

## History of the development of mobile communications

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*Now we cannot imagine our life without this device – mobile phone. But the majority of us do not know how it has appeared and developed. Now I want to turn your attention to the early facts. Let us see how it all started.*

First step to mobile communications was the discovery of electromagnetic radio waves by Ghenrich Gerts in 1888. A little later Russian scientist Alexandr Popov invented a device for registering electrical oscillations – first primitive radio receiver.

In 1901 Guilermo Marconi installed radio-receiver/transmitter at a steam car and conducted the first ground mobile communication. But it could not transmit voice, only data (point-dash). In 1921 in the USA the Dispatching Department of Mobile Telegraph Communication appeared.

Originally the same radio systems were installed only on police cars. It was the system of unidirectional action and it can be called as modern paging communication's prototype. In 1934 USA's Congress created the Federal Communications Commission (FCC) that was managed besides the wired telephone business and the radio-range adjustment. A limited number of frequencies and, consequently, small clients' amount was one of the causes of radiotelephone communication development delay. In June 17-th, 1946 in St. Louis, USA, "AT&T" and "Southwestern Bell" companies launched the first radiotelephone network for private clients. Equipment was very bulky and was assigned for the installation in the car. In 1947 two events, important for the further development of radiotelephone communication took place. William Shokley, Walter Brattain and John Bardeen, specialists of Bell Laboratories, invented transistor, which allowed to reduce weight and dimensions of mobile phone devices. Later D. Ring proposed an idea of cellular principle of organization mobile

communication networks. The first cellular communication base station was installed in 1973 at the top of 50-storeyed Alliance Capital Building in New York. It maintained not more than 30 consumers and provided them with the stationary phones. But, despite the fact that main engineering was concentrated in the USA, the first ever commercial cellular communication network was introduced in 1978 in Bahrain. Two 20-channel cells in the range of 400 MHz served 250 consumers. More and more countries have understood the benefit and facilities that it could bring. But every country has used its own frequency range and cell phone owner could not use it in other countries; also all existing systems were analogue that could not make the call confidential. For solving of all these problems the European Conference of Postal and Telecommunications Administrations (CEPT) made a decision to create Special Mobile Group in 1982. Its goal was to develop the unique European standard of digital cellular communications. It gave the possibility to use not only radio communication, but also the Internet with the speed of 7.2 Mbps. Now the main feature is individualization – every client gets an IP. Also clients have an ability to be always online, because they pay only for traffic, not for used time. Nobody knows now, what waits us in future. But we can notice that mobile technologies have become part of every day life and will develop further. The mechanism of this movement is launched and it accelerates every year.

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