

Managing rising data traffic to increase data revenues

by Niall Norton, CEO, Openet

Within a few years, ten per cent of all mobile connections will use 4G, but will generate 45 per cent of the traffic. With increased data traffic comes additional costs and, as well, a chance to sell ever more sophisticated services to build revenue. Operators' are becoming digital service providers and partners to those who provide digital services and content - everything from home automation services, to cloud based entertainment to mobile health products. Telecoms are becoming content delivery networks.



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I recently read that in 2012 only one per cent of global mobile connections were on 4G networks, but this one per cent drove 14 per cent of all global mobile data traffic. 4G has been described as the fastest growing mobile technology ever and market forecasts predicting that by 2017 ten per cent of all global connections will use 4G, but will generate 45 per cent of the world's mobile data traffic. This will help account for the fact that data usage is continuing to grow, as is the penetration of mobile devices with Internet connectivity. According to recent Cisco 2013 VNI forecast, Western Europe is second only to North America in the growth

of connected mobile devices with ten per cent CAGR from 2012 to 2017. Increasingly, many of these devices will be able to access LTE networks, with 96 per cent of European operators surveyed by Informa Telecoms & Media claiming to have a live or pending LTE network.

These figures are useful in setting the context. Just a quick look at the websites of mobile operators and we can see how they've changed in a few years - they're now data centric. In many bundles voice calls and text messages are unlimited, and it's data usage that has caps (by volume,

and increasingly speed). The next step in the operators' evolution is moving to become digital services providers and partners to those who provide digital services. Several operators are now providing digital lifestyle products and services - from home automation services, to cloud based entertainment to mobile health products. Telecom networks have come a long way from being a phone company and are poised to be content delivery networks.

At the heart of this evolution - services that require data.

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With this increase in data traffic comes both opportunities and threats. The network and infrastructure CapEx costs, as well as the ongoing OpEx, are significant threats. The opportunities are there too - the optimal success formula being how operators best turn this massive increase in usage into profit. Many of the most innovative operators are rolling out LTE networks, seeing average data usage and revenues increase and facing the ever increasing data upsurge with a confidence that this will enable them to sell many more value based products and services to their customer base. And they're doing so profitably.

The key to success is to manage the mobile data gap - that is the data revenue per subscriber is greater than the data traffic cost (and associated cost to serve) per subscriber for delivering data. It is not just a case of managing down network costs to serve - it's also clearly about increasing data enabled revenues.

Innovative operators are managing the mobile data gap, and many have taken steps to better optimize mobile data traffic. Operators have reported optimized data traffic growth due to such measures as web and video optimization, reduction in peer-peer traffic, as well as tight control and enforcement of fair usage policies. These controls and traffic management initiatives are the start of an increased focus on proactive data traffic management, and we will continue to see an increase in their range and implementation over the next few years.

Generating increased revenues on the other hand requires operators to be able to offer a more rich and diverse portfolio of 'mobility enabled' solutions to their customers directly, and indirectly via content partners. Such services include video, location based services, content and real time services that maximize the ever increasing features of their devices. Revenues also are now being also generated from partner deals where mobility is transforming existing business models, cloud based service offerings and machine-to-machine business models. These services are real time typically to make them valuable.

Cost control to revenue generation

When data usage started to cause some alarm bells to ring, many operators bought policy management systems to add controls to network usage. Typically the first use case was to implement fair usage policies. Policy management systems have come a long way since the early days of fair usage, and they're now used by marketing in product development, as well as by network. Knowing which traffic to apply required bandwidth to, and what rules to apply to different traffic types, from different customers, all helps in controlling network cost. For example, deciding to off-load one traffic type (e.g. video) to wi-fi for certain customers, may result in cost optimization. Using the same policy system an operator may decide to allocate a higher QoS to traffic for one content partner for streaming videos, rather than just best effort - this example shows how policy is being used for product development as well as network optimization.

However, traffic (and associated cost) optimization is only one part of the equation. The other is to increase data revenues at a fast enough rate. This comes from looking at increasing revenues for the delivery of data services and also looking at new business models and revenue sources.

