

Scott Jensen Sorted By Project

300078 - DMO Support - AUV

- Started setting up the drive motor with the LRAUV thruster drive (Week 12)
- Received motor development kit and beginning to understand how to use the system (Week 46)
- Purchased and fabricated a quadrature encoder mount (Week 51)
- Shifting from sensorless to sensed code (Week 51)

708146 - Saildrone

- Supported troubles with instrument slated for next deployment. (Week 19)

901205 - SURF Center

- The puck heater is being redesigned and working on a means to layout the heater elements in a circular pattern (Week 2)
- ESP development (Week 5)
- Continued support of sampling development (Week 6)
- Struggling with some design decisions and their trade-offs. (Week 8)
- Sampler design, theory of operation (Week 9)
- Sample design continues with a few details worked out (Week 10)
- Beginning to finalize first prototype for fabrication (Week 11)
- Submitted drawings, ordered parts and begin fabricating parts for first build (Week 12)
- Received parts for sampler. Working on fine tuning and automating (Week 13)
- Collecting quotes and placing orders (Week 13)
- Submitted next print round (Week 16)
- Beginning build of third terrestrial housing (Week 16)
- Preparing drawings for third terrestrial housing build (Week 17)
- A little help with saildrone (Week 17)
- Sampler fluidics prototype (Week 17)
- Work on Sample prototype continues. Moving axis with candidate stepper drive. Assembled carousel encoder and accuracy seems very reasonable. (Week 19)
- Preparing drawings for third terrestrial housing. (Week 19)
- Investigated ways to push the high level communications out to an external module. (Week 21)
- Untangled carousel position codes and now have a means to position the carousel. (Week 21)
- (Week 21)
- Preparing sampler for demonstration and eventual fluidics work (Week 22)
- Flow sensor options were investigated (Week 22)
- An iteration of the sampler electronics is being worked on to increase fidelity a little bit and possibly use a microcontroller that may actually be used. (Week 24)
- Preparation for the Ohio recovery. (Week 24)
- Deployed Jackson instruments (Week 29)
- Working on electronics "brass board" for sampler (Week 29)
- Brass board development (Week 31)
- Working on brass board initial coding (Week 32)
- Good progress being made on bring-up of brass board. (Week 33)
- G3 Cartridge heater received, assembled and first article tested, awesome! (Week 33)
- Support of Alaska deployment (Week 33)

- Support of wyoming deployment (Week 33)
- The constant acceleration routine is working (Week 35)
- Command line function and ready for actual commands (Week 35)
- More coding on the brass board for the next prototype sampler (Week 37)
- Preparations for the Wyoming recovery (Week 37)
- Diagnosed MV1 Failure and repaired faults (Week 39)
- Found issue with hostgate board and implement fix (Week 39)
- Assembled cylinder on next copy of sampler (Week 39)
- RFID tag was working but now failed. Still trying to figure out the issue (Week 39)
- Continued progress on firmware for prototype sampler mechanism (Week 42)
- Envisioned a different method for puck manipulation for the sampler. Lots of details but first tests look promising. (Week 46)
- Firmware is in a state that some instrument level testing could begin. (Week 46)
- Fabricated prototype to test vacuum manipulation (Week 49)
- Delivered materials to begin fabrication of wiring harness for portable instruments (Week 49)
- Development of the vacuum actuated manipulator. A simple machined model of the concept has shown that there is significant holding force ample to remove a puck from the bottom of a stack. (Week 50)
- Support with build of two new portable units (Week 51)

