Abstract

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“Multimedial Signal Transmission with Spread Spectrum Modulation for Transport Applications”

The proposed system is a module for images transmission-reception based on the integration between source coding techniques, namely JPEG image coding, and channel coding techniques, namely Spread Spectrum Modulation.

Such integration allows one to protect images information, through the use os Spread Spectrum Technique, and also to reduce the necessary channel bandwidth, through the JPEG compression. The whole system chain, by using the CDMA (Code Division Multiple Access) access technique, has been implemented through the development of libraries set under the MATLAB(R) environment using the SIMULINK(R) Toolbox.

The final result has been a simulator that allows one reproduction of a real image transmission-reception based on integration between Spread Spectrum and JPEG coding. A possible application of the system is the remote video-surveillance in the transport environment.