



Motorola LTE Update

Interview with Darren McQueen

Q&A



Vice President
Wireless Broadband Access
Technologies
Home & Networks Mobility/
Motorola, Inc.

1. Is Motorola making progress with its LTE platform?

Yes, in fact, we've just announced our intention to have products for the 700MHz and 2.6GHz spectrum bands in our first commercial release of Long-Term Evolution (LTE) solutions next year as well as support for the LTE Time Division Duplex (TDD) variant in Asia and Europe. We're planning to introduce our initial LTE solutions in 'Q4 2009 and anticipate further deployment activities in mid to late 2010. The timing for most commercialization activities will be based upon a combination of 4G spectrum licensing trends globally, availability of devices and individual customer demands.

In March 2008, Motorola announced a key component of our LTE development activities is our ability to reuse much of the earlier WiMAX development activities and leverage it as common baseband platforms capable of both LTE and WiMAX. Motorola plans to begin deploying the new hardware in 2008 in commercial WiMAX networks which will provide Motorola LTE customers a distinct advantage deploying LTE on a field proven platform in 2009 and beyond.

2. Does Motorola have any LTE trials underway?

We have been conducting LTE demos in our labs since November 2007 and will begin extensive field trials in the second half of 2008. Motorola is very proud to be among the vendors selected by Verizon Wireless and Vodafone to participate in their joint LTE trials during 2008. We anticipate additional trial activities in 2008 as well as early 2009.

Motorola is pioneering mobile broadband innovation and leveraging its OFDM expertise with an industry leading LTE end-to-end solution that, combined with Motorola's fully-integrated and customizable media solutions, accelerates the delivery of personalized, rich media experiences.

3. What market forces are working in LTE's favor and what types of service providers will adopt it?

Increased data consumption continues to drive service providers to evaluate both radically different technology and cost models to meet the evolving needs of their customers. LTE delivers on both counts. With LTE's all-flat, IP architecture, operators will be able to deliver voice (VoIP based), data, video and full mobility of these elements between customers' homes, offices schools and transit mediums of choice.

We have seen both traditional 3GPP (GSM-based) and 3GPP2 (CDMA-based) service providers in the US, Europe and Asia publicly announce intent to evolve their networks along the LTE path. Motorola expects to see the same momentum carry through into 2009 and 2010, expanding into other regions of the world.

LTE provides a smooth migration for all mobile operators today as it can be deployed in existing Frequency Division Duplex (FDD) spectrum bands while offering the ability to hand over calls to existing 2G and 3G networks and maintain global roaming agreements. These service providers are typically seeking to improve their total cost of ownership over time while maintaining and improving the user experience and meeting the steadily increasing data

demands of the populations they serve – LTE delivers in all these fronts. As I discussed earlier, we believe that with our WiMAX development and deployment experience, LTE TDD will fit nicely with those operators having TDD spectrum that wish to deploy LTE.

4. What is Motorola's view on the 700MHz and 2.6 GHz bands for LTE deployment ?

The US 700MHz auction provides a great opportunity for LTE as the spectrum auctioned was FDD and provides a great band for nationwide coverage. The large spectrum bandwidth awarded and LTE's inherent spectral efficiency also provides operators the capacity they need to meet future demand. With the recent ITU decision, 700MHz may also be opened up for auction in EMEA in 2010-2012 timeframe meaning that LTE in 700MHz would also be a very suitable band for LTE global roaming. Motorola plans to have LTE solution in the 700MHz spectrum by 2009.

With regards to 2.6GHz, Norway was the first country in Europe to auction its 2.6 GHz spectrum at the end of last year and Sweden followed about a month ago. The 2.6GHz band is great for capacity as it offers the unique opportunity for LTE deployments in maximum spectrum bandwidth by providing channels of up to 20 MHz. Several other countries such as Italy, Germany, the UK and Austria are scheduled to auction their 2.6GHz spectrum in 2008 and many other countries will follow with auctions planned in 2009. Motorola has committed to delivering LTE in 2.6GHz spectrum with its first commercial release in 2009.

Darren McQueen's Bio

Darren McQueen is a member of the Broadband and Cellular Networks Senior Leadership Team, and serves as Vice President, Global Product Management, Wireless Broadband Access Technologies for the Home & Networks Mobility Business.

Prior to this role, Darren was Vice President for LTE, CDMA and Core Network Products. In that role, he was responsible for leading the CDMA and LTE Product Management organizations as well as Motorola's global IMS, UMA, Seamless Mobility, Messaging and Converged Core product management teams. In earlier positions, Darren served as Senior Director, Systems Solutions Product Management for the CDMA Systems Division where he worked with Motorola's regional teams to develop end to end CDMA system roadmaps, assuring technology and product roadmaps aligned with regional market requirements.

Prior to joining Motorola, Darren was Director, CDMA and Common Platform Product Management for New Product Introduction for Lucent Technologies' Mobility Solutions Radio Access Network organization. Under his leadership, his team brought to market the first US based Commercial High Speed Data (CDMA EV-DO) product offering operating at speeds greater than 2.0 Mbps.

Darren has an extensive business and operations background in product and program management. He has also served in positions within Human Resources and Labor Relations. He holds an MBA from the University of Chicago, a MS degree in Management Information Systems from Stevens Institute of Technology and a BS degree in Electrical Engineering from Fairleigh Dickenson University.



MOTOROLA

motorola.com