ABSTRACT

Data compression techniques (signal) has been widely used for efficient storage and transmission of sound or images on a computer or mobile phone. This new technique is referred to as CS (compressed sensing) does not require dominant coefficient adaptively sampled because all components are equally important and overcomplete bases, can be taken with any of the original number of samples met the minimum threshold for signal reconstruction. CS theory requires a generalization of the correlation between time-frequency uncertainty principle to apply.

Planning compressed sensing of audio signals using multiple sensors includes an audio sensor placement using multiple sensors, the measurement process data acquisition and data processing system contains planning and manufacture of compression and reconstruction. Parameters measured in testing is SDR (Signal to Distortion Ratio) for comparison with the original signal so that the signal reconstruction can be determined MSE (Mean Square Error) which states that the performance of coding.

Results of the reconstruction shows that the more sampling taken \( k \) means the smaller the value of compression so that the value of SDR (Signal to Distortion Ratio) is getting larger and best result with average coding error MSE (Mean Square Error) smaller. CS engineering successfully reconstruct the signal compression by taking even the smallest sampling of the original signal.

Key Words: CS (Compressed Sensing), sampling, BP (Basis Pursuit).
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