

ABSTRACT

BTS role that is so important in terms to operate and connect the telecommunication system, causing the need to have a good security system in its shelter. Therefore we need to design a door security system at a BTS shelter that is no longer a conventional key which is easily broken by anyone, but in the form of automatic lock system with supervision by shelter owners in the central office. The current system and developed by author is a random password security system based on microcontroller Atmega2560. However, the system still has a weakness , where a person who was in the shelter , its characteristics can't be detected, so it is still vulnerable to theft by those who irresponsible.

So , in this final project designed a security system that is more reliable and have more functions, which can determine characteristics of a person is detected in the shelter BTS, using the Raspberry and Pi camera that connected to the previous tool. The function of Pi Camera is detect a movement of people that capture a person's face in real time, when it gets input from a motion sensor and save it in an SD memory card. The design was created so that the face of someone who is detected can managed and monitored when someone illegally entered into the BTS shelter.

The results were analyzed and taxable income through the whole test process namely operating systems: Runs notification delivery process with good, GPRS Shield feedback can be given to respond to the Arduino Uno with sms delivery time to destination number average 4 seconds. Pi Camera human presence can be detected and capture someone face position when facing the camera and light intensity of the light. PIR sensors can be responded with the neither the existence of the human radius up to 4 meters. Random password system can be working good, operating system can be automatically randomize passwords currently specific conditions and sending sms notification destination number. The system can be said to work like as 100%.

Keywords: Pi Camera, Raspberry, SMS Gateway, Pendeteksian Wajah, Open CV