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2010: 4G arrives

In December 2009, Ericsson launched the world's first commercial 4G network in collaboration with TeliaSonera (previously Swedish PTT Televerket). The network was based on the new standard for mobile telecommunication systems: LTE, Long Term Evolution.



In December 2009 TeliaSonera launched the world's first and largest commercial Long Term Evolution (LTE) service in Stockholm, supplied by Ericsson. This historic rollout was completed well ahead of plan.

From the late 1980s onwards, mobile telecommunication systems underwent generational shifts. Today, the first NMT network is thought of as 1G (first generation), followed by 2G (GSM), 3G and so on. Each new generation of mobile networks enabled new services for mobile users. When it became time to look at the development of 4G, the focus was on delivering real broadband to mobiles, to accommodate the increased usage of smartphones.



Several different technologies competed to become the established standard for 4G. Ericsson did look at many of them, such as CDMA2000 and WiMax, but ultimately decided to pursue a

technology called LTE, short for Long Term Evolution.

LTE, named within the collaborative organization 3GPP in November 2004, utilized an air interface for downlinks (from the mobile mast to the device) and another air interface for uplinks (from the device to the mobile mast). This, along with the access technology LTE used for the transport of voice and data traffic, provided a fast and stable network.

In March 2008, the International Telecommunication Union-Radio (a UN agency), defined the standard for 4G. It set the goals for 4G to achieve speeds of 100 Mbps for mobile devices and around 1 Gbps for stationary ones. (The initial networks launched as 4G did not reach these speeds but are retrospectively referred to as 4G.)

In late 2009, Ericsson carried out the world's first commercial launch of an LTE network, with Sweden's TeliaSonera (the previous Swedish PTT Televerket). Ericsson announced that this network now made it possible for people to watch seamless TV or read newspapers, regardless of location, on their mobile devices. In June 2010, during the Swedish Crown Princess' Royal Wedding, Swedish TV companies broadcasted live via 4G from the celebrations in Stockholm.

Ericsson's network for TeliaSonera built on LTE Radio base stations, part of the "RBS6000 series", which had been launched by Ericsson in 2008. These radio base stations for multiple standards allowed the use of 2G, 3G, and 4G in one device (on different frequency bands). Compared to previous radio base units, the RBS6000 required 25% less space and could reduce energy consumption by up to 65%.

For their work in developing several of the thousands of innovations that together constitute LTE technology, eight Ericsson employees were recognized in 2014 by being nominated for the "European Inventor Award 2014." Their work included contributions to air interfaces and base station design for mobile networks. 4G proved to be a significant advancement for mobile network users. In the last quarter of 2015, active LTE subscribers worldwide were estimated to be 200 million.

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