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Autonomous navigation of mobile robot using Kinect sensor (Conference Paper)

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Abstract

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The problem of achieving real time process in depth camera application, in particular when used for indoor mobile robot localization and navigation is far from being solved. Thus, this paper presents autonomous navigation of the mobile robot by using Kinect sensor. By using Microsoft Kinect XBOX 360 as the main sensor, the robot is expected to navigate and avoid obstacles safely. By using depth data, 3D point clouds, filtering and clustering process, the Kinect sensor is expected to be able to differentiate the obstacles and the path in order to navigate safely. Therefore, this research requirement to propose a creation of low-cost autonomous mobile robot that can be navigated safely. © 2014 IEEE.

Author keywords

Kinect sensor Mobile Robot Navigation OpenCV point cloud

Indexed keywords

Engineering controlled terms: Clustering algorithms Indoor positioning systems Mobile robots Navigation Robot applications

Autonomous Mobile Robot

Autonomous navigation

Clustering process

Indoor mobile robots

Kinect sensors

OpenCV

Point cloud

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