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GRASS ERASING ROBOT

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Annotation . *This article grass eraser robots of technology development , application and advantages analysis does In the article , it is important aspects as , of robots work principle , different different sensors and automatic systems using the fires to determine and on shutdown efficiency seeing will be released . Also grass eraser of robots the world across fire safety in the field place , their a person his life in storage role and to nature effect also thought about is conducted . Economical and ecological aspects are also considered is taken , this while robots in the future more wider apply opportunities shows . Article , vol eraser of robots the future and their technological to innovation effect about conclusion with will be completed .*

Key words : *Grass erasing robot, automated systems , fire security , sensors , Human life , fire determination , management systems , robotics , arduino microcontroller .*

INTRODUCTION

Grass erasing robot project basically a lot layered houses , buildings fire out the rest build a robot at the moment internal to the part come in on fire standing the rooms to delete starts The robot is one to the room standing up around the rooms are also on fire turn it off takes In many people how said question is born Grass the erasing robot increases in width , length , and height takes Today's in the day fire safety issues each how construction and structures for important important have A lot layered houses and buildings , own complicated structure and many of people to live place as , fire output in the situation dangerous to situations take coming can So at times , fast and efficient approaches necessity increases . This problems solution to do in order to , herb eraser robots innovative solution as appear it has been . This robots , fire in cases of , internal in the environment work for intended being his own a lot layered buildings inside efficient movement ability have They are not only one in the room settling down , maybe around the rooms from the fire protection to do able Robot's change in dimensions (width , length , height). and adaptation possible him more efficient and comfortable is doing This in the article , grass eraser of robots work the principle of their possibilities and fire safety in provision role about in detail analysis will be done .

RESEARCH MATERIALS AND METHODOLOGY

This in research grass eraser of the robot efficiency and activities evaluation in order to experience transfer planned . Experience process the following materials and from methodologies consists of will be :

Special work developed , automated to systems have robots , fire in the situation activity conduct for intended . Experience transfer for special prepared on fire standing buildings model , this model is a real fire cases reflection to continue need The robot from a distance manage for NRF (Nordic Semiconductor) technology based on created communication module. Grass The erasing robot is one times on fire standing of the building into will be placed . In this process of the robot automated parts of fire spreading control so it is necessary functions performs Experience

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during the robot, remotely using NRF managed . Management in the process of the operator robot actions and activities cameras through real time mode observes Experience during of the robot fire delete efficiency , time , energy consumption and another parameters note will be done . This is the data later on analysis will be done . From experience received results based on of the robot efficiency , possibilities and work features is evaluated .

RESEARCH RESULTS

This research during grass eraser of the robot work features , remotely manage possibilities and automated functions analysis done Robot's Code C++ programming in the language written being , this programming language of the robot different functions coordination and efficient manage for opportunities created Robot, through the NRF module from a distance being managed . This system is from the operator to the robot commands fast and efficient deliver enable gives , this while operative approach and high at speed reaction to give opportunity provides . In the robot installed automated functions the fire identification , localization and delete processes to optimization help gives This functions , sensors through received information again work and fire sources to determine able Robot's performance for Arduino microcontroller main management system as service does Motors manage for drivers is used while of the robot actions sure and reliable respectively manage enable gives Experiments during of the robot efficiency high level manifestation it has been . It's a fire to determine and on shutdown fast and efficient actions showed also from a distance manage through safe work conditions provided . Research results that's it shows that grass eraser robots fire safety in providing important role to play can also their automated systems modern technologies using more development can

Figure 1. Grass of the eraser robot project ready status version 1.

DISCUSSION

Grass erasing robot project a lot layered in buildings fires delete process efficient and safe done to increase directed innovative solution as attention is rich Fire during , of people life and property storage as well as fire quickly delete important important have This robots , his automated functions and from a distance manage possibilities using , such tasks makes it easier . Robot's internal in parts installed sensors and cameras fire sources to determine and location in determining

