IMPROVEMENT OF EFFICIENCY OF ALARM KODAS FORMATION BASED ON THE CODE SEQUENCE OF GALOIS

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The codes of the field of Galois after general classification belong to subclasses of cyclic sectional codes which own all basic properties of codes. In sectional codes sequence of elementary reports broken up on the blocks of characters (B1, B2, B3, …, Bn) of the fixed length K, to each of which certain combination of characters of code word belongs in accordance (b1, b2, b3, …, bn). Cyclic codes behave to the class of systematic codes.

Formation of alarm code of without excessive is based on the principle of creation of code with possibility of exposure and correction of errors, which does not result in the increase of number of signals when transmitting bit-oriented flows of data.

Essence of methods of without excess of alarm codes with possibility of exposure and correction of errors consists in the formation of such a class of codes to five alarm signs of the following type: front of growth $\underline{\quad}\uparrow\overline{\quad}$ ($\wedge$) ; front of slump $\overline{\quad}\downarrow\underline{\quad}$ ($\vee$) ; to positive potential |▬| (+); to subzero potential |▬| (–); zero potential |▬| (S).

The followings possible methods of formation of such a class of codes are set:

- Position alarm code;
- An asymmetrical recurrent alarm code;
- A recurrent symmetric alarm code;
- Quasi-symbols alarm code.

The exposure and correction of errors on the basis of the proposed method and methods of alarm code of reports will be realized on the receiving end of informative channel, by the use of recurrent properties of codes there are the fields of Galois, which modulate bit-oriented information which are passed additionally. In case if the code of "1" in information is accepted wrong and in place of a "1" decoder is formed by a zero, it means that in the environment of information there are more zeros (at the same time code "00" at the end of transmission contains 8 zeros). The appearance of any number of errors in the passed information the eventual code of Galois of zeros will not answer the number of accepted, which allows finding an error.

On the basis of research of existing methods of manipulation and alarm spaces the new methods of unsurplus of alarm code of bit-oriented informative streams are proposed with the use of codes of the fields of Galois, which, as compared to the existing methods allow a completer to use information of alarm spaces and provide possibility, without introduction of redundant information of streams given, which are passed, to discover and correct single errors.

Investigational descriptions of protection of data from errors on the basis of   the proposed alarm codes of type positions alarm, asymmetrically recurrent and quasi-symbols code, result in the asymmetrical alarm codes, which are provided by the exposures of all possible single errors.

The proposed methods allow realizing without excessive code of information in computer networks for their more effective work.