Секція 6.

**ANALYSIS OF THE CURRENT STATE OF ATTRACTING INFORMATION AND COMMUNICATION TECHNOLOGIES IN THE MONITORING SYSTEM OF THE MEDICAL AND BIOLOGICAL CHARACTERISTICS**

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Over the last decade, information and communication technologies, especially commercial applications, have undergone significant changes. Their arsenal is replenished with sophisticated access technologies, coding, including space-time, modulation, adaptation, MIMO and more. [1]. However, the results of recent studies indicate that current technologies are not sufficiently effective in the real world of even commercial use [2]. Recent trends [3-5] in the field of application of information and communication technologies in the field of emergency prevention, especially wireless technologies, indicate that in most cases the principles of system engineering have not been fully taken into account in their development. This partly explains the emergence of an arsenal of various sophisticated modern wireless technologies and their lack of efficiency in real conditions, when the model adopted in the development is significantly different from the real radio channel. The analysis of the current state of information and technical support of monitoring in the prerequisites of emergencies shows the use of a rather wide range of wireless technologies with different information functional capabilities [3]. The majority of wireless technologies belong to the first and second generations, mostly of the analogue type, which today are morally and technically outdated and do not allow to effectively solve the problem of information support in difficult conditions of monitoring of medical and biological emergencies. The simplest way out of the situation is to re-equip the functional field of monitoring with modern means of information transmission with deliberately redundant information and communication characteristics. However, in view of the economic constraints of information re-equipment, it is necessary to find a compromise, which is, first of all, to solve the problems of substantiating the direction of constructive development of existing and promising wireless technologies for informational provision of a functional field of emergency monitoring.

**References**

1. Shakhnovich I.V (2006) Modern wireless technology. M. 288 p.

2. Vishnevsky V.M, Portnoy S.L, Shakhnovich I.V. (2009) WiMAX Encyclopedia: The Road to 4G M. 472 p.

3. Pospelov B.B, Shevchenko R.I (2011) Development of information and communication technologies for the civil protection system of Ukraine in emergency situations. / Emergency problems. Sat. of sciences. Kharkiv Ave. P. 135-142.

4. Model Gleam. (2020). URL:<http://www.gleamviz.org/model/>.

5. Nature Outlook  555, S2-S4 (2018) Infection forecasts powered by big data URL:<https://www.nature.com/articles/d41586-018-02473-5>

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