

Canny Humanless Safeguard Machine

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Abstract— a canny humanless safeguard machine (CHSM) is actively being developed for both civilian and military use to mainly perform in dangerous activities. Predominantly these vehicle are used to replace human in hazardous. Lately CHSM are the focus of many research projects for military and civilian applications like military, surveillance, security service, riot control, hostage situation etc. For Example is explosives and bomb disabling vehicles. CHSMs in varying sizes to meet mission capability requirements are today saving lives and providing critical supporting capabilities in military operations worldwide. The main issue in every country is border problems due to this problems border guarding force of army men are implemented for guarding land border during peace time and surveillance of border preventing transnational crime and to monitor intruders like terrorist, and civilian of other nation. During surveillance operation many army men wounded and shot dead in borders by the attack of terrorist and army of opponent country, so to protect the precious life of army men and women. We are implementing sensor based robotic technology for border surveillance and guard the boarder from enemy. This robotic technology will be very useful for army of every country so that the lives of many army men/women's are protected. We expect that the canny human less safeguard machine plays an important role in the future military operation.

I. INTRODUCTION

A canny human less safeguard machine is actively being developed for both civilian and military use to mainly perform in dangerous activities. Predominantly these vehicle are used to replace human in hazardous. Lately CHSM are the focus of many research projects for both military and civilian applications. The CHSMs are used in different kind of applications like military, surveillance, security service, riot control, hostage situation, police, law enforcement, border patrol, etc. Examples are explosives and bomb disabling vehicles. CHSMs, in varying sizes to meet mission capability requirement, are today saving lives and providing critical supporting capabilities in current military operations worldwide. We guys are concentrating to secure our place from intruders first and sometimes used as an attacking those intruders.

Nowadays the intruders have a chance to enter our place easily or by using some techniques to enter easily. By avoiding this method we introduce a canny human less safeguard machine for security purpose. If anyone wants to meet our military commander from other country they have to get permission from commander. The commander will collect the details about that person and feed the information into the database system. Why because the security camera will capture that particular person face and comparing it with into the database and send that information into the robot by using GSM. If that person has a permission it will

allow that person otherwise it will attack that person. The information's are transferred through GSM System. CHSM getting an input from commander by using zigbee network communication at manual mode.

Soldiers say one of the biggest advantages to having this "Is the ability for this vehicle to stop out enemy snipers in the area. The remote control station and the robot play very important role in the future military operations. During the research time of military operation they found more men and women's were died in wars, etc. So DRDO planned implementing of robot will reduces the human loss. Afterwards improving the robot performance and finding new techniques like "mine scanning, bomb diffusion, etc." Long ago they create a robot for some specific purpose only. But now days the technologies are improved so creating a multipurpose operation robot for military surveillance. In the existing system our soldiers has to stand in the boarder for long time in rotational timings not only this problem , they have to bare the climatic conditions which is the great problem to face. Whenever the enemy enters the boarder our soldier has to fight with them. Possibility of defeating them is depends. We may survive or they may. Any way a human loss will happen.

II. PROPOSED SYSTEM

In the proposed system we have implemented a new technique to for overcoming the human loss. We have planned of implementing a Robot in the place of humans. It means that the military fully will not as Robot. Only in the boarders we will place the Robots. We use camera, DC motor, laser, Zigbee, Pc, Robot.

The camera will be monitoring all the places. If any new face is emerged the camera will send the image of the person to the Pc and will check in the data base.

If he is new person then the Zigbee which is connected to the controller will send the information to another side of the Zigbee, then the DC motor will be initialized and make the Robot to move towards the person and attack them using the LASER.

Here we have used two way of Mode automatic mode and Manual mode. If the computer operator used the auto mode then the robot will taking an action independently. If he gives manual mode the camera will analyse the person and send information to Pc and check the data base, if so he is new person the microcontroller will send information to GSM, the GSM will send information to the other side microcontroller then Robot will be initiated and the Robot will get the command from the commander and act according to the command. This robotic technology will be very useful for army of every country so that the lives of many army men/women's are protected. The remote control station and the robot play very important role in the future military operations.

III. SYSTEM ARCHITECTURE

To secure our place from the intruders. We will place the camera in all the boarder lines and also along with the robots. In Pc we will be having all the data base of the military people. The camera will be monitoring all the places. If any new face is emerged the camera will send the image of the person to the Pc and will check in the data base. If he is new person then the Zigbee which is connected to the controller will send the information to another side of the Zigbee, then the DC motor will be initialized and make the Robot to move towards the person and attack them using the LASER.

