Abstract

Persons using low coast hand held cameras are untrained, thus captured videos suffers from severe handshakes and jitters. Hence digital video stabilization algorithm is required to acquire video sequences by removing these unwanted handshakes and jitters. This paper proposed an adaptive motion smoothening method that removes high frequency jitters, by filtering the accumulated global motion vectors. A modified method for motion vector validation implemented on global motion vectors using adaptive threshold. Proposed method not only removes the jitters but also preserves the scene information. The proposed method reduces the missing image areas significantly. This allows using a simplified edge completion method to generate the full frame stabilized video, which performs better in the presence of large moving object in the scene.

References

Adaptive Motion Smoothening for Video Stabilization

- Pyung Soo Kim, FIR filtering based image stabilization mechanism for mobile video appliances Proceeding CIS'apos;04 Proceedings of the First international conference on Computational and Information Science Pages 1106-1113, 2004

Index Terms

Computer Science
Multimedia
Keywords

Video stabilization  Motion Smoothening  Motion Estimation  Motion vector  Edge
validation  completion