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A Review Paper on Advance Long Range Spy Robot

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Abstract: ***Now a day many illegal activities like crossing borders through forest regions, planting landmines, etc to keep an eye on such activities there is a need for some spying device that can spy on the restricted areas or some forest or territorial region where a human cannot go due to risk. In this paper, we have described such type of spy robot that is 'long range spy robot with night vision camera'. This system Long Range Spy Robot with Metal Detection is very innovative as this system allows operating a robot irrespective of the distance. To drive the system, the user has to formulate a call to the phone coupled to this robot and once the call is received, the user will have to make use of the keypad to transmit data commands to the robot. The data commands will make the robot either go in forward, then backward, left, or right direction. The system makes use of a night vision-enabled spy vision-enabled help of which the user can view the area captured by this spy camera which will be mounted on this robot. The user will be able to view the area captured by this spy camera not only during the daytime but also during the night. All the areas captured by this spy camera can be viewed in a mobile application or PC.***

Keyword: DTMF Technology, Auto Surveillance Technology, Robot Night Vision, Video Transmission, Audio Transmission, Metal Detection

I. INTRODUCTION

In this era many illegal activities like crossing borders through forest regions, planting landmines, etc are taking place in order to keep an eye on such activities there is a need for some spying device that can spy on restricted areas, forest, territorial regions where a human cannot go due to high risk. We introduced a high-speed and advance long-range spy robot with a night vision camera.

The system basically works on the principle of DMFT. To operate the robot we have to couple a mobile phone which supports DMFT with the robot. The Robot Consist of 360 degrees view night vision spy camera, a metal detector. When we connect a call to the phone coupled with the robot it activates and with the help dial pad of the phone we can control the movement of the Robot.

The camera is linked with the mobile application where we can view the live moment activities, we can control the camera direction, record the video with audio, also speak through it with the help of this application. When the robot goes near the metal it will detect it with the metal detector mounted of the robot and will alert us with the buzzer. The robot totally works on the battery. As the robot works on the DMFT hence there is no problem with distance.

II. LITRETURE SURVEY

A. This paper deal with the robot which is used for the surveillance of human activities in the war field or border regions in order to reduce infiltrations from the enemy side. The robot consists of a night vision wireless camera which transmits videos of the war field in order to prevent any damage and loss to human life. Soldiers have a high risk on their lives while ingoing an unknown territory.

B. This paper deals with the requirement to make a variant of a spying robot that can empower us to watch the place of our advantage. Robots are assuming a critical job in military application. The vast majority of the work in the military is unsafe for a person. In a war field or safeguard task, a warrior needs to take his own specific manner to achieve the goal. The vast majority of the ways are perilous for a warrior. Consequently, the robot replaces the trooper. The extent of the robot additionally helps it to be utilized as a covert agent robot.

C. This paper deals with the robot based on the android application for outlying action attached with wireless camera for intelligence purposes. The robot can wirelessly send out real-time video with night vision capabilities. This is a type of robot that can be supportive for intelligence work purposes in war fields.

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D. This paper deals with the development of robots using android applications for distant operations attached with wireless cameras for surveillance purposes. This robot uses motors that are interfaced to a microcontroller through remotely operated commands to it by touchscreen-based user-friendly GUI on any smartphone with Android applications.

[5] This paper deals with the robot which facilitates human beings through giving security and working as a helping hand through reprieving. In this a high-quality wireless video camera equipped with a stepper motor for the Omni-directional view is used for the spying purpose which is mounted on the rob car to send real video images and audio signals. These audio and video streams received by the receiver unit can be used to take proper steps according to the received signals. This robot can also be used to go to places where humans cannot go like hidden places, small tunnels. The ultimate focus of this system is to offer far possible security for human beings.

