

Executive Summary

The third quarter of 2011 has come to its end, accompanied by remarkable events for the 4G industry. LTE operators all over the world have made important commitments for deployments, spectrum acquisitions, strategic alliances with other carriers or vendors, as well as network upgrades to newer technologies. Strategic partnerships have become the dominant trend among 4G operators, which have realized that they cannot survive alone but must cooperate among themselves by combining or sharing resources such as capital, infrastructure, and spectrum.

This trend has created important synergies among some of the largest operators in the world, which are paving the way to build the most advanced 4G networks today. This quarter, Sprint and LightSquared announced a partnership to share their networks. LightSquared will have the right to sell access to Sprint's LTE network, while Sprint can also piggy-back on the other's existing capacity where needed. This partnership will be mutually beneficial for both carriers: LightSquared won't have to incur high capital investment costs since Sprint's architecture can support LightSquared's LTE network on the same base stations as its CDMA network, and Sprint will have access to LightSquared's spectrum.

Clearwire, after having trialed both flavors of LTE, TD-LTE and FDD LTE, confirmed it will begin deploying "LTE-Advanced-ready" network technology in addition to maintaining its mobile WiMAX network and it will use TD-LTE technology. Clearwire announced its collaboration with China Mobile on TD-LTE devices. The two companies will work jointly to further accelerate the time-to-market availability of high volume TD-LTE chipsets and devices that should be commercially available starting in 2012. However, Clearwire's financial condition leaves a lot of room for questioning whether the operator will successfully deploy TD-LTE and the timing of that deployment. Clearwire must receive additional funding of at least \$600 million to begin LTE deployment.

Much discussion is ongoing about whether the so-called transaction between AT&T and T-Mobile will foster or hamper competition in United States. The merger with T-Mobile would increase AT&T's spectrum and capacity in very congested cities. Whether the transaction is approved or not by the FCC, AT&T has taken one step forward on its LTE plans, and during Q3 2011, the operator announced the commercial availability of LTE in 5 cities: Houston, Dallas, San Antonio, Chicago, and Atlanta.

LTE Deployments Trends

At the end of Q3 2011, there were 206 major mobile operators committed to LTE. 182 operators were committed to launch FDD LTE, 24 operators were committed to launch TD-LTE and 35 operators were commercial with LTE. Among the most notable LTE deployments added during the quarter, we found AT&T (USA), Roger Wireless (Canada), LG U+ (South Korea), SK Telecom (South Korea), and Etisalat (UAE), among others. In total, 15 new commercial LTE networks were added during the quarter. The 35 commercial LTE networks today account for approximately 6.25 million LTE subscribers worldwide, according to Maravedis 4G Subscriber Forecast (October 2011).

LTE TDD is becoming truly complementary to FDD LTE as many governments are now auctioning globally assigned spectrum for mobile broadband. There are significant spectrum resources suitable for TD-LTE across a wide range of frequencies, including 2.3GHz (100MHz) band available for LTE in APAC in countries such as India, Korea and China, and 2.6GHz (50MHz) band available for LTE in all the regions.

We believe that TD-LTE momentum will start in Asia Pacific in 2012-2013. At the end of October 2011, there were 3 commercial TD-LTE networks, one from Aero2 (Poland), one from Hi3G (Sweden, Denmark) and the other from STC (Saudi Arabia). The region where more TD-LTE trials have been conducted is APAC with 12 operator's trials, followed by Europe with 9 trials. Although we have seen some commercial TD-LTE deployments happening in 2011 outside Asia, these deployments will not drive the economies of scale expected from the deployments that will occur in China and India next year, and volume production of TD-LTE handsets will not be realized until the end of 2012. Carriers launching TD-LTE in 2011 and early 2012 will use devices such as USB dongles, data cards and routers. We now expect TD-LTE smartphones will be ready for commercial launch in early 2013.

The most recent Maravedis 4G Subscriber Forecast (October 2011) predicts that LTE subscribers will grow from 12 million in 2011 to 448 million in 2016. By the end of 2016, 80% of the LTE subscriber base or 350 million will be FDD LTE subscribers, while the remaining 20% or 97.5 million will be TD-LTE subscribers. We expect, that the TD-LTE subscriber uptake will commence in 2013.

More findings in the report!

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