KompyuterM3chakrs

Week of (Date):June 21, 2019, Friday

Team Members Active this Week:Nathan Bellew, Keren Angeles

Weekly Update of Project/Research (Summarized by Team Lead):

Due to the limited amount of time that could be spent in the week, we had to cut a lot of time that was spent on Networking. We believe that the mower runs off of a radio-signal to its host. We are not sure what data is being collected, so the goal for the week was to research and try to develop programs that determine radio frequencies. This will most likely be our main project for the next few weeks and a radio transmitter and detector have been ordered. The idea is to tap into the radio waves emitted by the Charging Station in order to find the frequency and amplitude. This way we could send faulty/spoofed signals to trick the mower into driving for longer. Our current knowledge is without connection the mower will error out.

Name: Nathan Bellew Hours worked this week: 9

Please explain in detail what you worked on this week.

I spent the week gathering resources for the team to use in the upcoming weeks regarding network hacking, how it is used, how to abuse it. Then I researched how to hack a radio signal.

What are the outcomes of your research and time for the week?

We have successfully created a tool that takes files/folders and zips them which is a good way to send over the network. So we may be able to send full data packets over the internet. We have also found how to connect to a mini-computer such as a rasberry pi, over the internet. So we may be able to “upgrade” the computer parts in the lawn mower.

Please describe any roadblocks or difficulties you experienced in your research this week.

Finding reliable data is really hard, most data is either dated or not real. Often if it is real it would require resources that are not yet available for our department yet.

What are your next steps moving forward?

Continue to gather resources and push the team to finding a solution to accessing the AutoMower.

Name: Keren Angeles Hours worked this week: 9hrs

Please explain in detail what you worked on this week.

This week I did more self study on networking. This time I learned about ports, DNS, socket, and ARP.

What are the outcomes of your research and time for the week?

During this self study I learned how ports and sockets are manipulated when hackers perform exploits and DNS and ARP are protocols used to convert IP addresses for other specific purposes.

Please describe any roadblocks or difficulties you experienced in your research this week.

I still have more to study bout networking. I still have more to learn about networking.

What are your next steps moving forward?

The next steps I would like to look into is to apply what I learned about networking using Raspberry Pi.