"Cashing In" on the Promise of LTE

By *Paul Sutton*, *Sukki Sandhar*, and *Manish Gupta*

The start of each new year is a temporal benchmark at which time we consciously survey the progress and stumbling blocks of the prior period and fold that information into an updated perspective on what is to come. It's a time to take stock and re-prioritize our projects and resources so we can maximize our opportunities during the next critical twelve months of our economic recovery and growth. For many operators, rising to the top of the list of critical agenda are decisions on "when" and "how" they are going to deploy an LTE network.

A number of operators have already answered the "when" question in 2009, and LTE projects are

The rationale for that decision is well substantiated and acknowledged. Evidence suggests that instead of implementing reactive "baby-step" point solutions to individual network and service offering challenges, deploying a comprehensive LTE network will deliver a much more impactful architectural and capability upgrade. This is

already committed to by KDDI, Softbank, Vodafone, T-Mobile, Orange, Verizon, AT&T, Telus, Optus, and others. With the industry looking at substantial proliferation of LTE networks globally between 2010 and 2013, that list is certain to grow.

essential for operators who see the exponential growth in service usage as both a boon, with regard to new revenue opportunity, and a burden, with regard to punishing traffic load on their current infrastructure. Deployment of LTE networks enables operators to make sweeping

enhancements to their ability to affect both top-line and bottom-line performance, raising their performance capability bar in line with the steep usage growth curve.

Therefore, LTE can be seen as much more than a network solution. It can indeed be seen as an evolutionary change that provides a new order of benefit… across multiple operational parameters. For example, LTE can deliver:

- Flexibility that will enable a more rapid introduction of new services and devices

- The ability to deploy existing services and legacy infrastructure in a manner that smoothly migrates them to be deployed alongside innovative new services

The last three listed benefits are important to an operator's ability to more effectively and cost-efficiently deliver services. However, in most cases the total bottom-line benefit of harvesting these operational savings is likely insufficient to offset the type of major incremental investment an LTE deployment requires. To justify LTE implementations, it is critical to achieve rapid return on investment (ROI). Moreover, in today's economic environment, accelerating the pace of return (POR) becomes a critical factor in positioning an operator to participate in and exploit opportunities during the impending economic recovery. Note, however, that the first three points of benefits as listed above go directly to improving an operator's ability to respond

- Capability to engage in new partnerships and revenue opportunities based on innovative business models

- The ability to achieve better spectral efficiency

- Increased throughput and cell capacity with reduced response times

- A flatter, more simplified network architecture that reduces the need for multiple interfaces and shortens interoperability testing

quicker, deliver quicker and therefore exploit new revenue opportunities more rapidly and efficiently. With these benefits added into the equation, LTE network deployment should in fact be able to produce a positive ROI in short duration. It is clear that early monetization of LTE networks is crucial not only for proving-in business cases for deciding whether to deploy, but it is also one of the most critical objectives for all successful LTE implementations moving forward.

In order to understand how to manufacture opportunities for early monetization it is becoming evident that operators need to focus on one critical aspect of "how" their LTE network is deployed. That aspect is the ability to create and gain finely tuned control of revenue generation opportunities by establishing a robust Policy Orchestration capability. Policy orchestration capability, when effectively implemented, enables revenue generation and/or margin maximization on a number of levels. Policy management capability provides LTE network operators the ability to map subscriber profile information in real-time to usage , service plan, presence and personal attributes to unleash a virtually unlimited set of mass customizable services that meet the unique needs and interests of subscribers. Moreover, with policy orchestration, operators can take advantage of cross-sell and up-sell opportunities as they occur in real-time. Similarly businesses that wish to tap into the operators' end-user subscriber base will be able to leverage the rich profile information the operators can control with policy orchestration and help drive and create new services and offerings that operators by themselves would be unable to deliver. Clearly this last type of new revenue opportunity requires that operators be able to accurately track usage and revenue share across partners. This includes new partners that have not previously interfaced with telecommunications provider networks for the purpose of billing or collecting revenues. This is another area where implementing policy orchestration can be an integral part to solving a problem.

Reducing revenue leakage, while not creating new revenues in a strict sense, is another way to gain revenue and profit that were previously unrealized for an operator. The policy management mechanisms that drive the aforementioned capability to cross-sell services on LTE networks as a function of a subscriber's usage and service profile can also address leakage situations. They

can be used to push those users who are exceeding their usage allotment to service self-activation that extends their usage allotment and collects payment for that increase. Subscribers are therefore notified in real-time of their usage status and given a much more customer-friendly experience than simply blocking usage after the threshold is exceeded.

Highly effective policy orchestration capability also provides LTE network operators the ability to "fine-tune" their services and offer value pricing. Rather than needing to set one price for all like services, to all subscribers, policy orchestration affords operators the option to selectively price for the following:

- A specific subset of subscribers – enabling operators to decrease pricing to an affiliated group or a group with similar usage characteristics in order to stimulate service adoption

- A specific subset of offerings – for example, a separate price for access via mobile phone to eBay

- A specific period of time – affording operators the capability to offer "free for a limited time only" services

Such value pricing allows operators to increase revenue and profitability by giving them powerful levers with which to create and exploit customer demand, and in turn create revenue opportunities across new markets.

The benefits of a solid policy orchestration capability go even beyond these advantages. Take for instance the ability to segment and differentially charge for varying levels of Quality of Service (QOS). Those who require and are willing to pay for greater bandwidth and speed on demand will be afforded that ability while the operator gains on two fronts. First, the additional

revenue for this premium access increases profitability. Second, those unwilling to pay for premium access can be pushed to off-peak periods and away from peak periods where premium charges can be assessed. This more profitable traffic shaping helps ensure additional network build is done in a manner that maximizes cost-effectively and increases use of previously dormant and unproductive off-peak network resources.

As we look back at the past year's progress and forward towards what clearly will be a year of significant activity for LTE, we can affirm that LTE networks can provide opportunity for substantial gains in both network operations efficiencies and new revenue generation. However, the difference between success and struggle very much depends on the ability to deliver early monetization of LTE network investment so as to accelerate pace of return. Realizing "early" new revenue is a necessary precursor to realizing LTE operational efficiency. What is now also becoming increasingly clear is that implementing effective policy orchestration is key to delivering early monetization and a critical linchpin to LTE deployment success.