Abstract

This review paper, takes into account previously published papers based on human exposure to electromagnetic fields which is radiated from cellular base stations and its corresponding adverse effects on human beings. This paper reviews the estimation and evaluation of the human exposure to electromagnetic fields (EMF); these radiated fields from cellular base stations which aim to verify the exposure compliance with human protection guidelines. There is an abundant literature in which experiments are carried out to study what effects the radiated fields have when human cells are exposed to such exposure. Here exposure situation considered is around the base stations and the approximate distance from base station is from 5m to 150m. Different exposure measurement methods were used in different papers such as single point measurement method or spatial averaging methods, such as 3, 6, 9, 20 points. Selected countries in Europe and elsewhere has taken the EMF exposure survey and compared the results with guidelines developed by the International Commission on Non-Ionizing Radiation Protection (ICNIRP). The paper also focuses on different international standards developed for EMF exposure from base stations. Finally adverse biological effects of EMF exposure from various papers are summarized.
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Index Terms

Computer Science

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Keywords

Radio frequency  electromagnetic field  human exposure guidelines  EM radiation  Uncertainty  public concern  Perceptions  In situ  mobile switching center (MSC)  Biological effect.

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