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THE VOICE OPERATED DRILLING ROBOT

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ABSTRACT

Now a day's technology is a part of our day to day life, and even it is used for our personal day to day activities. This technology can be used to eliminate the extra efforts required to complete a task. We use many machines to complete our tasks; some of the machines are involved in our day to life such as fan, washing machines, computers, mobiles, etc. These machines help us to complete our task in an efficient way. Machines are also been used to reduce the efforts involved in constructions of building or infrastructure. One of the machines used is Drilling machine where we used this machine to make hole in a hard solid surface. Usually in home we use drilling machine for making holes in our walls for some reasons. There can be also a situation where we need to use the drilling machine in an unconditional environment or in not suitable environment for human beings. So at these times we need some new advanced technology to control the drilling machine remotely. While we succeed to develop such technology but still it would be complicated to handle or control the machine through remote while we are multitasking. So we are developing a model through which we are eliminating all problems we discussed here.

INTRODUCTION

Now a days, increase in population of every nation, worldwide demand of products increases. To satisfy this demand of products, the manufacturing sector changes themselves to a 'mass production' unit and mass production industries taking a maximum production of the micro- components. The aim of the today's industries is to manufacture the smaller product at low prices because of that they are more interest in developing the micro components devices. As an alternative solution to this problem is which are made with the micro component equipped with sensing devices and using tools for that may have an important role in such a small industries with greater accuracy, less effort and available at minimum cost. In this paper is presented the concept of automated micro- drilling, "voice control" type, in which arduino and motor driving boards' uses to receive the commands through the Bluetooth module from the any of the smart phone. In this machine we also created movement of the drilling robot can allow to move not only at one pace but also at any place and in any direction.

MATERIALS AND METHODS

Materials

- Arduino ARDUINO Uno R3 ATMEGA328P
- Bluetooth module HC-05
- Drill Mandrill (1pc)
- Motors: Johnson motors 300 rpm (1pc)
- Battery: 12v 3.2Ah (1pc)
- Jumper wires: M-M, M-F AND F-F
- Clamps (5pc)
- Wheels (4pc)(dummy wheels)
- Drawer slider (mini) (1pc)
- Plywood
- Screw
- Nylon wire

Figure

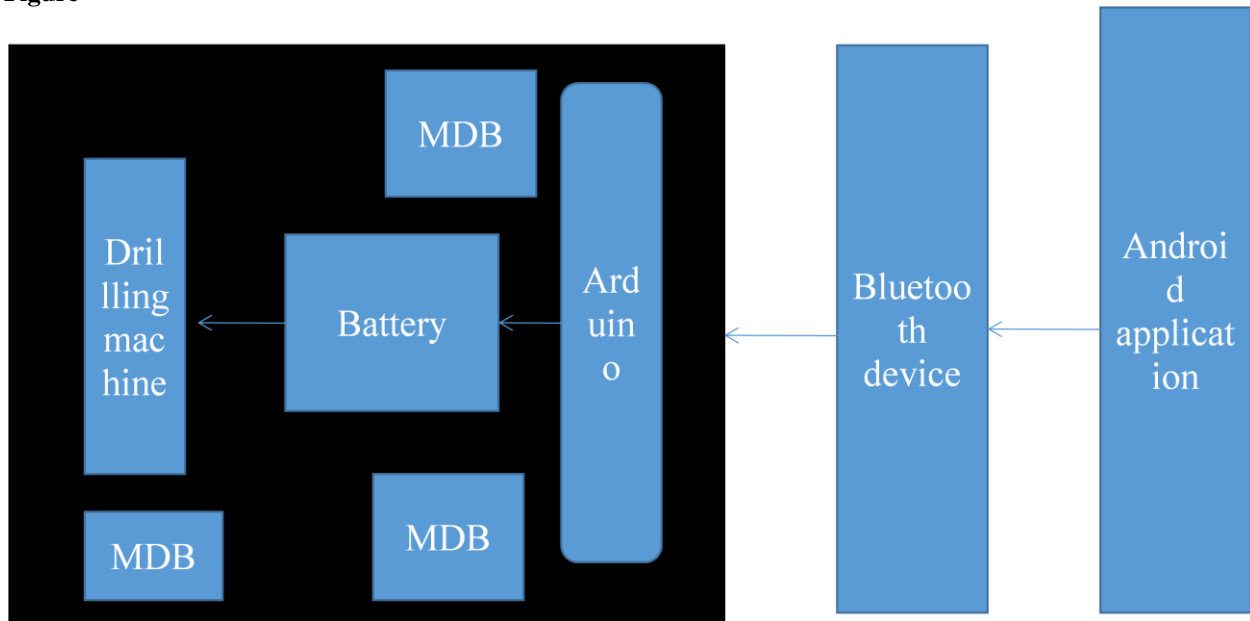


Fig: Block diagram of prototype

Methods

- We are developing a model where we are controlling the drilling machine remotely through our voice, hence it's a voice controlled drilling machine.
- Here we are creating a hardware model where our drilling machine will be connected with the chassis of a small movable module which will allow the whole model to move anywhere in the surroundings. That model will be getting connected to our Smartphone where our android app will be installed through which we will control the whole model with our speech/voice. For this connection will get connected.
- Now in order to control the user must give a command in speech, let us assume that the user gave command MOVE FORWARD then the command is been proceed and send to the model where it understands which command is given and according to that it moves forward.
- Similarly, when we will say DRILL it will start drilling, and when the work is done we will disconnect the connection and the model will be getting disconnected.

RESULT

As we studied previous technology used where we can control things remotely through remote but if the remote gets lost then it is not possible to control the things. Also we saw that recognition technology is also present where we can complete a task through giving a command by or speech. But here is also a limitation where cannot control things like any things. Hence we are overcoming there drawbacks in our project.

DISCUSSION

This is research for existing system in the world which would be similar to our project but we couldn't find any. We did find that there is technology where we can control things through a remote control where we need a remote through which we can control the things. But the drawbacks of such technology is that if the remote get lost then things become uncontrollable, which means we cannot control that things without the presence of remote and also there are quite few technologies where we can control things through our speech remotely.

There is a technology where we can use of voice/speech and our task is completed, this technology is commonly seen in our mobiles, smart phones .In Smartphone we see that we say some task and that task get completed, e.g. when we say TURN MUSIC PLAYER ON or TURN FLASH ON then the music player turns on or flash turns on.



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CONCLUSION

Hence this is a model which will drill in the surface where we want as the model is movable. This whole model is been controlled by speech/voice, when we will give specific command then it will perform action according it.

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