Real Time Motion Detecting and Tracking System for Video Surveillance Security System

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Abstract

Today, the smart surveillance security system is controlled automatically not only in the business environment but also in the personal home security management. The integration of the Arduino and the Android based application is the popular smart security system for the most cost-effective, flexible and secure system. This video surveillance system implements the motion detection and tracking system based on the combination of the above systems. In detection stage, to improve the system reliability, triggering is performed from the embedded system with PIR sensors and the confirmation is performed from the Android with the histogram calculation of snapshot. These two platforms are connected with the Bluetooth connection. In tracking, the major tracking process is performed by the combination of the ultrasonic sensor and the servo motor. In this proposed system, by collecting real-time data from both of the sensors and camera reduces the fault tolerance in detection and power consumption.