

Human Alive Detector

ABSTRACT

Natural disasters occur frequently nowadays. Many human beings are victims of such occurrences. Some lose their lives because of not being treated at time. Human detection in an unmanned area can be done only by an automated system. To avoid such losses, a robotic system can perform well for providing alert (detection) of human being. The main purpose of the robot is to detect alive human beings after the occurrence of natural calamities with the help of sensor.

In this project the system consist of a Matlab control robot. There is a heartbeat sensor & various parameters. Robot will have the arm & the heartbeat sensor is mounted on the arm. The sensor will sense the pulse & provide data to the user. The heartbeat sensor will sense the pulse by inserting the sensor in the finger & the user will come to know from the beap of the buffer that the suffered person is alive or dead.

While detection of human being, there may be some obstacle on the way of robot. In order to get over of obstacles we have a wireless camera connected on the arm of robot which not only show the status of victims and also way to robot.

INTRODUCTION

The robot built by our team is capable of navigating the difficult terrain of a disaster site but lacks sensors for victim detection. The contribution of this work is to provide a sensor suite for human detection in the urban disaster environment. The philosophy of this project is that the robot team should be low cost, semi-autonomous, heterogeneous, and work together under a human coordinator.

In line with this philosophy, one of the most challenging parts of this project is to find a light weight and low cost solution that can fit robot.

Conditions in a disaster area are extreme with many unknown parameters. Victims may be covered in debris, trapped in voids, or entombed, making it difficult to find them and determine their state of health. This is why it will be important to choose a set of different sensors which are complementary and able to operate in these conditions.

This project consists of three main parts. The first set consists of heart beat sensor to determine the condition of victim. Next set consists of MATLAB controlled RF transmitter made by GUI(graphical user interface); with the help MATLAB not only robot will be controlled but also it will show the image transmitted from robot. The third set consists of robot which is operated by RF module and camera mounted on arm.

BLOCK DIAGRAM-

