

ROBOT MECHANISM CONTROL BY USING HUMAN IRIS MOVEMENT & WITH BLUETOOTH TECHNOLOGY

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ABSTRACT :In this generation, every people are tend to do their work with easy and more beneficial methodology with less stress and quick accessing. To do every aspects within an instinct we need an device which can work faster with high accuracy and simple accessing techniques. This will be possible by using mobile device to have easy accessing. To achieve these goals we have made use of the Bluetooth technology with an alternate of eye blink sensor to monitor the human iris movement and to control the robot to do what we need. Though the system parts cost may vary for this we have been making use of the mobile device to control the arduino uno, where this mechanism helps us to move from one place to another by an robot system with an eye blink sensor and ultrasonic sensor to sense the obstacles and it also helps us to reach our target. Using this robot mechanism we can have more advantage by reducing

human work by moving to needed targets and accessing anything. We have also included sensors to have trouble-free execution. These all have been controlled by using the mobile application through buttons and voice commands.

KEYWORDS: Bluetooth, arduino uno, ultrasonic sensor, eye blink sensor, robot mechanism.

I. INRODUCTION

Nowadays smart phones are becoming more powerful with reinforced processors, larger storage capacities, richer entertainment function and more communication methods. Bluetooth is mainly used for data exchange; add new features to smart phones. Bluetooth technology, created by telecom vendor Ericsson in 1994, shows its advantage by integrating with smart phones. It has changed howpeople use digital device at

home or office, and has transferred traditional wired digital devices into wireless devices. A host Bluetooth device is capable of communicating with up to seven Blue tooth modules at same time through one link. Considering its normal working area of within eight meters, it is especially useful in home environment. Thanks for Bluetooth technology and other similar techniques, with dramatic increase in Smart phone users, smart phones have gradually turned into an all-purpose portable device and provided people for their daily use. In recent years, an open-source platform. Android has been widely used in smart phones. Android has complete software package consisting of an operating system, middleware layer and core applications. Different from other existing platform like iOS (iPhone OS), it comes with software development kit (SDK), which provides essential tools and Application. Using a Smartphone as the “brain” of a robot is already an active research field with several open opportunities and promising possibilities. In this paper we present a review of current robots controlled by mobile phone and controlling it to move to our target using Bluetooth technology.

II. PROPOSED SYSTEM

In this paper, we design a robot which is being controlled by using bluetooth technology by button and voice command through arduino bluetooth controller. This proposed system for Arduino microcontroller eyeblink sensor are used to direct the vehicle and ultrasonic sensor to detect the obstacle, additional Bluetooth app

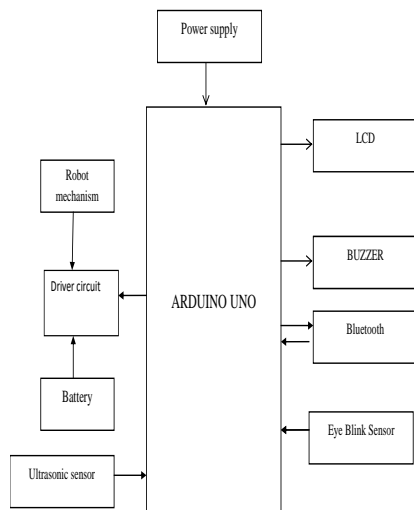
used to control the robot through voice and command. LCD is used to view the status of the robot mechanism.

III. LIST OF MODULES

- **ARDUNIO IDE application**
Using arduino bluetooth controller the commands have been given in fader mode and with other controller modes where voice controller mode made as added advantage to this advantage
- **Assemble the ARDUINO UNO with parts**
The robot mechanism is being set up with the arduino uno microcontroller along with the ultrasonic sensor to make it navigate to the target
- **Connecting bluetooth with Arduino uno**
In connecting the bluetooth to the arduino uno it must be in an discoverable mode and with the specific name node the device has been made paired with the arduino uno to perform the target action
- **Controlling using mobile device**
After pairing gets successful, we can use the mobile to give voice commands to make it move from one place to other or by fader mode as commanding with front, back, right, front – left, front – right, back – left and back – right by assigning with 0-9 command keys or it by navigating

keys are present in joystick when there is exists on obstacle ultrasonic sensor will sends and its sounds with the help of buzzer and status will be seen in mobile

BLOCK DIAGRAM



IV CONCLUSION

By this project disable person will be benefited by moving to their target It is used for detecting purpose and it is also used for pink and place the objects from one place to another .Those are all controlled by mobile application through buttons and voice commands via Bluetooth and also controlled by eyeblink sensor

VI .REFERENCES

[1] (Android Developers Guide. Android Architecture

[2] Heidi Monson (1999) Bluetooth technology and implementations, John Wiley & Sons.

[3] Piyare, R. and Tazil, M. (2011) "Bluetooth based homeautomation system using Android phones". IEEE 15TH International symposium on consumer electronics (ISCE),14-17 June 2011, Singapore.

[4] Sakr, Sharif. "ARM co-founders John Biggs". *Engadget*. Retrieved December 23, 2011. "[...] the ARM7-TDMI was licensed by Texas Instruments and designed into the Nokia 6110, which was the first ARM-powered GSM phone."

[5] Andrew (bunnies') Huang. "On MicroSD Problems". *Bunnie Studios*. "This is comparable to the raw die cost of the controller IC, according to my models; and by making the controllers very smart (the Samsung controller is a 32-bit ARM7TDMI with 128k of code), get to omit this expensive test step while delivering extra value to customers"

[6] ARM7TDMI Microcontroller Development Resources - header files, schematics, CAD files

[7] Wen L, Wang T, Wu G, et al. "Novel method for the modeling and controlinvestigation of efficient swimming for robotic fish". *IndustrialElectronics, IEEE Transactions on*, 2012, 59(8): 3176-3188.

[8] J. Yu, M. Tan, S. Wang, and E. Chen, "Development of a biomimeticrobotic fish and its control algorithm," *Systems, Man, and Cybernetics,Part B: Cybernetics, IEEE Transactions on*, vol. 34, pp. 1798-1810, 2004.

[9] Ren Q, Xu J, Yang S, et al. "Design and implementation of a biomimeticrobotic fish with 3D locomotion", *Control & Automation (ICCA), 11thIEEE International Conference on. IEEE*, 2014: 139-144.