



 Telecommunication is a system used in transmitting messages over a distance electronically. A famous tool that is used widely for telecommunication is the telephone. Telephones are electronic equipments that convert sound into electrical signals that can be transmitted over distances and then converts received signals back into sounds. Telephones have evolved over the years.

Looking back into the history of telephones, radio telephony was first used on the first-class passenger trains between Berlin and Hamburg in 1926 in Europe. At the same time, radio telephony was introduced on passenger airplanes for air traffic security. Later radio telephony was introduced on a large scale in German tanks during the Second World War. In 1940s, the walkie-talkie was introduced by Motorola which is a backpacked two-way radio, together with a large hand-held two-way radio for the US military. This battery powered "Handie-Talkie" (HT) was about the size of a man's forearm. In 1946, the Mobile Telephone Service was introduced in St. Louis.

 Leonid Kupriyanovich a young Soviet radio engineer from Moscow created a portable mobile phone, and named it the LK-1 after himself in 1957. This mobile phone communicated with a base station and consisted of a relatively small handset equipped with an antenna and rotary dial. The LK-1 weighed 3 kilograms and could operate in a range of up to 20 or 30 kilometers. It’s battery can last up to 30 hours. The ‘pocket’ version of this phone was created in 1958 which weighed about 500 grams.In 1960, the first fully automated mobile phone system for vehicles known as MTA (Mobile Telephone system A) was launched in Sweden. MTA was developed by Sture Laurén and other engineers at Televerket network operator and allowed calls to be made and received in the car using a rotary dial. An upgraded version called Mobile System B (MTB) was introduced In 1962. Unlike MTA, MTB used  push-button telephone, and used transistors and DTMF signalling to improve its operational reliability.In 1979 the first commercially automated cellular network (the 1G generation) was launched in Japan by Nippon Telegraph and Telephone Corporation NTT .

2G

The Global System for Mobile Communications GSM standards were used in the 'second generation' (2G) mobile phone systems in 1990s.This system uses digital transmission instead of analogue transmission. Prepaid mobile phones were also advent during this era. With the introduction of 2G systems, tiny 100–200g hand-held devices took over the larger "brick" phones. Short Messaging Services more commonly known as SMS were also introduced in 2G. The first SMS was sent in 1992. Since the beginning of the usage of the prepaid system, SMS became the preferred communication method by all, mainly youngsters. 2G also enabled the sharing of media content on mobile phones. The first media that was sold was a ringtone in 1998.

3G

3G technology uses packet switching, meanwhile 2G uses circuit switching  for data transmission. The Japanese were the pioneers of 3G. 3G was launched by NTT DoCoMo Tokyo, Japan in May 2001. 3G had high connection speeds that enabled content of media streaming to 3G handsets. High-Speed Downlink Packet Access (HSDPA) is an evolution of 3G technology In the mid 2000s. This evolution allowed networks based on Universal Mobile Telecommunications System (UMTS) to have higher data transfer speeds and capacity. 3G technology also allowed access to the internet using mobile phones.

4G

In 2009 the industry began looking for data-optimized 4th-generation technologies, with the promise of speed improvements up to 10-fold over existing 3G technologies. The WiMAX (Worldwide Interoperability for Microwave Access)standard (offered in the U.S. by Sprint) and the 3GPP Long Term Evolution LTE standard were the first two commercially available technologies billed as 4G, first offered in Scandinavia by TeliaSonera. One of the main ways in which 4G differed technologically from 3G was in its elimination of circuit switching, instead employing an all-IP network. Thus, 4G ushered in a treatment of voice calls just like any other type of streaming audio media, utilizing packet switching over internet, LAN or WAN networks via VoIP.