ABSTRACT

A sense of security is one of the indispensable requirement for humans at this modern era. The progress of time and curiosity also one cause for human beings to continue to develop a security system for the building. With the continuous increase in criminal activities such as frequent loss of important documents and other valuable assets, it needed a security system that can be applied as a security office.

It required a system that could be the security solution. System can detect objects in the form of the face as the input image. System requires the input image from a camera. Once the object is detected by the camera, the system will perform face matching with the facial image contained in the database system. Once the data is processed, the system will produce a logic that is used for further processing in the system as a whole.

This system is an application of Computer Vision for security system. The system will take imagery using a camera located at the door. The image will be processed using Haar Cascade method for detecting objects faces contained in the image. Then using the Eigenface method to match the object faces detected by the face contained in the database. From the test results, the optimal position of the camera in order to get a good result is to a distance of 1 meter with an accuracy of 95 % and with a slope angle between the camera and the object is 0^{o}.

Keywords : Eigenface, Raspberry Pi, *Building Security*