Paper on Term Project:

Motion Sensor Security Camera System

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With Raspberry Pi Security Cameras, I created a way to monitor the activity outside of my house. This project is important because I created a working system to ensure the safety of my house without spending a lot of money on a name brand system. I did this through a remotely accessible/controlled system and motion sensors. This objective was accomplished using the hardware of 2 Raspberry Pi’s, 2 Motion Sensors, 2 Power Sources, 2 Cases, 2 Micro Chips, a chip Converter, 2 Raspberry Pi Cameras, and a monitor. The software used was an SD card formatter, Notepad++, Wi-Fi linking code, and MotionEye OS. (Gus, 2020).

The first step was to format the micro chip using the card reader and SD card formatter application. Then the MotionEye OS code was downloaded and a Notepad++ file with the Wi-Fi code for my network. The chip was put in the Raspberry Pi and connected to the monitor and a power source. On the monitor the Raspberry Pi IP address was found. (Dick, 2019).

The Raspberry Pi was disconnected from the monitor and the camera was attached. On a laptop the Raspberry Pi IP address was searched and MotionEye OS came up with what the camera was showing. These steps were followed again for the second camera. Through the first IP address of the first Raspberry Pi, the second Raspberry Pi was added to the application. (Dick, 2019).

When motion is detected I am sent an email notification with the time and which camera it came from. Pictures and videos are also uploaded to a Google Drive folder with the time stamp as the name. (PcMac, 2018).

My project irrefutably demonstrates networking principles because the system is remotely accessible and controllable. When the motion sensors in the camera pick up a motion, the camera is activated and sends the data, a picture and a video, through my home Wi-Fi network into the system on my laptop, and a Google drive folder. This is an example of an asynchronous transmission because the information is only sent when motion is detected and not continuously.

Sources

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