Performance Analysis of DPCM and ADPCM

Abstract

The advantages of using signals in digital domain are of many folds. Some of the advantages compared to the analog signals are multiplexing, storage, compression & ease of reproduction of digital signals. Added to this the Moore’s law factor, the cost of digital hardware continues to halve every two years while performance or capacity doubles over the same period has led to an exponential use of devices that are digital in nature. Digital signals are obtained by sampling & quantizing the analog signal so that they can be efficiently represented. In this paper, different kinds of waveform coding techniques such as DPCM & ADPCM are studied. Performance is evaluated based on Signal to Quantization Noise Ratio (SQNR) & Mean square
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error (MSE) measures. Encoding & decoding complexity as a function of time is also studied.

References


Index Terms

Computer Science

Electronic Design And Signal Processing

Keywords

Dpcm  Adpcm  Sqnr  Mse  Predictor  Adaptive Quantizer