HUMAN SENSE ROBOT

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ABSTRACT

Human Sense Robot is a sophisticated robotic device that can be used in extreme situations to help rescue operators in rescue missions. After a calamity such as an earthquake, forest fire, tsunami or bomb blast, the rescue personals need to go within the dead zone to check for any alive humans.

This is a very dangerous mission in that they risk their invaluable life. This project gives a solution by constructing a robot that goes where dogs and humans cannot easily go, and sense any alive humans to indicate that to the rescue operator. It is of more useful when the visibility is difficult to carryover the rescue operations, thereby it allows its operators to operate from a secure distance not exposing them to any risks that may be involved in the target area while still fully controlling the robot. The data communication happens through ZIGBEE communication that transmits the data wirelessly to the control unit.

The robot is equipped with the PIR human sensor that measures the IR radiation incident from alive human body to identify a human.

INTRODUCTION

The traditional design used to have limited intelligence and mainly operated by human operator. This system requires human power to monitor the status of the rescue area, the messages are transferred through half-duplex mode. i.e., this mode allows transmission in only one direction at a time, if one device is sending, the other must simply receive data until it's time for it to transmit.

This system presents the construction and design of robot controlled through the PC. This system is composed of transmitter section and receiver section. The robot monitors the area continuously with the help of CCTV (Closed Circuit Television Camera). The camera transmits AV signals to receiver section and it has a PIR sensor to detect if any humans is present or not. In receiver section, PC is used to display the current status of the location, according to the video information from the CCTV, the control operation has to be performed.

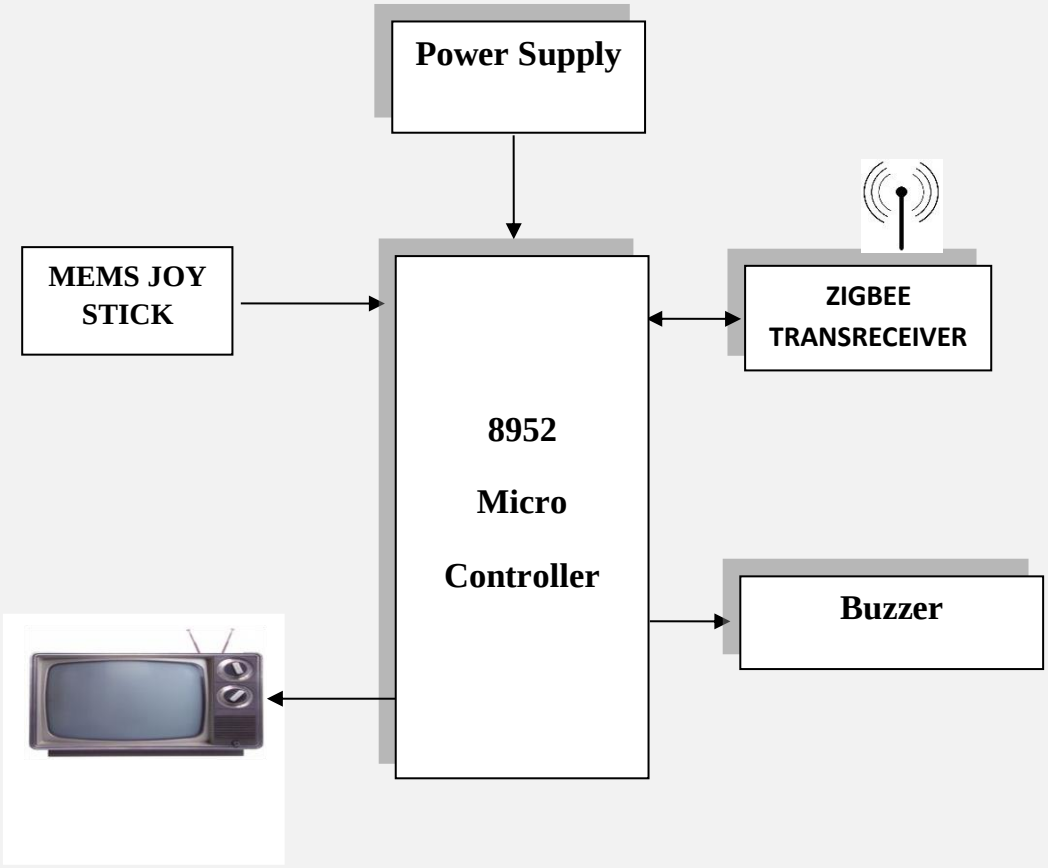
PC is interfaced with the controller for controlling the direction of the robot via ZIGBEE modules. The controlling data are transferred wirelessly way from the receiver section to the transmitter section with the help of encoding and decoding devices.

Application:

- Can be used in military applications
- It can also be used to provide medical aid for needy.

BLOCK DIAGRAM

CONTROL SECTION:



ROBOT SECTION: