ABSTRACT

The technology of 3D imaging out of 2D images for post-processing and application purpose has been extensively researched for many years. Recent years saw many papers on transformation methods that map images onto space domain, frequency domain or time-frequency domain, followed by optical pre-analysis to derive a relation between image variations and distances from images, based on which 3D models are then constructed. This study breaks apart from earlier researches in being the first to statistically analyze the standard deviations of image textures which vary under different camera parameter, and constructs 3D object based on the relative distances obtained through texture comparison of the object's images taken under different camera parameters. This paper presents the scope of this study, with detailed description of its uniqueness and how the underlying algorithms are formulated.

Keywords: Local Standard Deviations

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