III. METHEDOLOGY

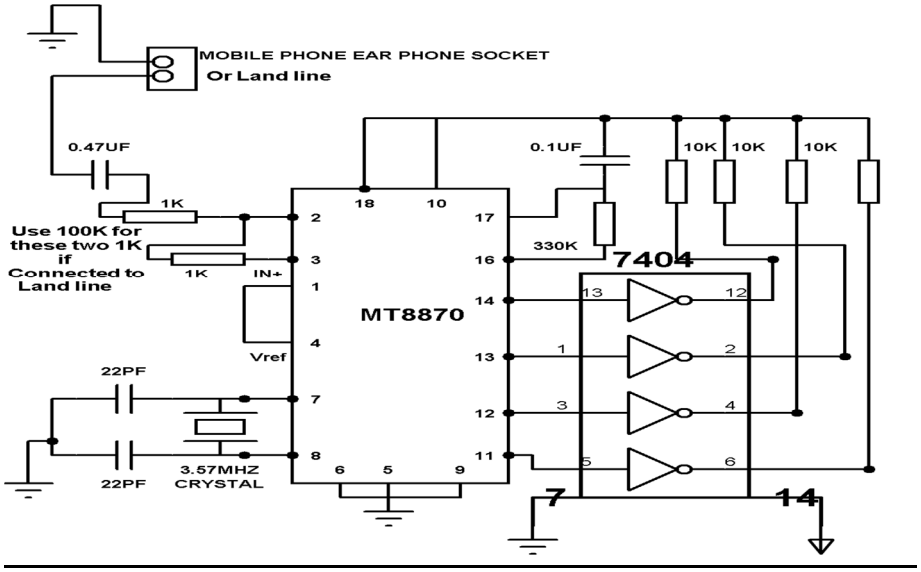

Fig.1 DTMF Decoder

After the call is answered by the mobile phone the tone command sent by the sender is received at the earphone socket which is fed to pin no 2 of DTMF decoder MT8870/HT9170through series resistor and capacitor. The system uses DTMF technology for decoding tone commands by a DTMF decoder IC. This develops a 4-bit binary data corresponding to the number related to the tone received at its pin 2 through a high pass filter resistor in series. The IC uses a crystal for frequency reference such that input frequency is compared to develop digital output. This 4-bit binary data is passed through an inverter for buffering purposes before being connected to MC input at pin 1.0 to 1.3. The output from the microcontroller drives the L293D for 2 motors as per the command to move multidirectional and start-stop. The surveillance camera is linked with the mobile application from which we can operate the movement of the camera, record video as well as audio of high quality. There is a metal detector mounted on the robot for metal detection. The metal detector is provided with a separate power supply from the battery whenever the detector moves over the metal it alerts the controller of the robot using the buzzer.

IV. OPERATION

A mobile phone is mounted on the Robot with its audio output from the earphone socket connected to pin2 of DTMF IC in series with a high pass filter. The tip and GND thus formed the input tone command. When a call is established from a calling mobile phone to an installed mobile phone which is kept on auto-answer mode gets activated and the call is answered. Now any number by the sending cell phone is pressed the corresponding tone is available at the receiver's mobile phone linked to the robot thus forms an input tone to the DTMF decoder the productivity from which is input to the controller through inverter IC. The program while executed makes the motor run forward, backward, left, and right as per the command from the sender's end. The commands are 2 for forward, 8 for backward, 4 for left and 6 for right, and 5 for the stop. Thus the robot operates as per the command. In a similar way, the movement of the camera is operated from the sender end using the controller provided in the application. The camera can be rotated in 360 degrees for viewing or recording the surrounding region.

