



## A Review on growth of 4g technology

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**ABSTRACT : 4G** means **fourth generation**. It is fourth generation of mobile telecommunications technology, succeeding 3G. A 4G system must provide capabilities defined by ITU in IMT Advanced. Potential & current applications include amended mobile web

access, IP telephony, gaming services, high-definition mobile TV, video conferencing, 3D television, & cloud computing. Two 4G candidate systems are commercially deployed: Mobile WiMAX standard first used in South Korea in 2007, & first-release Long Term Evolution (LTE) standard . This has however been debated if these first-release versions should be considered to be 4G or not, as discussed in technical definition section below. In United States, Sprint (previously Clearwire) has deployed Mobile WiMAX networks since 2008, while MetroPCS became first operator to offer LTE service in 2010. USB wireless modems were among first devices able to access these networks, with WiMAX smartphones becoming available during 2010, & LTE smartphones arriving in 2011. 3G & 4G equipment made for other continents are not always compatible because of different frequency bands. Mobile WiMAX is not available for European market as of April 2012.

### 1. INTRODUCTION TO WIRELESS COMMUNICATION

**Wireless communication** is transfer of information between two or more points that are not connected by an electrical conductor. most common wireless technologies use radio. With radio waves distances may be short, such as a few meters for television or as far as thousands or even millions of kilometers for deep-space radio communications. This encompasses various types of fixed, mobile, & portable applications, including two-way radios, cellular telephones, personal digital assistants (PDAs), & wireless networking. Other examples of applications of radio *wireless technology* include GPS units, garage door openers, wireless computer mice, keyboards & headsets, headphones, radio receivers, satellite television, broadcast television & cordless telephones. Somewhat less common methods of achieving wireless communications include use of other electromagnetic wireless technologies, such as light, magnetic, or electric fields or use of sound.



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The term *wireless* has been used twice in communications history, with slightly different meaning. This was initially used from about 1890 for first radio transmitting & receiving technology, as in *wireless telegraphy*, until new word *radio* replaced This around 1920. Term was revived in 1980s & 1990s mainly to distinguish digital devices that communicate without wires, such as examples listed in previous paragraph, from those that require wires. This is its primary usage today. LTE, LTE-Advanced, Wi-Fi,

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