



About the effects of exposure to radiofrequency of the mobile services

www.vivacom.bg





Mobile phones changed our life!

Thanks to the myriad of functions that mobile phones and networks have, each one of us, at any time and anywhere, has access to news, information and entertainment through the internet.

TO BE CLOSE TO THOSE WHO MATTER

Mobile phones enable us to stay in touch with our family, friends and colleagues anywhere we go. The sound of a familiar voice brings us comfort and the ease of mind that everything is OK. Even when we are unable to speak directly, we can use the voice mail to leave and take messages and be updated about things that matter for us.

TO HAVE EASY COMMUNICATION

When it is too noisy around us, when we have to keep quiet or we don't have the privacy we need to make a phone call, we can still be in touch by sending and receiving text messages and pictures. The practice of exchanging text messages introduced an entirely new language of communication in our life with short forms and symbols replacing the full words and phrases.

TO REACH ACROSS THE WHOLE WORLD

Mobile phones make communication easy even when we are abroad. The international roaming service allows easy connection between compatible international networks, ensuring accessible and affordable communication with our home or office.


TO STAY INFORMED: MULTIMEDIA AND INTERNET

Thanks to the incredible pace of technological development, we can send and receive e-messages and faxes, personalize ringing tones and graphic symbols, check the TV programmes, read the news headlines, receive traffic updates, play games or listen to music, all through our mobile phone.

MOBILE COMMUNICATIONS HAVE GROWN INTO AN INDISPENSABLE PART OF EVERYDAY LIFE. MORE THAN 4 BILLION PEOPLE ACROSS THE WORLD USE MOBILE PHONES AND THEIR NUMBER IS FORECAST TO REACH 6 BILLION BY 2013. FOR THIS REASON VIVACOM, THE LARGEST AND FAST GROWING OPERATOR IN BULGARIA, TREATS WITH UTMOST SERIOUSNESS ALL ISSUES CONNECTED WITH HEALTH AND ENVIRONMENT.

How do mobile phones function?

Mobile communication is based on the same principle as radio and television. Mobile phones use radio waves to transmit information and can function within a broad geographic range without physical connection. Mobile handsets are like two-way radios for transfer of information by ultra-high frequency (UHF). The signal from the mobile phone is transmitted by air to the aerial of the nearest base station which relays the signal to and through the network to the final destination.



Major elements of the mobile telephone network are the base stations for transmission and receipt of telephone signals. When a mobile phone connects to a given network, the device makes a connection with the nearest base station by radio signals. The radio waves have a limited range of transmission and that is why it is essential to have a network of many base stations, each securing coverage of a given geographic zone, to ensure a broad geographic reach.

How do base stations function?

Mobile communication networks are most efficient when their transmission capacity is minimized. This is why the VIVACOM mobile network is designed in a way whereby during communication each phone that is being used gets a signal to minimize the transmission capacity. This has two added advantages: minimized radiofrequency exposure for the user and maximized life of the handset battery.

The base radio station is the first element in the connection between a mobile phone and another mobile/landline phone or information source. Base stations and handsets transmit information and effect a mobile connection by radiofrequency fields.

Radiofrequency fields are a type of an electromagnetic field used in television, radio, two-way radios, baby phones and mobile phones. In our everyday life each one of us is exposed to the influence of electromagnetic fields from various sources: daylight, TV and radio sets, and electronic car keys, among many others.

Large TV transmitters transmit to the TV sets radio waves with a capacity of some 100,000 W. The capacity of the base stations used by mobile phone providers is only between several to some 40 W.



How does VIVACOM integrate its base stations with environment?

VIVACOM treats with utmost seriousness its responsibility for protecting environment and selects the sites for its base stations in keeping with the established environmental standards. It applies long-term measures to ensure an optimal choice of base station location, and public concerns are always taken into consideration.

VIVACOM exercises continuous monitoring of its mobile networks. When a new base station needs to be set up in a given area, all options are carefully explored. The process includes consulting the competent authorities, performing a detailed environmental impact assessment and considering the option of shared operation of the new station with other telecommunications operators.

Base station aeri^{als} are usually mounted on existing buildings. The preferred choice is joint operation of base stations with other operators. Applications for building new base stations are submitted to the local authorities only when all options for shared operation have been exhausted.

In some cases it is admissible to have a new base station next to an existing one. This is called „collocation of communication equipment“.



How radiofrequency exposure affects people's health

The growing popularity of mobile phones in the recent years and the increased number of base stations has heightened public health concerns. Being the biggest provider of telecommunication services in Bulgaria, VIVACOM treats very seriously its responsibilities, and supports and assists scientific research and surveys in this area. The possible health effects of radiofrequency exposure have been examined in a myriad of surveys in the past 60 years. None has established any connection with adverse health effects when the international standards of operation are applied. VIVACOM applies the Russian standards which are lower than the European, have a more restrictive nature and ensure higher safety. In other words, with this capacity of radiofrequency fields, no adverse effects to human health are known to exist.

Several important factors need to be considered in examining the possible health effects of radiofrequency exposure. One is the operation frequency. The modern mobile telephone systems use frequency between 800 and 2,170 million cycles per second, or hertz (Hz). Such frequency should not be confused with those of ionizing radiation which we have with X-rays or Gamma rays. Unlike them, radiofrequency fields cannot cause ionization or radioactivity in the human body.

The human body can absorb some radiofrequency fields created by electrical devices including TV and radio sets, and mobile handsets. The energy of mobile phones and other transmitters generates very little heat which is scattered in the natural process of thermoregulation in the human body.

For more information:
www.gsmworld.com
www.who.int/peh-emf/
www.mthr.org.uk