

Team Name: sdmay24-44

Team Members: Chris Agyare, Jaxon Dennis, Taylor Moore, Simon Aguilar, Zech Mundy, Vince Quattrone

Report Period: 03/11 - 03/31

Team members:

- Taylor Moore – Team Lead/Representative
- Christopher Agyare – Machine Shop Specialist
- Jaxon Dennis– 3D Modeling Specialist
- Simon Aguilar – Software Development Lead
- Vincent Quattrone – Software Researcher
- Zechariah Mundy – Software Testing Specialist

Past Week Accomplishments:

- The hardware group (Taylor, Chris, and Jaxon): The Faraday cage has been completed and tested and is thereby deemed satisfactory. Initial measurements and designs were completed for the moving wall and the wheels and axels should be created via a 3D printer in the very near future.
- The software group (Simon, Vincent, and Zechariah): Met to discuss the upcoming cybersecurity traps. Discussed the possibility of radio frequency hijacking.
- The software/hardware group (Everyone): We had a meeting to discuss which traps should be worked on next. We came to the consensus that moving wall should be worked on to provide enough work for both the software and hardware teams in the upcoming weeks

Pending Issues:

- Determining the radio frequency being used by the RC Car teams
- Deciding which moving wall trap design to use

Individual Contributions:

- Jaxon Dennis – Completed the fabrication of the Faraday cage and tested it with a normal RC car. Woodworking for ramp and faraday cage final designs. Moving wall design and fabrication of parts.
- Taylor Moore – Helped build the Faraday cage as well as cut all materials for ramp. Met with representatives from car teams to discuss the floor of the track as well as the track borders.
- Christopher Agyare- Found an outside resource to aid in the 3D printing of the wheels and axels for the moving wall. Cut the wood for the newly made faraday cage and the ramp.
- Simon Aguilar – Procured some nails, aluminum foil and screws. Also started on the walls researched.
- Vincent Quattrone – Obtained and lent the aluminum foil needed for the faraday cage. Also researched proper flooring material and decided on Roofing Underlayment.
- Zechariah Mundy — Researched more floor materials at various cost levels considering both total area required and durability.

Plans for Coming Weeks:

- Procure the rest of the cardboard for the track walls and start making the walls.
- Fabrication of ramp and faraday cage prototypes
- Implementation of feedback from testing

- Continued testing of track assembly to ensure that traps work together

Midterm Peer Feedback:

- Strengths
 - Good design and execution with already completed traps and the timer.
 - Knowledgeable designs
 - Good communication with car teams
 - Adaptable design of track and traps allowing for modularity
- Weaknesses
 - Lack of detail for physical size and dimensions of track and it's traps
 - Lack of signal blocking traps
 - Limited by car teams design
- New insights
 - Lack of signal blocking traps
 - Could improve communication and discussion with car teams about track changes
 - Lack of dimensions
- Changes made form feedback
 - More focus on finalizing dimensions and specifying that in design and presentation
 - Discussions with car teams via discord when making track design changes
 - Further look at more signal jamming ideas for traps.