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## ANALYSIS OF BASIC SPEECH INFORMATION FOR CONSTRUCTING SPEECH-LIKE NOISE

*Amiry Homayoon, Master Student*

*Belarusian State University of Informatics and Radioelectronics, Minsk, Republic of Belarus*

*Vrublevsky I. – PhD*

**Annotation.** The main stages of creating speech-like noise signal for means of vibroacoustic protection of speech information based on the phonetic-acoustic base and words of the Russian language are considered. The choice of jamming signal of the speech chorus type is described.

To generate speech-like noise, the synthesis of sound signals is used by random sampling of speech elements from the generated database. The advantage of the method is the generation of a noise signal shape with a spectrum envelope similar to a speech signal and a similar signal structure [1]. In this case, the task of separating the noise signal from the useful signal becomes more complicated, which makes it possible to increase the overall stability of the speech information protection system [2]. Investigations in the field of psychoacoustics have shown that the most effective type of noise signal is “speech chorus” [3].

The formation of speech-like noise signal included several stages. At the first stage of the formation of speech-like noise signal, a speech array was created, including a set of Russian words and containing all the necessary allophones. The sound array of the text and the formed phonetic-acoustic database are input data for the synthesis and subsequent allophonic marking of the speech signal. The synthesized speech signal is used for segmentation and allophone marking of natural speech signal. The next stage was listening with a possible manual adjustment of the boundaries of the allophones. For the first stage, a phonetic-acoustic database of the speaker with the necessary set of allophones was formed. In Russian, there are 42 phonemes, of which 6 are vowels and 36 consonants. In the flow of speech, phonemes, depending on the environment, can change their acoustic characteristics, which leads to the appearance of their modifications (allophones). For systematization, each allophone was placed in a separate file. The following designations were adopted: the first character in the file name was a letter forming a sound, then three indices followed in the name, characterizing the position of the allophone. After compiling a database of allophones, software was used that accepts an array of created files as input. Then the synthesis and reproduction of the input text took place using the recorded allophones. The “speech chorus” noise was formed similarly to the speech-like noise with the overlapping of the voices of several speakers at the same time.

### **References:**

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