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V. BLOCK DIAGRAM

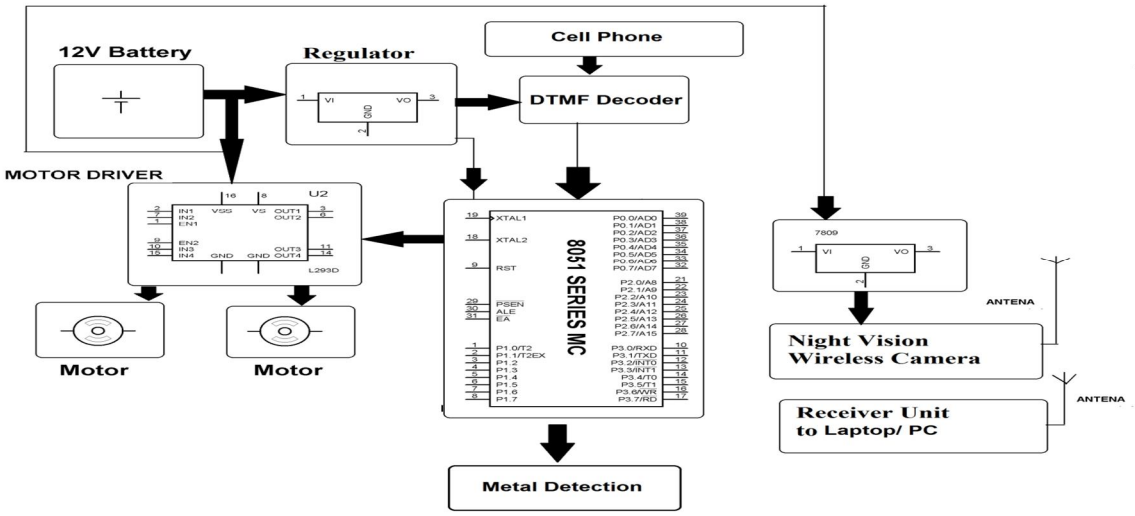

Fig 2 Block Diagram of long range spy robot with night vision camera

VI. CONCLUSION

In this paper our main objective was need of some spying device. Illegal activities like crossing borders through forest regions, planting landmines, etc to keep an eye on such activities there is a need for some spying device that can spy on the restricted areas, forest region or territorial region where a human cannot go due to risk and search any unwanted substance like metal, landmines, bombs, etc. without actually going on the site. All these problems will be overcome by the advance long range spy robot. We can send robotic vehicle at a long distance as it operates wirelessly and works on battery.

REFERANCES

[1] Jignesh Patoliya, Haard Mehta, Hitesh Patel "Arduino Controlled War Field Spy Robot using Night Vision Wireless Camera and Android Application", 5th Nirma University International Conference on Engineering, November, 2015, IEEE 2015.
[2] Sarmad Hameed, Muhammad Hamza Khan, Naqi Jafri, Adeel Azfar Khan, Muhammad Bilal Taak "Military Spying Robot", International Journal of Innovative Technology and Exploring Engineering, Volume-8, Issue-7C2, May 2019
[3] Selvam, M. "Smart phone based robotic control for surveillance applications", International Journal of Research in Engineering and Technology, 2014.
[4] Pahuja, Ritika, and Narender Kumar. "Android Mobile Phone Controlled Bluetooth Robot Using 8051 Microcontroller", International Journal of Scientific Engineering and Research (IJSER), www. ijser.in, ISSN (Online): 2347-3878, 2014
[5] Golap KantiDey, Raqibul Hossen, Md.Shafayet Noor, Kazi Tanvir Ahmmed, "Distance Controlled Rescue and Security Mobile Robot", IEEE 2013
[6] Kunj Gudhka, Aishwarya Kadam, Devika Kale, Manil Rupani, Prof. Tilottama Dhake, "War Field Spying Robot Using Wireless Camera", International Journal of Electrical and Electronics Research, ISSN 2348-6988 (online) Vol. 4, Issue 1, pp: (85-92), January - March 2016
[7] Chaitrali Jadhav, Shamli Gibile, Snehal Gaikwad, Neelum Dave, "Military Spying and Bomb Disposal Robot Using IOT", International Research Journal of Engineering and Technology, e-ISSN: 2395-005 Volume: 05, 04 Apr-2018.
[8] Wai Mo Mo Khaing, Kyaw Thih, "Design and Implementation of Remote Operated Spy Robot Control System", International Journal of Science, Engineering Technology and Research, Volume 3, Issue 7, July 2014
[9] Dr.S.Bhargavi, S.Manjunath, "Design of an Intelligent Combat Robot for war", International Journal of Advanced Computer Science and Applications, Vol. 2, No. 8, 2011
[10] Albert Ko and Henry Y. K. Lau, "Robot Assisted Emergency Search and Rescue System with a Wireless Sensor Network", International Journal of Advanced Science and Technology Vol. 3, February, 2009

