**Raspberry Pi Security System**

**System Overview**

With the versatility of the Raspberry Pi and our I/O boards, we would like to develop a security system with these tools and some extra I/O peripherals. The security system would be able to perform the basic functions needed to secure an area. These basic functions include:

* Surveillance camera
* Motion detection
* Alarm sounding upon intrusion

As well we would have the option of sending out images of the area where motion was detected, either a snapshot or a video feed (defined by the user). The image is sent via SMS for immediate action to be taken.

To execute this we need the following equipment:

* 2 Raspberry Pis
* An I/O board per RPi
* Motion sensor
* Camera
* Speakers/Buzzer
* Mobile phone
* A main computer

These equipment are used such that one RPi would deal with motion and sounding the alarm whereas the other sends either a video feed of the last 30 seconds until motion was detected which should have the cause for alarm represented or a number of snapshots of the moment of detection. The RPi acting as the surveillance camera could send the video/photo to a predefined phone number and after sending this message the system waits for a response from the user, where to shut off alarm or call 911.