

MCTX3420 Team 4: Progress Report #6

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Work Done:

1. Decide between JavaScript and Java GUI
 - a. Decided to stay with JavaScript GUI
2. Generate analog output on BeagleBone as required by Electronics team
 - a. Software has been written, but cannot be tested without BeagleBone
3. Add digital sensors/switches (GPIO pins) code to server side code
 - a. Software has been written, can't be tested without BeagleBone
4. Emailed Adrian, still no ETA on the BeagleBone
5. Improve GUI design and layout
6. Improve server API to meet GUI requirements
 - a. Server API is now versioned - agreement between GUI and server over what is available
 - b. Can now query the server for a specific time range and number of points
7. Add sanity check function to check values of sensors are safe
8. Make potentiometer to test ADCs on beaglebone
9. Setup documentation generation using Doxygen

Work Todo:

1. Deal with failure in sensor sanity check
 - a. Warning threshold and Emergency Threshold
 - b. Send log information and alerts to GUI
2. Plot sensor values vs actuator (pressure) values (not just time)
 - a. Two approaches; store data on server or process data in GUI
3. Improve Beaglebone sensors/actuator code for more general cases
 - a. Currently acts upon specific sensor/pin paths, should be a general function
4. Distinguish between individual experiments; start and stop functionality
 - a. Specify formula to automatically control actuator
5. Write test code to process an interferometer image

