الآية القرآنية

قال تعالى

أَلَمْ تَرَ أَنَّ اللَّهَ أَنْزَلَ مِنَ السَّمَاءِ مَاءً فَأَخْرَجْنَا بِهِ ثَمَرَاتٍ مُخْتَلِفًا أَلْوَانُهَا وَمِنَ الْجِبَالِ جُدَدٌ بِيضٌ وَحُمْرٌ مُخْتَلِفٌ أَلْوَانُهَا وَغَرَابِيبُ سُودٌ ﴿٢٧﴾ وَمِنَ النَّاسِ وَالدَّوَابِّ وَالْأَنْعَامِ مُخْتَلِفٌ أَلْوَانُهُ كَذَلِكَ إِنَّمَا يَخْشَى اللَّهَ مِنْ عِبَادِهِ الْعُلَمَاءُ إِنَّ اللَّهَ عَزِيزٌ غَفُورٌ ﴿٢٨﴾

[سورة فاطر: الآيات٢٧- ٢٨]

DEDICATION

This study is lovingly dedicated to our parents for their emotional and financial support, our brothers, our sisters and our friends whose has been constant source of inspiration for us. They have given us the drive and discipline to tackle any task with enthusiasm and determination. Without their love and support this project would not have been made possible.

ACKNOWLEDGEMENT

We wish to express our profound gratitude to our supervisor Ust. Mohaned Hamed Aljack for his valuable guidance continues encouragement, worthwhile suggestions and constructive ideas throughout this project. His support, pragmatic analysis and understanding made this study a success and knowledgeable experience for us.

ABSTRACT

The intention of this project is to reduce human victims in terrorist attacks., so this problem can be overcome by designing the RF based spy robot which involves wireless camera, so that from this rivals can be examined when it required. One of the most important things about these robots is that they have the capability to perform missions remotely in the field, without any actual danger to human lives.

RF technology is used to control the movement of the robot, by sending command signal from a Smartphone to Bluetooth module, which interfaced with the Arduino controller, which process the signal and send it to the motor shield which connected to the DC motors to take the desired movement.

This project is mainly concentrating on the use of a smartphone to run an external hardware device. Previously it was not possible to do so; just because of the emergence of android it became possible. Smartphones are becoming each time more powerful and equipped with new accessories that are important for robots. In this project 2 Smartphones have been used to form a spy robot. One smartphone acts as a controller and other as the spy (Camera). Hence the system is a low cost controller useful in all the fields of life.

مستخلص

الغرض من هذا المشروع هو الحد من الضحايا في الهجمات الإرهابية.هذه المشكلة يمكن التغلب عليها عن طريق تصميم روبوت تجسس يحتوي على كاميرا لاسلكية يتم التحكم به عن طريق موجات الراديو لتفحص أماكن الأعداء. أحد أهم المميزات في هذه الروبوتات هي القدرة على أداء المهام عن بعد دون أي خطر حقيقي يهدد حياة الانسان.

تستخدم تقنية موجات الراديو للتحكم في حركة الروبوت عن طريق إرسال إشارة من الهاتف الذكي إلى وحدة البلوتوث والذي بدوره موصل مع متحكمة الأردوينو التي تعالج الإشارة وترسلها لدارة قيادة المحركات ، دارة قيادة المحركات تكون متصلة مع ماكينات التيار المستمر التي تجعل الروبوت يتحرك بناءً على الإشارة المرسلة.

يتمحور هذا المشروع حول إستخدام الهاتف الذكي لتشغيل روبوت مستقل، سابقاً لم يكن بالإمكان القيام بذلك، ولكن بسبب ظهور نظام التشغيل أندرويد بات ممكناً. تم إستخدام هاتفين ذكيين في هذا المشروع ،أحدهما يمثل المتحكم والآخر يمثل روبوت التجسس(كاميرا) . ويعتبر هذا النظام منخفض التكلفة ومفيد في مجالات كثيرة .

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LIST OF ABBREVIATIONS

RF	Radio Frequency
PC	Personal Computer
DC	Direct Current
EEPROM	Electrically Erasable Programmable Read Only Memory

EMF	Electromotive Force
EPROM	Erasable Programmable Read Only Memory
TV	Television
LED	Light Emitted Diode
MMF	Magnetic Motive Force
CCD	Charge Couple Device
IP	Internet Protocol
CPU	Central processing Unit
PROM	Programmable Read Only Memory
PWM	Pulse Width Modulation
RAM	Random Access Memory
ROM	Read Only Memory
RX	Receiver mode
TX	Transmitter mode
MCU	Micro Controller unit
GPS	Global Positioning System
IC	Integrated Circuit
USB	Universal Serial Bus