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AUTOMATION FOR WAR FIELD SPYING

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ABSTRACT

The goal of this device is to reduce human casualties in terrorist attacks like the one on September 11th. So, this problem can be solved by building an RF-based Automation spy robot with a wireless camera, which will make it easier to study competitors as needed. This robot can enter enemy territory discreetly and provide data to us via wireless camera. For more than half a century, robotics has been a mainstay of advanced production. Automation for Spy Robots and their associated equipment are increasingly being used for military and law enforcement reasons as they grow more sophisticated, reliable, and smaller. With proper sensors and cameras to execute varied duties, mobile robots are operated remotely for reconnaissance patrol and feedback video footage to an operator says a military spokesperson**.** Android smart phones are the most common gadget nowadays. On the internet, there are numerous programmers that use inherent hardware in these phones, such as Bluetooth, Wi-Fi, and ZigBee technology, to control other devices. Bluetooth technology strives to communicate data wirelessly at a short distance through radio wave transmission, with features to produce ease, perception, and controllability. We've created a robot that can be con- trolled using an Android phone application. It connects to the controller through Bluetooth and sends control commands. The Bluetooth module can be connected to the controller using the UART protocol. The robot's mobility may be controlled using commands received through Android. As a result, the necessary actions can be taken.

Keywords: Surveillance, Military Robot, Border Safety, Security.

I. INTRODUCTION

Every minute there will be an improvement in the robotics and parallelly there will be many deaths of the soldiers in our country. So, if we can design robots that are useful to our soldiers, we can save their lives there are few robots that are helping to our army, and this will be next generation of robot that can handle very easily by everyone. In this system mine disposal technicians and mission controllers with several challenges including high risks in it. A typical mine disposal mission will initially involve investigating the site using a remote-controlled robot and disposing the mine. The system also includes night vision camera which will not only allow viewing whatever will be recorded in daytime but also during night. The whole system is controlled via android application. An Android smart phone will act as remote con-trolled device for movement of the robot. An Android application will be developed for the same. The Bluetooth module will act as an interface between Smartphone and Arduino. We will be using Bluetooth module for the system, which can be used as either master or slave. Generally, our master will be smart phone and slave will be Bluetooth module. Bluetooth module will give the commands given by smart phone to the controller. Controller will act as the brain of the robot. The robot movement will be decided by the controller. The Controller will be programmed with the help of the Embedded C programming. In addition to this we also have a ultrasonic sensor and also a metal detector to detect bombs.

II. METHODOLOGY

In the project Raspberry pi is main controller. Also with that other modules like metal sensor, smoke sensor, ultrasonic sensor, camera, Bluetooth terminal , GSM, LCD,DC motor are the components using in the project. Motor is used for the movement of the robot. Also, for detecting the distance ultrasonic sensor is used. Robot can detect the weapon for that metal sensor is used. Using camera robot monitors the situation and detects smoke or fire. Also, we are getting this reading on our mobile for that GSM module is used.

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III. MODELING AND ANALYSIS

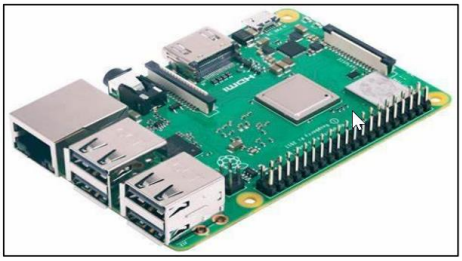

Figure 1: 3D view of Raspberry Pi

Raspberry Pi 3 Model B+ is a single-board computer developed by the Raspberry Pi Foundation. It is a credit-card-sized computer that can be used for a variety of tasks, including programming, media center, and home automation. The 3B+ model features a 1.4GHz 64-bit quad-core ARM Cortex-A53 CPU, dual-band 802.11ac wireless, Bluetooth 4.2/BLE, faster Ethernet, and Power-over-Ethernet support (with separate PoE HAT).

IV. RESULTS AND DISCUSSION

Following are the outputs that we get from the robot on our mobile screen through the mail when the sensor detects:

1. Metal Detected- If metal detected at border, a Pop-up would get at user's Gmail like "Ooopsss Metal Detected…!!"

2. Unknown Person Identified- If unknown person means unregistered faces gets detected, a pop-up will get at users gmail like "Oooopss Enemy detected….!!".

V. CONCLUSION

Smart phone is android device which can develop effective remote-control program. At the same time, this program uses Bluetooth connection to communicate with robot. It has proven to allow for meaningful two-way communication between the Android phone and the robot The Multi-Purpose Military Service Robot will be designing in such a way that it can fulfill the needs of the military, the police, and armed forces. The main function of Spy robot is to roam around highly sensitive region and provide image information from the required environment to the remote monitoring station about person identification.

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