

Team Name: sddec21-14

Team Members: Aaron Goff, Noah Berkland, Dakota Berbrich, Nolan Jessen

Report Period: Mar 1 – Mar 14

### **Summary of Progress in this Period**

During this period, the team continued to make progress in integrating the Sphero RVRs with the Raspberry Pis and micro:bit microcontrollers. This has included finding some limitations and challenges in what the micro:bit controllers are capable of (such as assigning analog signals and fully programming the board). The team has also learned some of the tools that may be needed but are oft overlooked, such as heatsinks for the Pi. In addition, the team put together the design document, which laid out the basic timeline for developing the curricula over the next two semesters. The website has also started being built, and access has been granted to the IT Adventures website (so that the curricula may be stored there for easy access for schools).

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### **Pending Issues**

Currently, the primary pending issues relate to the continued lack of knowledge about the boards and their complete interface with the RVR. While the issue of programming the boards themselves has been continually improved upon, the team is still running into issues with interfacing with the RVR. This will primarily be solved through continued research, and the team also plans to reach out to Sphero to hopefully clear up some of the issues.

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### **Plans for Upcoming Reporting Period**

As discussed in the *Pending Issues* section, the team plans to reach out to Sphero to solve some of the interface questions that are being faced. The team will also start really laying out the first few months of the curricula, with the goal of having a basic outline by the end of the period (with some coding projects started). These will primarily involve the Raspberry Pi and the micro:bit boards, as those are separate and are easy to demonstrate working code on. For example, it can be very easy and quick to get an example of a for loop running through the LED pixels on the micro:bit. This would be one example project to teach the concept of programming loops in the first month or two of the curriculum. The goal will be to have a general idea of the curricula by the end of the next period.

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