Abstract

Terrorists are finding new ways of attacking developing countries like Kenya using current technology. Security forces and guards are exposed to high risk of attack due to lack of modern facilities to monitor international borders and buildings. Due to this challenge, a system was proposed that would be used to monitor these places remotely. This system was able to interact with other security gadgets like drones to effectively survey international borders and buildings, send real-time alerts, and stream videos live from anywhere. An Application Programming Interface (API) was developed to interconnect the system with a drone. A web page and a simple Android application were developed to stream videos and control the rover over the internet. Raspberry Pi 3 Model B and the Arduino UNO microcontrollers were interconnected and used to run the Rover. Satellite, Wi-Fi, Internet and the GPRS technologies were used for communication. Appropriate sensors were mounted on the rover to collect information from the environment and relay real-time data to the central server for further analysis and interpretation. The system was tested, evaluated, and recommendations made for future work.
References


Index Terms

Computer Science Security

Keywords

Terrestrial, Robotic, Microcontroller, Rover, Architecture.