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Analysis and enhancement of the denoising depth data using kinect through iterative technique (Article)Karbasi, M.^a, Bilal, S.^a, Aghababaeyan, R.^b, Rad, A.E.^c, Bhatti, Z.^a, Shah, A.^a^a Khulliyah of Information and Communication Technology, International Islamic University Malaysia, Malaysia^b Department of Computer, Rodehen Branch, Islamic Azad University, Rodehen, Iran^c Department of Computer Engineering, Faculty of Computing, Universiti Teknologi Malaysia, (UTM), Johor Bahru, Johor, Malaysia[View additional affiliations](#)

Abstract

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Since the release of **Kinect** by Microsoft, the accuracy and stability of **Kinect data**-such as **depth** map, has been essential and important element of research and **data analysis**. In order to develop efficient means of analyzing and using the kinect **data**, researchers require high quality of **depth data** during the preprocessing step, which is very crucial for accurate results. One of the most important concerns of researchers is to eliminate image noise and convert image and video to the best quality. In this paper, different types of the noise for **Kinect** are analyzed and a unique **technique** is used, to reduce the background noise based on distance between **Kinect** device and the user. Whereas, for shadow removal, the **iterative** method is used to eliminate the shadow casted by the **Kinect**. A 3D **depth** image is obtained as a result with good quality and accuracy. Further, the results of this present study reveal that the image background is eliminated completely and the 3D image quality in **depth** map has been enhanced. © 2016 Penerbit UTM Press. All rights reserved.

Author keywords

Denoising; **Depth** map; **Kinect** sensor; Types of noise

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