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important role plays of the building into included robot, one to the room in and around rooms according to the fire on shutdown help gives That's a lot layered buildings such as complicated environments the fire fast and efficient respectively delete enable gives From a distance manage operator robot using system (NRF module). safe from a distance manage can This is the approach of people fire during directly risk under not to stay provides . Cameras through of the robot actions observation , to the operator sure and fast decisions acceptance to do enable gives Research in the process of the robot software Support C++ programming in the language written This programming the language of the robot complex functions efficient manage for opportunities creates Arduino microcontroller and motor drives of the robot sure and reliable work provides . Experiments during of the robot self manage and automated functions successful done increase ability was determined . However , this of technology development and done increase for some there are also problems . For example , robots mechanic rise up ability and fire conditions difficulties as well as programming of supply safety provide necessity separately attention taken need In the future , robots measurements and features improve , their the fire delete efficiency to increase service does As a result , grass eraser robots modern fire safety solutions one as serious important have being their application a person life and property in storage important role to play can

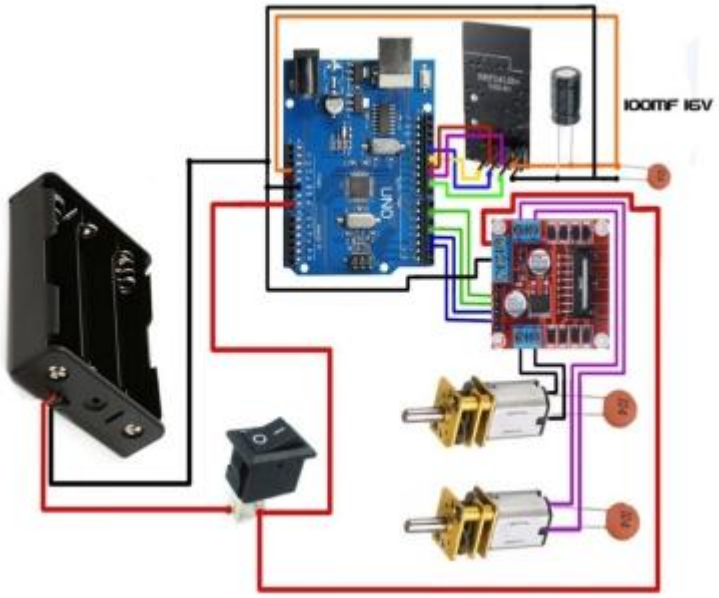

Figure 2. Grass eraser of the robot arduino on the board assembled scheme

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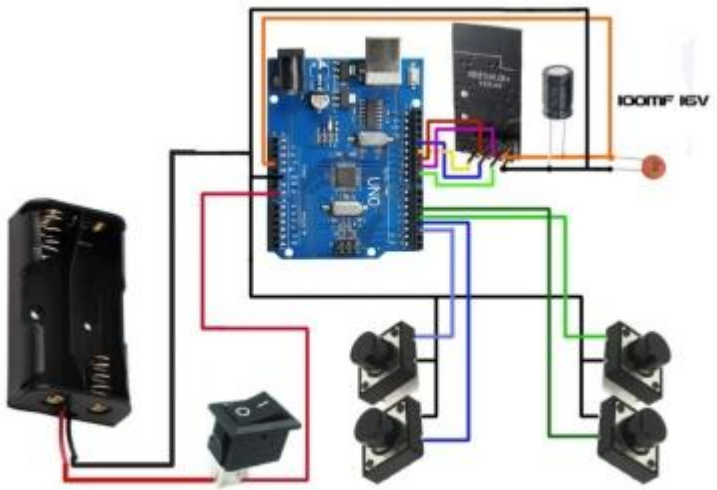

Figure 3. Remote robot management for remote control assembled scheme

CONCLUSION

This in research grass delete of the robot a lot layered in buildings the fire on shutdown role and efficiency analysis we did Robot, his automated systems and from a distance manage possibilities with , fire safety in providing important important have of the building into inserted robot, lit standing the rooms delete in the process to act effectively and one from the room another to the rooms pass the fire turn it off take with separately separate stands

Figure 4. The robot remote control code

Experiments during of the robot software Support C++ programming in the language work the fact that it is complex tasks successful to perform possibility gave Arduino microcontroller , motor drivers and using the NRF module of the robot actions and functions reliable managed .

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From a distance manage system people safe in the distance holding stand , fire in the situation of people life and health in storage important important have

Figure 5. Grass eraser of the robot work functions code part

With that together , grass eraser of robots possibilities and mechanic rise up ability increase necessity there is . In the future this robots fire safety in the field new approaches and technologies with to be filled is expected . In general when , grass delete robots modern fire safety from solutions one as , a person life and property protection in doing big role to play can

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