


CC3501 weekly report example

Group number: 2

Team members: Hunter Kruger-Ilingworth, Thomas Mehes, Quentin Bouet

Week number: 10

Progress this week:

Task	Who did it?	What were the outcomes?	Who did the peer review?	What did you learn?
Tested connections and power supplies of board	Quentin	The board works and all tested connections are functioning as expected. The 12V voltage regulator outputs below 12V (10.6V) as expected, because the board is powered by 12V.	Hunter	Confirmed and supervised testing. Checked that 10V is enough for all sensors. Noted that the load cell will need calibration because of this.
Started the report	Thomas	The report's introduction was well elaborated. The system design and technical challenges sections have been started. The weekly reports were very useful to refer to determine previous problems and their solutions.	Quentin	The introduction is well written and in depth. It also describes a dew point generator for people who don't know.
Developed the i2c driver for the DAC	Quentin	Went through the datasheet and created an initialisation function for configuring the DAC. Created a function to set the output voltage of DAC. Documented the code with respect of the datasheet (showing decision process).	Thomas	Unfortunately, still struggling to get the DAC working and will require more experimentation to determine if the issue is hardware or software related. Since we don't know the source of the problem, help from Laurance might be necessary to progress.
Implement filter for load cell and successfully writing to SD card	Hunter	Implemented an exponential smoothing function for noisy loadcell mass. This approach has minimal memory usage (eliminates the need to store all historical values in memory) also cheap to run on the microcontroller. Ironed out a datalogging program to poll the smoothed loadcell mass value to a csv file.	Quentin Hunter	Changed the board.h file to to run the prototype on the actual board instead of the breadboard.
Received board and soldered on components	Hunter Quentin Thomas	Each member contributed to soldering the different headers and barrel jack.	Hunter Quentin Thomas	

Overall project tracking:

Week number	Milestones
4	Confirm project topic
5	Begin Overview and planning
6	Hardware design: Microcontroller, DAC, SD card, flash and usb interface
7	Hardware design: Voltage regulators, loadcell circuit layout and testing, SDI-12 testing and interfacing and Informal check with Laurance
8	Hardware design: write working SDI-12 code, start PCB layout Finalise draft schematic for Laurance to review.
9	Finish PCB layout and review to make sure all design rules pass. Implement fixes to the PCB. Final PCB design submitted on Friday to Terence
LR	Software: Begin development that doesn't require hardware testing Report: begin report writing
10	Hardware: Solder components to PCB and begin interfacing Software: Coding to receive data from I ² C DAC and optimise more SDI-12 sensor code
11	Software: data logging applications including averaging, variable sampling periods and clean exported data.
12	Verify all hardware functionality, perform testing of existing software on the physical board. Polish the software.
13	Implement final bug fixes. Write the report. Demo day during Friday lab.