LTE

LTE, short for Long Term Evolution, is considered by many to be the obvious successor to the current generation of UMTS 3G technologies, which is based upon WCDMA, HSDPA, HSUPA, and HSPA. LTE is not a replacement for UMTS in the way that UMTS was a replacement for GSM, but rather an update to the UMTS technology that will enable it to provide significantly faster data rates for both uploading and downloading. Verizon Wireless was the first U.S. carrier to widely deploy LTE, though MetroPCS and AT&T have also done so, and Sprint and T-Mobile USA both have plans for LTE. In fact, Sprint is phasing out its WiMAX network in favor of LTE. Verizon Wireless and AT&T currently have incompatible LTE networks, even though they both make use of 700MHz spectrum. AT&T and Verizon Wireless LTE customers often see download speeds that exceed 15Mbps, and upload speeds in the 10Mbps range.

Also known as: "Long Term Evolution"

LTE (Long Term Evolution) is a 4th-generation wireless standard.

The 3GPP Release 8 specification outlines the features and requirements. Key features include:

•Peak data rate: 100 Mbps DL within 20 MHz bandwidth (Peak DL data rate in 10 MHz bandwidth: 70 Mbps (approx.) for Cat 3 device)

·50 Mbps UL within 20 MHz bandwidth. Actual throughput depends on the network configuration, band-width assigned to the UE, the number of users, and RF signal conditions.

•Up to 200 active users in a cell (5 MHz)

•Less than 5 ms user-plane latency

•Supported bandwidths: 1.4 / 3 / 5 / 10 / 15 / 20 MHz

•Spectrum flexibility: 1.4–20 MHz (3–20 MHz in future F/W release)

•Enhanced support for end-to-end QOS

•Frequency Division Duplexing (FDD)

•Physical layer uses: DL: OFDMA (Orthogonal Frequency Division Multiple Access).Modulation: QPSK, 16QAM, and 64QAM UL: Single Carrier FDMA (single carrier modulation and orthogonal frequency multiplexing) Modulation: QPSK and 16QAM

•MIMO (Multi-Input Multi-Output) antenna support