Abstract

Compression is useful in reduction of the cost of transmission bandwidth and storage of larger size images. One of advanced form of compression is based on wavelet compression. DWT can be used to reduce the image size without losing much of the resolutions computed. It reduces the amount of memory required to represent given image [1]. This paper covers a review of the fundamentals of image compression based on wavelet and also presents wavelet
based low bit rate video coding technique. Wavelet based image compression has been illustrated using DSP Processor platform. The implementation of DWT compression algorithm using embedded approach has been tried with DSP processor TMS320C6713. DWT algorithm is implemented using C language. The Code Composer Studio (CCS) software is used to simulate the code written in C language to successful display the compression result on TI’s digital signal processing board TMS320C6713. DSP simulation results are verified using MATLAB simulation results. Compression ratio for the image compressed by DSP simulation is obtained as 1.0124. Compression ratio by MATLAB simulation is obtained same as 1.0124. This work shows that average simulation time of the system is 21 milliseconds and memory used is 2.5Kbyte. The coefficients of compressed image which are the results of MATLAB software and C language using Code Composer Studio (CCS), IDE Environment are closely matched.

References

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**Index Terms**

Computer Science  
Signal Processing

**Keywords**

Discrete Wavelet Transform (dwt)  
Dsp Processor  
Code Composer Studio (ccs)  
Matlab Simulation  
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Ide Environment