Abstract

In this paper we analyze the performance of B-spline filters, pre filtering and bit-plane coding for low bit rate image compression. The B-spline filters exhibit higher energy concentration in the lower frequency band than other known filters. This property can be exploited for very low bit rate image coding where the higher frequency bands might be very coarsely quantized. The
relative information in the low frequency bands of the of the image can be increased by employ of the pre processing technique and bit-plane coding. Averaging technique is employed for image smoothening at low bit rates and bit-plane coding helps removing noise by discarding LSB. In this paper we analyze five techniques for image compression. It is found to be B-spline with one level of decomposition and preprocessing (along with bit-plane coding) gives the appropriate results as compared to the other techniques.

Reference


Index Terms

Computer Science

Artificial Intelligence

Key words

B-Spline filters

filter banks

sub band coding

Pre processing

Image Averaging