B. F. Kiryanov, D. V. Kiryanov (The Novgorod state university of a name of Yaroslav the Wise). **Safe information transfer on communication channels.**

The model of a communication system guaranteeing almost zero probability of receiving by hackers of codes of the transmitted data at breaking of a communication channel is offered and investigated.

Keywords: generators of pseudorandom codes, digital noise.

From burglars of communication channels it was indicated importance of a solution of the problem of information security in the Decree of the Russian President No. 351 of March 17, 2008" About measures for ensuring information security of the Russian Federation when using information телекоммуника-ционных networks of the international information exchange" and in a number of documents of the Government of the Russian Federation.

The solution of this problem is connected with the solution of two tasks: ensuring almost impossible receiving with hackers of codes of the transmitted data and almost impossible interpretation of this information in case of reception by her hackers. The second task (choice of cryptopermanent coding of the transmitted data) is rather studied and therefore by authors wasn't considered.

In the developed model transferred to information disappears from potential "burglars" of communication channels by its casual hashing with digital noise: on object transmitter are carried out replacement of the corresponding fragments of transferred digital noise with transmitted data fragments, and on objects receivers fragments of transferred information are allocated from digital noise. Control of such information transfer is exercised generators of pseudorandom codes (GPSK) of objects of the communication system previously entered into a mode of synchronism, that is generating at the same time identical codes [1 - 8]. Casual change of algorithm of hashing of the transmitted data with digital noise [3] is realized that practically does probability of disclosure of this algorithm by hackers zero.

The offered model imitates hindrances in communication channels with set intensity, can change algorithm of work and word length of managing directors of GPSK, defines statistical characteristics of communication sessions. Program realization of various algorithms of formation of hindrances in channels свзи is possible.

Modeling of an offered communication system at various hindrances in communication channels, including when using Internet, showed reliable work of this system.

LIST OF REFERENCES

1. Kiryanov B. F. Bases of the theory of stochastic computers and devices//Kazan aviation institute. Monograph депонир. in TsNIITEI of instrument making 21.05.76, No. 524. – 168 pages.

2. Kiryanov B. F. The micro COMPUTER as means of imitation and processing of casual processes in the radioelektronknykh systems//Novgorod polytechnical institute. Monograph депонир. in VINITI 10.11.86, N 7646-B86. – 213 pages.

3. Kiryanov B. F. Mathematical modeling in the environment of Delphi. Monograph/M: PARADISE. 2012. 154 pages.

4. Kiryanov B. F. Zhgun T.V. Vasilenko E.G. Dudanov V. V. Hidden transfer of information on communication channels//Review of applied and industrial mathematics. – M.: 2005, T. 12, Vyp. 2. – P. 339.

5. Kiryanov B. F. Zhgun A.A. Otsenka of probability of synchronization in model of the hidden information transfer//Kazan: KGTU bulletin, No. 4, 2009. – P. 78 – 84.

6. Kiryanov B. F. Kiryanov D. V. Model of a communication system with highly reliable information security in channels of its transfer//The Messenger of NOVGU. Technical science series, Vyp. 65, 2011. P. 73 – 75.

7. Kiryanov B. F. Kiryanov D. V. The certificate No. 2013617209 of August 23, 2013 about the state registration of the "Modelling of System of the Hidden Information Transfer on Communication Channels" program.

8. Kiryanov B. F. Reliable information security in communication channels//The Review of applied and industrial mathematics. – M.: 2013, Volume 20, Vyp. 4. P. 551-552.