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IV. CHSM'S STRUCTURAL DESIGN

A. Mode of Automation and Manual:

The Canny human less safeguard machine system will operate in two different modes (1.Automation 2.Manual). If the CHSM's are set into the manual mode the camera will analyse the person and send information to Pc and check the data base, if so he is new person the microcontroller will send information to GSM, the GSM will send information to the other side microcontroller then Robot will be initiated and the Robot will get the command from the commander and act according to the command (e.g. allow or attack). Handling the robot manually with the help of personal computer.

If the CHSM's are set into automation mode the robot behaves an independent. If any intruder is sensed by camera the immediate of firing and attack on intruder is done without any command from military commander.

The personal computers with MATLAB software were used for controlling the canny human less safeguard machine for military operation. The MPLAB compiler will compiles the high level language to low level language (machine language). The controlling command is an high level language so the machine cannot understand that language due to the MPLAB compiler were used converting ASCII code to binary code.

B. Area Sensing:

The Canny human less safeguard machine sensing the surrounding areas with the help of Infra-Red cameras at 24/7. If cameras are identified anything it will alert the micro controller to get ready for capturing the image. The PIC was used for controlling the infra-red camera. The microcontroller which is used to control the microchips. An each microchip will do a particular task. The PIC kit 2 Development Programmer/Debugger can program microcontroller devices that are installed in an application

circuit using In-Circuit Serial Programming (ICSP) requires five signals:

- 1) VPP Programming Voltage; when applied, the device goes into Programming mode.
- 2) ICSPCLK or PGC Programming Clock; a unidirectional synchronous serial clock line from the programmer to the target.
- 3) ICSPDAT or PGD Programming Data. A bidirectional synchronous serial data line.
- 4) Power Supply positive voltage.
- 5) Power Supply ground reference.

C. Capturing Image:

If anything's are identified by camera then the microcontroller will order to capturing the target image immediately and send this image to personal computer by using GSM. The GSM modem which is used to send and receive information from one device to another device and vice versa. The infra-red cameras are used for capturing images in day and night vision. The infra-red camera will take the image very clearly so there is no problems will occurs during face detection method. The PICKIT 2 Programmer applications were used for capturing the image with the help of microcontroller.

D. Face Detection:

The personal computer, gsm and camera plays an very important role in the face detection method. If any faces are detected it will compare the image with an existing image stored in database system. In this method to conform whether he/she is an authorized person or not.

The personal computer is used for monitoring the objects. GSM modem is used to transfer the images from camera to personal computer. The camera will capture the image as clear shot. The Database systems are used to store the images into the database like SQL, etc. It is best way of backup the images and the information's. The database systems are used to manage the data about the authorized and unauthorized persons. The database system plays an important role in worldwide. The MPLAB compiler provides a comprehensive solution for your projects development software needs and replaces all MPLAB C and HI-TECH compilers.

E. Database Management:

The Database systems are used to store the images into the database like SQL, etc. It is best way of backup the images and the information's. The database systems are used to manage the data about the authorized and unauthorized persons.

The database systems are merged with the personal computer. Whenever we want the details about the person to take the information quickly from the database system.

F. Commanding Information:

The CHSM's are active in Automation mode and manual mode. If the CHSM is in automation mode it follows the steps and does an action of whatever we wrote in the program design.

G. Attacking or Leaving:

The CHSM's are plays an important role in this method. The CHSM's consists of camera and laser guns. The CHSM

robot is built by using some peripheral components like (Motors, Wheels, etc.). The laser is used for firing the intruders. The Embedded C programming language is a collection of one or more functions. Every function is a collection of statements that are used to perform some tasks. The embedded system C languages are used for writing a code for peripheral component. After getting the command from commander the CHSM attacking or leaving the person of consists of command it received.

V. CONCLUSION

There is a role and place for both unmanned and manned systems on the future battlefield. While operating unmanned systems can prove costly, keeping people out of harm's way is priceless. The use of unmanned systems brings many benefits, but they should be seen as complementary to rather than replacements for existing manned systems.

The CHSMs are used in different kind of applications like military, surveillance, security service, riot control, hostage situation, police, law enforcement, border patrol, etc. They work more effectively in environmental extremes such as heat, cold, or nuclear, chemical and biological contamination. Thus, CHSM can be used to augment the soldiers' capability in the field of military operations. In this paper, we present automation robot and its software architecture to efficiently control CHSM in the future combat fields.

The developed systems, CHSM and automation system, is easy to operate and enable significant reduction in station operator workload by utilizing an intuitive graphic user interfaces for CHSM navigation and allowing a single station operator to command multiple CHSM's at a time. In the consequence of the operation test, we expect that the automation system and CHSM play an important role in the future military operation.

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