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Improving Capability of Detecting Impulsive Noise

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Abstract : Impulse noise is electromagnetic emission which generated by many house hold appliances that are attached to the electrical network. The main difficulty of impulsive noise (IN) elimination process from communication channels is to distinguish it from the transmitted signal and more importantly choosing the proper threshold bandwidth in order to eliminate the signal. Because of wide band property of impulsive noise, we present a novel method for setting the detection threshold, by taking advantage of the fact that impulsive noise bandwidth is usually wider than that of typical communication channels and specifically OFDM channel. After IN detection procedure, we apply simple windowing mechanisms to eliminate them from the communication channel.

Keywords : impulsive noise, OFDM channel, threshold detecting, windowing mechanisms
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