

ABSTRACT

One of the reasons for the increasing of crime is caused by a lack of supervision at the scene so that the perpetrators are free to do crime without any fear that lurks there or sees the action. Therefore, various kinds of security systems are being developed, one of them is using a camera surveillance system with CCTV (Closed Circuit TV), most systems are required with motion sensors. However, relatively expensive devices make it less popular for CCTV users among the middle class economy.

The purpose of this final project is to build application-based security monitoring webcam and PC (Personal Computer). In addition, the application authentication system is equipped with motion and alarm. Authentication movement aimed to distinguish whether the person who will enter the room to get permission to enter the room or not. The process of authentication will be done by looking at the path and number centroid movement committed person when it will enter the room, when according to the motion to refer, then there will be a warning if the person is allowed into the room. If the movements do not match, there will be a warning and alarm will be active.

Tests conducted by giving video input with any different parameters there are value of intensity lighting, duration of movement and wrong input motion. The accuracy of value of light intensity test is 93,1%. The accuracy of duration test is 100%. The accuracy of wrong input motion test is 70,8%. So, the average accuracy of the system is 87,9%.

Keywords : security, video, motion detection, centroid, webcam