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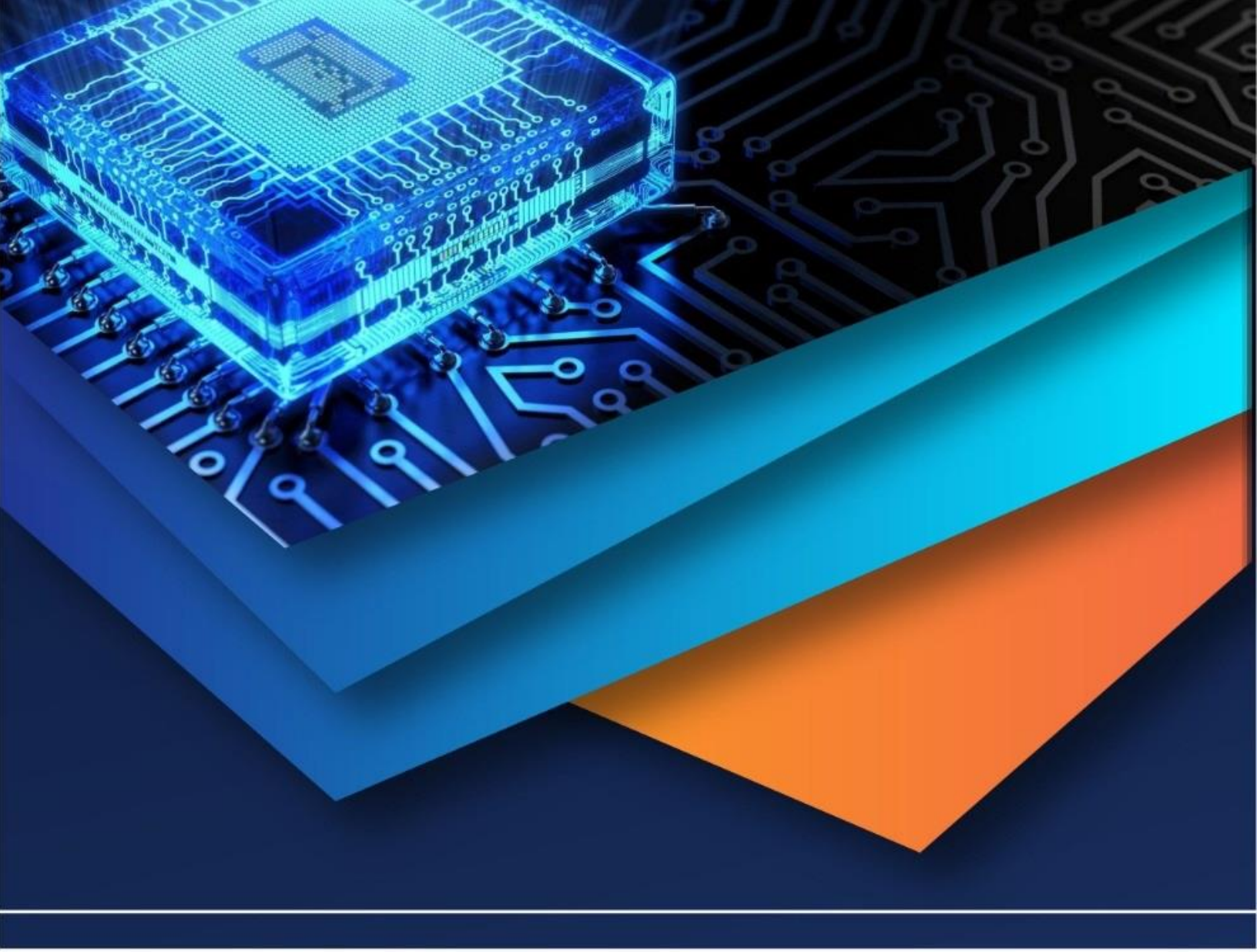

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