Region based hierarchixal disparity estimation technique

E-mail: 345493@ mail.dyu.edu.tw

ABSTRACT

In this paper, we proposed a hierarchical disparity estimation scheme using region matching. The proposed method is composed of hierarchical structure, region-based disparity estimation, and disparity refinement. In the hierarchical structure, three procedures, color transform, edge detection and sub-sample, are performed. To perform disparity estimation, a cost function based on normalized cross correlation as well as color and spatial features is developed and used as a measurement in the proposed disparity estimation method. And get a high resolution depth map. In disparity refinement, the disparity values in occlusion regions are estimated and patch outlier. According to experimental results, our proposed scheme can perform disparity estimation well.

Keywords : stereo matching   disparity estimation   region based   hierarchical

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