Abstract

Stereo correspondence mapping is the fundamental problem to achieve human like vision capabilities to machines and robots. Many local and global algorithms have been reported in literature in the last decade. Window-based cost aggregation methods for solving the correspondence problem have attracted researches as it can be implemented in real time using
parallel processors. In this paper a new window-based stereo matching algorithm with segment controlled window at each pixel to compute disparity map has been proposed. The proposed method uses sum of square difference correlation function on the window. In the proposed algorithm, pixels of square window which lie on the same segment to which the center pixel belongs are only considered while creating the window. Further, left-right consistency check is applied to generate disparity map taking full advantage of speed and simplicity of window based method.

Reference


Index Terms

Computer Science

Information

Technology
Segment Controlled Window Shape to Compute Disparity Map from Stereo Images

Key words

- disparity
- correspondence
- segmentation
- stereo vision
- correlation