weekly memorandum

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| to: | James Pettit |
| from: | Bradford Stricklin |
| subject: | srt week 2 |
| date: | September 20, 2015 |
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**LAST WEEK**

This past week, I focused on integrating the IMU with an Arduino and researched RTOS to determine the feasibility of real time control systems. This work was slightly delayed by the requirement of an FTDI board to control power and communications. I have already received this piece of equipment that I ordered and have done the soldering. I will be testing code tonight and attempting to calibrate the IMU. On top of this, I also looked into flight controllers. While Apogee Components had a good selection and a great comparison chart (<https://www.apogeerockets.com/downloads/PDFs/Electronics_Comparison_Chart.pdf>), The Rocketry Forum was also useful to see input from others who had used some of the flight controllers in the past. After researching, the top three flight controllers appear to be the Stratologger CF, the TeleMetrum, and the TeleMega. Though the Stratologger is a solid choice, it is already being used as a secondary controller and diversification of controllers would point to using a different controller. As for other controllers, the Mega is the top of the line, but costs about $100 more than the Metrum. The Mega also has four programmable sensor channels and offers six pyro channels (as opposed to the Metrum’s two). Both models have built in telemetry and a ham-band transceiver. While the Metrum has everything we need, the Mega has all of that and more and will allow us to expand in the future.

**THIS WEEK**

This week I will continue to work on reading in the IMU data (if I am unable to get it to work tonight) and will then start on outputting movements to the motor based on the values read in from the IMU. I will also begin working on choosing an RTOS and try to familiarize myself with the TeleMega’s systems if it is approved.