We know that mobile data can increase revenues and overall APRU, a challenge many operators face is that revenue uplift will not be enough to balance the cost of providing and maintaining networks to cater for the increases in mobile data traffic volumes. For many operators this is still a significant strategic issue, while others are meeting this challenge and are now starting to implement controls to decrease average network costs. The main challenge is now to consistently increase data revenues and to examine new revenue streams, which will ensure that mobile data revenues exceed costs and provide a solid foundation in which to roll out new networks and services.

We've seen the move away from all you can eat plans to tiered data plans, with tiers typically volume based. This provides

a more equitable approach to pricing and also attracts low volume customers, for whom an all you can eat plan doesn't make economic sense. The addition of speed tiers is starting to happen in some countries (e.g. with LTE networks), and some operators are now offering off-peak time based pricing for mobile data to try and help balance network traffic. Tiered pricing of data is just the start - operators now know that they need to deliver data enabled services that customers will value, and pay for accordingly.

It doesn't end in tiers - The emergence of dynamic services

Increases in sophistication in customer behaviour are radically changing how operators develop and market their services. The immediacy of customers' data experience is resulting in the continuous marketing loop of analyzing behaviour, developing offers, launching and promoting services, and back to campaign measurement at a faster rate than ever before (see Figure 1). Add new services from partners into the mix and the process becomes more complex as well as faster. New offer and service development will become increasingly dynamic, as operators continue to develop their pricing and product strategies based on value, rather than be involved in a race to the bottom by selling a generic commodity. As operators look at how to best monetize these new and enhanced services, they will need to look at pricing and packaging flexibility that exists in legacy systems and ask that it provides the flexibility and fast time to market that dynamic data driven services will require.

Dynamic Services enables value based pricing options to be presented to appropriate segments in real-time based on their context and network usage patterns. This requires real-time visibility so that customers can see when they are approaching thresholds and select from the available options e.g. to purchase additional data entitlements or accept a slower network speed.

Dynamic Services are enabled by advanced PCC (*policy and charging controls*) systems.

In addition to network access control and data monetization, PCC systems have access to real-time customer usage data which can be harnessed into customer intelligence to drive service innovation. Recent advances in PCC have seen the addition of interaction software which provides a secure channel to the customer device, which drives real-time customer interaction. This provides a step change in the evolution of PCC systems which speeds up the marketing continuum illustrated in Figure 1, by proving real-time offer presentation, interaction, communications and purchasing.

There are many successful examples of Dynamic Services being launched by operators - ranging from data, application, speed 'bolt-ons, to shared data plans, to service passes. What is consistent is that they need real-time charging and monetization, and policy is now being used to help develop products to increase revenues, as well as control costs. Real-time charging integrated with policy is now a given in providing the foundation for data offers. Operators are now evolving this to the next stage and delivering engagement

with the policy and charging control infrastructure direct to subscribers, who can view and purchase services, and to content providers, with controlled access to Policy and Charging functions.

PCC integrated with a real-time engagement capability is the key to operators delivering a Dynamic Services strategy and giving customers the choices needed to let them spend their money on the services that they want.

Real-Time - The foundation for data monetization

In order for operators to increase data revenues by offering innovative plans and dynamic services they need to be supported by systems that provide the real-time capabilities that customers need when buying and using data enabled services.

For customers to understand and take advantage of compelling offers 'right now' they must be able to explore and purchase 'right now.' As operators move into a world of value based charging with

its shared plans, sponsored services, and context specific passes, the emergence of the network as a platform drives us to the inevitable conclusion - with data and content we have to do everything, not just some things, in real-time.

Real-time data is the key to securing a sustainable place in the value chain for operators. It enables customers to make more choices, faster. It allows QoS to be built in to an infrastructure that now plays the role of marketing enabler. Operators can expand real-time PCC direct to the device, run real-time analytics and by moving real-time capabilities direct to the customer deliver real customer choice and deliver value. This is starting to happen and operators are now seeing that with the potential of real time operations in the hands of the business, anything is possible. ●

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