Low-textured regions detection for improving stereoscopy algorithms

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***Abstract*— The main goal of stereoscopy algorithms is the calculation of the disparity map between two frames corresponding to the same scene, and captured simultaneously by two different cameras. The different position (disparity) where common scene points are projected in both camera sensors can be used to calculate the depth of the scene point. Many algorithms calculate the disparity of corresponding points in both frames relying on the existence of similar textured areas around the pixels to be analyzed. Unfortunately, real images present large areas with low texture, which hinder the calculation of the disparity map. In this paper we present a method that employs a set of local textures to build a classifier that is able to select reliable pixels where the disparity can be accurately calculated, improving the precision of the scene map obtained by the stereoscopic technique.**

Stereo Vision; Disparity; Texture; Descriptors; Classification; SVM.

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