Abstract

Image matching is a crucial problem in computer vision and image processing. In order to improve the matching results, a proposed solution consists on employing geometric constraints. In this paper, we propose two effectiveness matching methods, which are called "First Found Is Winner" (FFIW) and "Polarity Coordinates And FFIW" (PC_FFIW). The first one is based on photometric data, while the second one, uses both photometric and geometric data. The proposed methods are based on three-step. Firstly, we detect for each image its corner points. Secondly, descriptors vectors are calculated for each corner points. Thirdly, to match the pair of images P and Q, we apply a matching algorithm optimized to find the best match for each descriptor from the first image with the descriptors of the second image. Experimental results presented to demonstrate that our proposed methods are efficient and give promising results in terms of repeatability and processing time.
Pattern Recognition, 2005.
- Shan, B., Cui, F., "Image Matching Based on Local Invariant Feature and Histogram-Based Similar Distance", In First International Workshop on Education Technology and Computer Science - Volume 01 (ETCS 2009). Pp 1030-1033.
- Abbas. A., "Construction d'une mosaique à partir d'une séquence vidéo", mémoire présenté Pour l'obtention du grade du maitre en science. Université de Montréal 2002

Index Terms

Computer Science  
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Keywords

Image matching  photometric and geometric data  local feature  repeatability