«Metrological Support of Innovative Technologies»
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«Wavelet method of hiding text information in audio signals »

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• One of the tools that allows to embed is a discrete wavelet transform. Wavelet transform is a relatively new and powerful analysis and processing tool.

• The method of secret transmission of a text message by hiding in sound files and subsequent recovery without loss is considered.

• The basic of method is a discrete wavelet transform on biorthogonal wavelets. A web application implementing this method has developed. The implementation language is Python.
a) $\psi$ -wavelet function rbior5.5, b) $\varphi$-wavelet function rbior5.5
Stegosystem based on DWT.
User interface
(a) original signal-container, (b) signal with embedded secret text at the decomposition level $L = 1$, (c) signal with embedded secret text at the decomposition level $L = 5$
Conclusions

Results, implementation

• Biorthogonal wavelet transform provides reliable hiding secret information with subsequent recovery without loss.

• The space for hiding information is the coefficients of subbands obtained as a result of decomposition of the signal to the level L.

• The steganographic method using reverse biorthogonal wavelet rbio5.5 has the greatest efficiency. It was found using the PSNR calculation.

• The considered steganographic method can be used for the formation of “watermarks” for copyright protection.
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