might manifest itself in different ways, like specific service bundles or tailored customer pricing.

"Actionable Customer Intelligence (ACI) is core to an operator's ability to generate new revenue streams and improve the retention of existing customers," Cerra said. "By leveraging their own customer data, operators may add more value."

That valuable customer data can be collected from two specific areas. First, is the operators' own ecosystems. Operators can use this data to identify what services customers want, how they want to pay for them and how those services can be made to be most relevant and best to monetize.

The other direction is in the wider value chain. "Operators can use that data to inform and assist partners," Cerra adds. "This must be done carefully, protecting the privacy of the user. However, customer data, along with the networks themselves, may yet prove to be the operator's greatest asset." HP's Actionable Customer Intelligence Solution lets operators build a single, customer profile; analyze trends in usage and preferences; act with personalized offers to improve customer experience; and control congestion and offer personal profile exchange with third parties. Solutions like HP's can help CSPs improve the LTE experience.

LTE Device Testing Matters

When it comes to new fangled LTE devices, customers will expect everything to work from the time it comes out of the box. Spirent, which specializes in LTE device testing, identifies a few key questions operators and device manufacturers should address before widespread device deployment:

- Does the device conform to minimum standards?

- Does it seamlessly transition between radio technologies?

- What happens to services in the presence of realistic noise, fading, variations in the MIMO channel and adversarial network conditions?

- What happens when subscribers are moving?

- Can the device deliver the location-based services experience subscribers expect?

- Is it ready to meet the strict requirements of quality-conscious network operators?

Spirent has been involved with testing commercial LTE devices from LG, Sierra Wireless, Novatel Wireless, Samsung and Fujitsu, which use chipsets from four different vendors. "Spirent solutions ensure that our customers' products and networks not only meet baseline industry standards but go beyond them to deliver the highest possible quality of experience for subscribers," Charles Simmons,

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president of Spirent's Wireless Division said. "Quality of experience is a major contributor to the successful take-up of new products and services."

Carriers won't have too many opportunities to educate consumers about LTE-specific devices, so it's paramount that network testing is thorough. On the customer side, empowering them to control their service as much as possible is the best way for operators to communicate the value of the service. "The 'educational' process here is likely to be via introduction of new flexible charging plans that help customers realize the real value they receive and the advantages they gain over the old 'flat-rate' plans," Carrero adds. The promise of LTE for network traffic efficiency and the ability to offer a new service to consumers has yet to be realized. However, the ability to optimize LTE and ensure it meets or exceeds customer expectations may be the difference between those who succeed and those who do not.