Environmental Safety of Base Stations and User Terminals of Modern Communication Systems

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Abstract: The issue of electromagnetic safety of base stations and subscriber terminals of modern communication systems is considered. The impact of electromagnetic fields created by communication equipment on human health and the environment is analyzed. An overview of international standards and recommendations on electromagnetic safety is provided, as well as a comparison of the impact of different generations of communication standards and existing mobile terminals from the point of view of environmental safety. Existing methods and technologies that can reduce the negative impact of electromagnetic radiation in the increasingly popular 5G mobile communications standard are considered. An example of the possible implementation of one of the methods for reducing the level of electromagnetic radiation affecting the human head when using mobile communications is given. Based on the analysis of the impact of electromagnetic radiation emanating from communication equipment on the human body and the environment, it was concluded that a more in-depth study of this issue and monitoring of electromagnetic radiation of mobile communication systems is necessary.