Abstract

Compressive sensing is a promising focus in signal processing field, which offers a novel approach of simultaneous compression and sampling. In this technology, a sparse approximated signal is obtained with samples much less than that required by the Nyquist sampling theorem if the signal is sparse on one basis. Encouraged by its exciting potential application in signal compression, Compressive sensing framework has been used for speech Compression. This paper shows detailed comparison of compressive sensing theory applied with different sparsity basis on 8 KHz sampled speech signal. Performance of various basis has been compared with Mean square error, Signal to noise ratio and Perceptual Evaluation of Speech Quality parameters.

References


The PESQ Algorithm as the Solution for Speech Quality Evaluation on 2.5G and 3G Network Technical Paper. URL: http://www.cn.ascom.com/cn/pesq-3g.pdf

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Index Terms

Computer Science

Signal Processing

Keywords

Sensing Matrix    Sparsity Basis    Reconstruction Algorithm