Abstract

A novel mosaic technique based on Strip Search Algorithm is proposed that improves non-linearity, accuracy and vertical distortions possibly found in mosaic image. Strip Search
Algorithm based on novel measure of Relative-Sum of the Squared Difference (R-SSD) is proposed to search particular strip of frame within its specified portion and it is used for normalization and simplification of some important steps of image mosaic. Steps like key frames selection, frames registration, their transformation and combination are suggested for mosaic creation. An optimal criterion is suggested for key frames selections. Hierarchical Seam Line Estimation and Vertical Strip Registration are introduced for precise image warping and distortion-less vertical transformation. Structural linearity, precision and non-deformation property reflects from mosaic results of proposed algorithm.

Reference

- Ging Li, quan Pan, Tao Yang, Stan. Z.Li, “Automated Feature Point management for video mosaic construction”, proceeding of the third International Conference on Information
Technology and Application (ICITA05), 2005.
- Horizontal Blending Algorithm, http://www.eecis.udel.edu/~qili/ta/cis489/2/

**Index Terms**

Computer Science  
Image Processing

**Key words**

Image stitching  
Image registration  
Similarity measure

Key frame selection