Mobile Phones

# History of Mobile Phones (home page)

### Wireless radios

Two way radios in cars were the ancestors of today's mobile phones. Before radio telephones, telecomunications depended upon wire or cable links which were pioneered in the 1830's and 1840's.

In 1910 Lars Magnus Ericsson installed a telephone in his car, although this was not a radio telephone. While travelling across the country, he would stop at a place where telephone lines were accessible and using a pair of long electric wires he could connect to the national telephone network. In Europe, radio telephony was first used on the first-class passenger trains between Berlin and Hamburg in 1926. Later radio telephony was introduced on a large scale in German tanks during the Second World War.

In the 1950's two way radios were used in vehicals such as police cars and taxicabs, but they were not true mobile phones because they were not normally connected to the telephone network. Users could not dial numbers from their vehicles. A large community of mobile radio users, known as the mobileers, popularized the technology that would eventually give way to the mobile phone. During the early 1940s, Motorola developed a backpacked two-way radio, the Walkie-Talkie and later developed a large hand-held two-way radio for the US military.

### The first true mobile phones

Leonid Kupriyanovich from Moscow developed the portable mobile phone. It consisted of a small sized handset equipped with an antenna and rotary dial communicated with a base station. Kupriyanovich's "radiophone" had 3 kilogram of total weight, could operate up to 20 or 30 kilometers, and had 20 or 30 hours of battery lifespan. Up to 1967, each mobile phone had to stay within the area serviced by one base station throughout the phone call. This did not provide continuity of automatic telephone service to mobile phones moving through several cell areas.

# The modern cell phone (2nd page)

The origin of the modern cell phone can be traced back to 1973 when Motorola invented the first cellular portable telephone to be commercialized, known as Motorola DynaTAC 8000X. Martin Cooper, a Motorola researcher and executive is considered to be the inventor of this mobile phone which was small enough to be carried around and did not have to be based in a vehicle.

The main technological development that distinguished the First Generation mobile phones from the previous generation was the use of multiple cell sites, and the ability to transfer calls from one site to the next as the user travelled between cells during a conversation. The first commercially automated cellular network (the 1G generation) was launched in Japan by NTT in 1979 and covered Tokyo's 20 million inhabitants with a cellular network of 23 base stations. 1G (First Generation) mobile phone networks used analogue technology, had low traffic capacity, poor voice quality and poor security.

### Second (2G) and Third Generation (3G) cell phones

2G networks used purely digital technology. Unlike 1G networks, they allowed text messaging and caller identity. 2.5 or Second Generation Enhanced networks lie between 2G and 3G and allowed web browsing, navigational maps, voice mail and the sending and receiving of email messages. 3G, networks, which became well established by the end of 2007, support much higher data transmission rates. Many new services include TV streaming and video conferencing.

### Types of mobile phones available

Mobile phones could be placed into two simple categories - conventional phones and smart phones. Conventional phones are cheaper and compact, with pre-paid quickly becoming the leading low-price option. All allow you to store frequently used numbers and to send and receive text messages. They now offer a range of other features including cameras and options for custom ring tones, games, and other services. Smart phones have now spread from business users, like travelling salesmen keeping up with email, to ordinary consumers. They can often handle office documents, like spreadsheets and can access a host of applications like multimedia, games, travel, news, weather, and finance.

# Social Impact of Mobile Phones (3rd Page)

### Problems

In developed countries, like New Zealand, mobile phones have been providing an extra channel for communication, other than long-established land-lines. Although a boon for communication, there have been some down-sides, like text bullying among teenage girls and road accidents caused by inattentive drivers who were distracted by their phone.

### Benefits for developing countries

In developing countries the advent of mobile phones has had a far more dramatic impact because landlines are few or non-existent. In 1999 less than 10 percent of rural Africans lived in areas with mobile phone coverage. Today, that number is more than 60 percent. Popular mobile services include money transfers, allowing people without bank accounts to send money by text message. Many farmers use mobiles to trade and check market prices. A trader, instead of travelling for hours to meet buyers and sellers, who may not even show up, now uses his mobile phone to find the best price, and place orders. In Kerala, a coastal state of India, mobile phones almost completely eliminated fisherman’s waste — the catch left unsold at the end of the day—by allowing fishermen to call around to different markets while at sea, choose the market with the best price, and sell accordingly. In Malawi mobile phones not only remind HIV-positive patients to take their anti-retroviral drugs, but also allow community health workers to share information on their patients’ status, saving considerable time and money.