LTE – Mid Year Review Infrastructure

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As we approach the middle of 2010, then, it's worthwhile revisiting the state of the LTE global network deployment.

Operators are still looking for vendors with solutions that allow LTE to be launched as an overlay or as part of a 2G/3G network renewal. Th ey're still looking to pair LTE launches with new applications and services (including voice, some day).

The positioning of 4G has been a real point of debate among operators. Last week MetroPCS has launched world's first LTE commercial handsets on its new LTE network with positioning as new 4G service against its 3G with unlimited data, text, voice, Video and new content agreements with real etc. We witnessed Sprint doing something similar with their new WiMAX based 4G core. We saw high average data consumption at Clearwire (currently at 7 GB/mo) – clearly a precursor of what's to come with new 4G networks.

Alcatel Lucent, Huawei, Ericsson , NSN ,Samsung and ZTE are competing to become market leaders in LTE based 4G Infrastructure. However, it's much too early to translate commercial or trial reference numbers into clear indications of market leadership – though they may well support mind share leadership.

	Alcatel Lucent	Ericsson	Huawei	Motorola	NSN	Samsung	ZTE
Trial Reference	45+	?	60+	20+	25	15	20+
Commercial References	3	6	9	3	2	4	5
Known Customers	AT&T DoCoMO Verizon	AT&T DoCoMo MetroPCS TeliaSonera Verizon	China Mobile MTC Net4Mobility Proximus Telenor TeliaSonera	China Mobile KDDI Zain Saudi	DoCoMO KDDI	MetroPCS LG	CSL Sonaecom Telenor Pannon Promonte

Source: Current Analysis

LTE Early Deployments and Market Drivers

In any new market, the first commercial deployments are always highly scrutinized; they provide insights into how a technology works, what it can deliver, its state of maturity, and how future launches can be improved. LTE is no different, meaning all eyes will be on launches in the Nordics (Telia Sonera), North America (Verizon Wireless, Metro PCS) and Asia (DoCoMo, KDDI).

Data Cards and Dongles. Talk with any operator or vendor involved with LTE and you will hear the technology positioned as a solution for addressing growing mobile traffic to PCs, laptops, smartphones, featurephones, consumer electronics, sensors and everything in between. For the next year, however, data cards and USB dongles will dominate usage, based on the relative lack of device diversity in the early days of a market along with early users focused primarily on laptop and netbook data access.

Data Services. Th e focus of early LTE device availability on data devices (axiomatic of any new mobile broadband technology) implies that early services will focus on data. More specifically, it implies that despite operator and vendor eff orts to standardize voice delivery over LTE networks, voice services won't be an integral part of most LTE off ers for the next 12 months or so. Where they are, they will come thanks to existing 2G/3G coverage and CS fallback.

North America & Asia. The Nordics may have enjoyed the world's first commercial LTE services, but broader momentum will first register in North America and Asia. Credit relatively new HSPA (and HSPA+) networks in Europe and Latin America along with relatively recent (or future) spectrum availability that will make commercial LTE in markets like Europe, and India a medium to long-term proposition.

Biz Model Explorations. Where LTE services (trial, commercial or otherwise) are launched, operators will leverage the opportunity to test out their assumptions around the technology from a business perspective. How will users react to policy decisions around usage caps? What applications will dominate usage? How will LTE free capacity (or drive usage) on 2G and 3G networks? Will indoor vs. outdoor usage patterns mimic 2G and 3G? We are already seeing these details from the early experience of TeliaSonera; and more of these findings – benefitting from a greater sample of users – will follow.

Operators Buying Criteria

Operators planning on LTE deployments in the near-term need to query their network vendors on their support for voice thanks to circuit-switched fallback (CSFB). Where the IMS-based VOLTE has become the de facto LTE voice plan for the industry, it's not going to be a near-term option for most operators. Few vendors, however, have done much to highlight their CSFB capabilities or commercial solutions – making it key for operators to verify them.

• Like any new mobile broadband technology, data devices will dominate initial LTE launches. For LTE to become the mass-market success operators envision for it, the technology needs to move beyond PC cards and dongles. Speeding this process will require operators to make their demands well known, working closely with vendors to drive supply.

• Operators need to consider leveraging LTE launches to introduce new policy tools into their business. EV-DO, HSPA and HSPA+ launches have taught the market that fully monetizing mobile broadband services will require new ways of charging for usage, throttling usage and offerring tiered experiences. It may be diffi cult to add these new policies on top of existing services – making the launch of new network like LTE a logical starting point.

• WiMAX operators may to consider TD-LTE as a future network evolution. With vendors reiterating their commitment to 802.16m, there's no need for operators to worry that WiMAX as a technology will cease to advance. Regardless, broad mobile operator interest virtually ensures that LTE will enjoy scale and ecosystem efficiencies over WiMAX – with TD-LTE offering a solution for WiMAX operator unpaired spectrum assets. To this end, it makes sense for operators to hedge their bets with solutions and vendors that can support both technologies.