Abstract

In many fields, the use of autonomous robots can provide significant benefits. Robots can be used to reduce the risk involved with human physical intrusion, especially in hazardous environments. They can approach the locations of attention to report sensory data and to show more detailed views of a mistrustful area. Moreover they can perform long-time tedious tasks that require reliable execution, without lowering their level of efficiency [3]. Robot navigation is defined as the combination of three basic activities such as, Map Building, Localization and Path planning. It is very important to have an accurate map and a reliable localization. All these information are sent to the display unit (Remote receiver) via RF module. The display unit is responsible for integrating all the sensory data collected by the robot and to provide the information as a map on the LCD display. Apart from viewing the map, the human operator could take important decisions about the path, with which the robot would take in special situations using the touch screen interface in the display unit. This type of robot would help civilians and military persons while dealing with dangerous situations like war and terrorist seeking operations. So this robot will help the first responders who could send this robot to quickly search the building structure and send back a map. This way they would have a much
better sense of what to expect and they can work out a plan before entering into the building.

References

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Index Terms

Computer Science  Embedded System

Keywords

MEMS  Ultrasonic sensor  LCD display  RF module  Robot