Robot Operated Gun

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Abstract- *A robot is basically an electro-mechanical machine or a controlled device or a computer program or an electronic circuit to perform various bodily functions. With the gradual advancement of technology scientists come up with new ideas and the invention of robots. it becomes an integral part of one's life. robotic technology also provides flexibility in the hospital, office and factory. In addition to automation the technology has also been applied to the Defense Forces, I have fun, space exploration, security systems and the manufacture of many dangerous machines. Since fear remains India's first enemy so, robots will use them to save human life. Countries like India are still facing and facing a common threat from terrorism.The main purpose of building this robot is to protect the Soldiers on the battlefield or in border areas to reduce attacks on the enemy side. This program will be a combination of a remote application application. In this project we are improving border security by using a smart soldier.*

Keywords- Electro-Mechanical, Robots, Soldiers, Electronic Circuit, Border Security.

I. INTRODUCTION

Advances in technology, the use of research results, the emergence of new, more sophisticated and sophisticated machines are changing our lives every day. But they changed the face of the war. Military robots, the use of independent tools and (almost entirely) independent tools for military purposes are not just a good idea in the minds of some sci-fi writers but a daily reality. Unauthorized aircraft contain almost the most versatile military equipment available in today's military. Increasingly, the idea is that in the very near future wars, even wars can be fought with robots and soldiers between not only nations or their allies but also between extremist groups, terrorist organizations, international criminals or over traditional political or economic units of all kinds and levels.

Current research makes it possible that autonomous systems (drones) will soon become the most widely used tools in war. Such self-contained structures, equipped with artificial intelligence and weapons systems, can be very different from the imaginative humanoid machines that are equipped with excellent performance, intended and directed by the people born of the mother. They can take almost any other working size and form too - they can be wheeled, winged, or tracked, swam, roll or use aircraft, of any kind and for any other purpose.

Even remote control is becoming less and less necessary, sometimes dangerous if you need to be clear - completely automatic, independent, self-directed "intelligence" is available or very close to achieving any goals and size of machines from large to low nano robots capable of pre-programmed or physical actions of man. Artificial intelligence finds a field ranging from medicine to production, from farming to exercise, from birth control to mass extinction in human dreams and to the everyday life of post-urban urban life. It can save and care for health or destroy the living.

Their use in the military is no longer a myth but a fact. They are present in peacekeeping and military action, in urban wars and in the digital war zone. Such robots contain an integrated component of modern weapons

1.1 Robots in the Military Sector

Increased speed of action means that victims have less and less time to respond in the same way. Defense systems are therefore more compelled to use defensive measures to prevent destruction. The use of robotic technology can easily lead to the creation of a highly efficient mechanical system aimed at the destruction of life. Everything can be controlled and monitored, as the context requires quick and accurate decisions as well as direct and effective implementation. The development of civil wars is aided by a particular trend in developed, urban, and post-colonial societies:

- Technology, due to mass production and the use of small items will become more expensive.
- Of the many cultural developments - among them mass education and the Internet that provides all sections of society with information and ideas, ideas and opinions - reinforces the belief that life (natural, human and non-human) is precious, human life is life. .

- It is the price of a democracy that society is expected to provide the necessary space and rewards for living a meaningful life.
- Machinery, robots have at least a moral value that can be important under human life.
- Equipment, thanks to the rapidly growing IT technology, is quick to detect, measure and analyze (in a predetermined way) sets of data larger than one can process, so its response can follow very quickly.
- Dressing and tearing is a minor problem of machines that are better designed than humans.
- Machines are constantly operating under adverse weather conditions or other environmental pressures where people have not been able to.

And they are less than ideal, following orders without questioning them (unless otherwise arranged). Not surprisingly, some of the most important security research projects are undertaken in the construction of unmanned robots and vehicles. As new and innovative solutions emerge, drones take over those man-made tasks or man-made machines, or provide an opportunity to reduce human risk in performing dangerous tasks.

The scope of the possibilities is wide - the stories are about robots that do not work, bombs that have not been built, spacecraft and helicopters, and precision attacks by unmanned aerial vehicles. All of these tools perform their functions under close personal control. Even if their operators do not have to be present in the workplace, their active cooperation is required during the course of their work.

All of these tools should be tailored to their functions. Preparation requires the cooperation of professional engineers and other professionals who share a room with a tool. The evolving IT revolution and new emerging technologies make it easier for virtual tools not only cheaper but also more widely used. Computers that take on analytics and programmatic decisions are not quick and small, but they are becoming more and more powerful - they are able to perform complex calculations with a very large amount of data in an unimaginable short time. The combination of modern sensor systems, fast data transmission technology, small sizes and extremely precise navigation transforms automation by the end of the 20th century.

The development of artificial intelligence that makes the emergence of automatic machines into automatic machines is a form of military development that is difficult to pay attention to. Responsible thinking is trying to mimic the consequences of the war in the near future and what challenges they may pose to today's national and domestic security, as well as to common security as well. The possibilities for its system range from nano programs to.

