With any door in your house, you need some type of key. The garage is no different than any other door. It needs some type of security to protect your house, your belongings, and your loved ones. A conventional key would be inconvenient to use for a garage door because it would require an inconvenience of getting out of the car to open. This also leaves the person and their car exposed for that amount of time. We propose to create a voice-security garage opener, for the benefit of convenience and security of any driver and homeowner. Also, it could be of great benefit to those who are physically impaired.

The technologies we will be trying to implement would be digital signal processing, filters, wireless communications, and embedded processing. The voice recognition will be based upon zero-cross hatching and template matching. En lieu of a commercial remote garage door opener, we will be creating our own device, powered by some kind of DC power supply, outputting a radio signal to contact a commercial garage opening machine.

A sound will be inputted into the device through a microphone, filtered and changed into a digital signal, which will then be analyzed by some kind of processor. The output of the processor will be changed to an analog signal.