A LOW COMPLEXITY MOTION ESTIMATION ALGORITHM FOR VIDEO CODING APPLICATIONS (WedAmPO4)

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Abstract:
A new recursive−search based motion estimation algorithm has been proposed that uses only a maximum of seven candidate motion vectors. True motion vector convergence in the proposed scheme has been improved through the use of small diamond search and half pixel precision based motion estimation. The coding quality in terms of signal to noise ratio and compression is quite close to full search motion estimator. The algorithm has a considerably reduced complexity. Results obtained from various test sequences indicate around 50% improvement in computational load over the conventional 3−D recursive search estimator. Simultaneously, the proposed technique provides about 8% improvement in the bit rates.