II. LITERATURE REVIEW

Since 2013 arms control (LAWS) has been negotiated worldwide under the 1980 United Nations Convention on Special Conventional Weapons (CCW), which regulates weapons that may be considered to be extremely harmful or indiscriminate. After three years of informal professional negotiations, the CCW parties agreed to formalize their discussion with the establishment of the Government Experts Group (GGE). The question of whether the parties that the CCW should take legal action against LAWS is not yet formally valid on the agenda, but will inevitably be a key area for GGE negotiations. Campaign to Stop the Deadly Robots - a coalition of 19 non-governmental organizations (NGOs) and 19 provinces advocating for a ban on the development, production and implementation of laws.2 an increase in independence in weapons systems.

To support countries in this process and to contribute to tangible and legal dialogue at CCW meetings, the Stockholm International Peace Research Institute (SIPRI) conducted a one-year map study to improve independence in military and arms programs. The reason for conducting this study is that assessing the current state of development and the independent use of weapons systems can provide a useful insight into future CCW discussions of LAWS. Specifically, such assessments can support delegates (a) improve their understanding of the technical basics of self-reliance and gain a sense of speed and track of independent progress in weapons systems; (b) find concrete examples that can be used to begin to illustrate points where the continued independence of arms may raise technical, legal, operational and ethical concerns; (c) investigate potential limitations of reasonable human control, using lessons learned from the use of existing self-powered weapons or misuse; and (d) identify practical options for monitoring and controlling the development of emerging technologies in the area of LAWS.

III. METHODOLOGY

The method used in the design and construction of the robotic machine gun is based on the operating characteristics and features of the microcontroller, stepper motors, electronic circuit diagrams and most importantly the design of the microcontroller system and stepper motors.

Proper selection of materials for various parts of the machine is a major goal. In machine design. The design engineer should be well aware of the effect, production

process and thermal treatment with the building materials. The choice of materials for engineering purposes depends on the following factors:

1. Availability of items.
2. Appropriateness of building materials for service.
3. The cost of building materials.
4. Physical and chemical properties of goods.
5. Mechanical features of goods

The mechanical properties of the materials are those, which are associated with the ability of what is necessary to withstand the force of the machine and the load.

III. DESIGN

Details of 3.1 Design :-

3.1.1 Workplace

1. The system must be able to withstand operating temperatures of -10 ° F to 120 ° F over long periods of time. Our main concern is high temperature.
2. The system must be able to operate in conditions where the sand is permanently present

3.1.2 Software

1. The Operator Control Unit (OCU) code will be in C ++
2. The Robot code will be a Linux code compliant with Open JAUS standards

3.1.3 Electrical

1. The interface between the weapons system and the robot can be in the contractor's choice of common areas of the sector

3.1.4 Human Resource Management

1. 1.It will be remotely controlled and controlled from the OCU containing the following: four camera views, a touch screen PC PC using Microsoft XP, and a Microsoft Xbox 360 controller
2. User input should be limited / down, left / right, point and shooting actions
3. Residences can be made after the time of any other installation that the system may require

3.1.5 Players

1. There will be no restrictions on the actuators used, but the specific actuators of the targeting systems are chosen by the customer because of their control and the ability to handle the kick back.
2. DC power of up to 36 volts is available but the design should try to work within a range of 12 to 24 volts used by most arm joints.

3.1.6 Security

1. You must be protected from an accident or by accidental vibration
2. The weapon should not be allowed to be easily controlled by the enemy of the system should fail in the "open" configuration to prevent unwanted disarmament from unintentional closure of the system

3.1.7 Shooting Program

1. It will be built with automatic weapons extraction. The system should work with the weapons shown in the figures below, but should be as common as possible. One use of metal burning one project Shooting frequency should not be more than once during 10 second time A good program will have a shooting frequency of less than five seconds
2. The impact on the system due to relapse should be minimized by the design
3. We will trace the characters extracted using at least one simple “counting” method.
4. Allows repetition as long as the system gains power and the weapon is loaded with bullets
5. We will be able to shoot different types of characters in one magazine without reloading manually.
6. We will issue a provided set of automatic weapons, but it should be common enough to adapt to a variety of shooting methods.
7. The first test will be done with a paintball gun.

3.1.8 Purpose

1. The purpose of the two joints is to properly adjust the location of the robot shooting
2. Most important will be accuracy over speed.
3. It will be made up of two members. Joint 1 will have a vertical motion (voice) below ~ 90 ° from the center. Joint 2 will have movements left and right (yaw) directions will be less than 45 degrees from the Joint Center will also be limited so that they do not hit the arm or left arm attachment

3.1.9 Delivery

1. Drawings, texts and papers
2. Weapons retrieval and destruction of CAD drawings and software
3. Effective delivery and display

IV. CONCLUSION

The implementation of this project will reduce the life risk of a soldier in many military operations and in any military arena. We built an Automatic Robot Gun that will ensure mobility and have an easy encounter with Zigbee. It will be a very user-friendly robot with good reliability and precision. Driving and shooting a robot in manual mode will be as easy as driving and shooting in video games.

V. SCOPE OF FUTURE WORK

1. The proposed system could improve the use of a bomb distribution unit and a machine gun.
2. This program can be developed using a different powerful controller than the current one.
3. The system can be upgraded to have artificial intelligence, which is able to design a fully automated system.
4. The system can be further developed using a face mask that is widely used on the battlefield where enemies can use the same uniforms as their troops.

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