

LTE and VoLTE

What it is, what it gives you

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What is LTE?

- LTE (Long Term Evolution) is an Access technology defined by 3GPP.
 - First LTE definitions in 3GPP Release 8, completed in December 2008.
 - Peak Data Rates - Downlink up to 170 Mbps, Uplink up to 75 Mbps.
 - Achieved through use of MIMO and OFDM.
 - Low latency – session establishment of ~10ms.
 - Definitions for both FDD and TDD.
 - Can use spectrum allocations of varying size.
 - Up to 200 users per cell attached at once.
 - No support for Circuit Switched voice calls.
 - 204 networks launch, 121 million connection at Q2 2013; predicted 175M by YE13

- LTE-Advanced builds on LTE.
 - Completed in Release 10, December 2010.
 - Higher order MIMO, Carrier Aggregation – peak downlink in excess of 300Mbps
 - 3 LTE-Advanced networks launched

Voice over LTE

- LTE is an All-IP network => either voice calls remain on 2G/3G or need to evolve to be delivered on LTE.
 - GSMA defined Voice over LTE in 2010, based on IMS.
 - Launched in 4 networks; many commitments to launch for 2013 and 2014.
- Some operators choose to still have voice service on 2G and 3G via Circuit Switched Fallback (CSFB).
 - Service to market quickly but limited evolution path
 - Seen as an 'interim solution' on path to VoLTE, but is not a mandatory step.

