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WI-CAM STAND

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Abstract:"*WI-CAM STAND" helps the wild life photographers and other professional to get the best output at any odd place. This Device can be operated by interfacing it with Arduino controller and with the help of Bluetooth module we can connect Smartphone to operate the movements of Prototype.*
The objective of this project is that we have created a useful tool for professional as well as amateur photographers. This tool would be used with the existing photographic technology to render a new dimension to how we capture images and videos.

Conventionally, simple tripod is operated manually, which is a major drawback. Use of wireless operated tripod can overcome these limitations. As it does not contains any wires so it prevents from electric shock. No need to adjust height manually as it can be operated using mobile or remote. It can also be operated from a specific distance which can be extended or reduced according to user's need.

In this project, the Wi-tripod is controlled by a remote that is attached to the radio transmitter. All the control instructions are transmitted using long range radio transponder.

Keywords: *Arduino, Bluetooth, L298N Motor Driver, Battery, Camera, Smart phone*

I. INTRODUCTION

This device helps the wild life photographers and other professional to get the best output at any odd place.

we have designed a useful tool for professional and amateur photographers. This tool would be used with the existing photographic technology to render a new dimension to how we capture images and videos in difficult to access areas. This device greatly enhances efficiency and reduces the discomfort felt by all shareholders.

This will also help wildlife photographers to capture images and videos inside wildlife sanctuaries when the entry of humans is restricted or in areas which are dangerous for human operators. It is also used as a useful tool for wedding and event photographers who need to do in stage coverage of events.

The project includes operating the robot from a remote location and capturing video and images by manipulating a video camera using a dedicated remote control.

Features:
1. remote controlled robot
2. adjustable pan and tilt
3. live video and audio transmission for video
4. Remote imaging

II. LITERATURE REVIEW

Automatic radio site survey using a robot is a method, apparatus, and carrier medium carrying computer readable code. The apparatus includes a mobile robot arranged in operation to travel across an area, a first transceiver for a wireless network firmly fixed on the robot and arranged to communicate with a second transceiver to effect radio measurement operations for determining at each of a plurality of locations covering the area a measure indicative of the path loss between the first and second transceivers, and a location determining system at least a component of which is mounted on the robot and arranged in to determine the location of the first transceiver in the area.[6]

III. HARDWARE DESIGN MODEL

Figure 1 WI-Cam stand prototype

Wi-cam stand is a wired prototype using it which we can operate the movements of camera stand and can be use easily from a specific distance. We can operate movements like forward & reverse movements of stand having a Robo car in its base. We can operate movements like pan & tilt to rotate the camera in all directions and to rotate it in a specific angle. This was our wired prototype which we had made for Design engineering project and for our final year project we continued this project but it is wireless and can be operated using a smartphone from a specific distance.

A. BLOCK DIAGRAM:

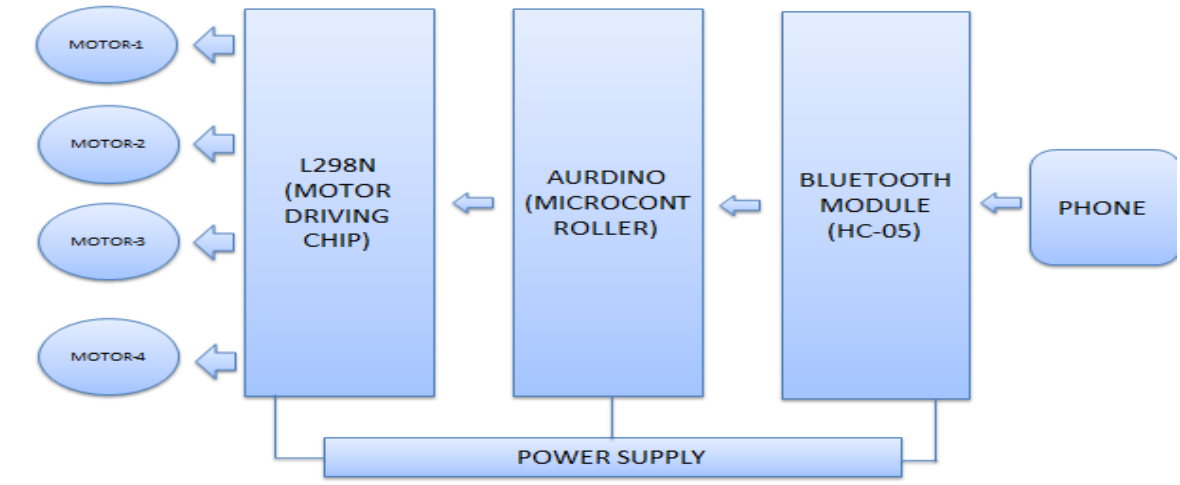

Figure 2 WI-Cam stand block diagram

Smart phone is connected to bluetooth module so the data sent from phone to bluetooth will be transferred to microcontroller (Arduino) which is further transferred to motor driving chip which operates the motors.

For example if the data sent is 1 which means forward option, so bluetooth module will send this to microcontroller which will send this to motor driving chip and this will operate the motor in forward direction.

Hence this is how our prototype works.

IV. ADVANTAGES

1. It is wireless so it prevents the user from electric shock.
2. Simple tripod is operated manually, which is a major drawback. Use of wireless operated tripod can overcome these limitations.
3. One can carry such tripod at places like Wild-life sanctuaries, Forests; any functions etc., decide an optimal position to place the tripod.
4. No need to adjust height manually as it can be operated using mobile or remote.
5. It can be operated from a specific distance which can be extended or reduced according to user's need.

V. CONCLUSION

Conventionally, simple tripod is operated manually, which is a major drawback. Use of wireless operated tripod can overcome these limitations. One can carry such tripod at places like Wild-life sanctuaries, Forests; any functions etc decide an optimal position to place the tripod. As it does not contains any wires so it prevents from electric shock. It can be operated using mobile, remote. No need to adjust height manually as it can be operated using mobile or remote. It can be operated from a specific distance which can be extended or reduced according to user's need. In this project, the Wi-tripod is controlled by a remote that is attached to the radio transmitter. All the control instructions are transmitted using long range radio transponder.

VI. FUTURE SCOPE

The prototype of our project is yet based on wires. We are working on making it a wireless wi-cam stand. Later on we will be working on waterproofing. So that it can handle even a rainy day. The forest is not the only area we want to cover. The wi-cam stand will have ability to work in desert safari. For that necessary changes like wheels etc. will be there. The pneumatic lift is also a future enhancement. The more we work on it the more we learn on it. The future is yet to bring many more amazing changes to the wi-cam stand. It can be used as an unmanned land based semi-autonomous robot and also as a miniature elderly monitoring device.

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