901405 - Wave-Energy Conversion for Oceanographic Applications

- Diagnose the load cell failure (Week 2)
- Hunting for parts to build spares (Week 5)
- Slow progress on acquiring parts for spare PCBs (Week 6)
- Prepared revision and had PCB sent for fabrication (Week 8)
- Coordinating build of spares (Week 8)
- Spare fabrication (Week 9)
- Slowly receiving PCB's in for assembly (Week 10)
- Received new motor encoder and built adapter (Week 11)
- Continued assembly of Spare PCBs (Week 11)
- Helped develop some of the code for the Battery Management System (Week 11)
- Continued progress on getting the spare PCBs assembled (Week 12)
- Some support getting it ready to deploy. (Week 13)
- Support of deployment (Week 16)
- Building up spare hardware (Week 16)
- Beginning to check out recent system build (Week 17)
- Continued design of Battery Management System (Week 29)
- Work toward an incremental; prototype of the Cell management portion of the BMS (Week 32)
- Next prototype of battery measurement circuit of new BMS ready for layout (Week 33)
- (Week 35)
- Assisted with development of BMS sampling scheme. Required some board and firmware level debugging. Net results are that the scheme has much promise. (Week 49)
- Development of the core features of the BMS are continuing. A possible COTS solution has been identified but more clarification as to customization with the manufacturer is required. (Week 50)
- Discussion with a contractor for a Battery pack with BMS (Week 51)
- BMS feature requirements and prototyping (Week 51)

901805 - Coastal Biogeochemical Sensing Program

- Finalized and sent out nanoFET (Week 2)
- Minimally checked out new nanoFET so that it could be programmed to complete check out. (Week 4)
- nanoFET check out and housing design (Week 5)

- Checkout of nanoFET continues as well as packaging starts. (Week 6)
- Debugging of a few problem boards. (Week 8)
- User found a anomalous feature. Found and fixed. (Week 13)
- nanoFET check out (Week 31)
- Testing of nanoFET. Indications are that the analog front end is functional (Week 32)
- nanoFET tested with DuraFET and results are very promising (Week 33)
- Continued testing of nanoFET and adjustment to a resistor for WAKE (Week 35)
- Tests of nanopHOx (Week 37)
- Working on voltage tolerances of nphox ISFET tester (Week 39)
- Found a design error with the battery measurement feature of the nanoFET. (Week 49)

902106 - Niobicon-Based AUV Docking Development

- A little support in getting rid of the low voltage warning (Week 2)
- Supporting integration and testing. Located a couple troubles and helped with solutions (Week 4)
- Supported a bit of Dock testing (Week 5)
- Working on dock communications with power line modems (Week 10)
- A little bit of support to add a feature (Week 13)
- Troubleshooting of Docking buoy (Week 16)
- Test of Blue robotics tether comms was inconclusive when applied to dock mock up. Communications were very capable but it was not clear that the actual communications were happening across the dock. EMI shields are being fabricated to see if the actual path can be controlled. (Week 19)
- Faraday Cages built for the modems to try to limit unwanted "talking". Seems to have helped but now they are having trouble talking even without the cages. (Week 21)
- Checked out insulation monitoring system in preparation for redeployment. (Week 21)
- Power Line modems seems like a good candidate and will move toward integrated testing (Week 22)
- Meeting about next steps (Week 31)
- Efforts to get a nocturnal load running so that daytime energy collection can be ascertained (Week 32)
- New buoy electronics housing design (Week 33)
- Monitor deployed buoy for energy harvest (Week 33)
- Drawings for bigger battery pack (Week 35)
- Design and Drawings for Dock 2022 (Week 37)
- Worked with battery cabling and leveling (Week 39)
- Reviewed drawings before submission (Week 39)
- Preparations for build (Week 42)
- Small amounts of time spent support the electrical design. (Week 46)
- Supported design of the Dock version 2 buoy electronics (Week 50)
- Monitoring of the build (Week 51)

DQ2113 - Tidal Turbine

- Meetings and discussions about how to handle the encoder (Week 2)
- Met with collaborators and decided the current encoder is not workable. Solutions are being searched. Starting build of hardware. (Week 4)
- Encoder identification (Week 9)
- Emails about upcoming work (Week 13)
- Preparing hardware for testing at APL (Week 16)
- Pulling together system to be tested at APL. Some of which is working out who has what equipment and how will they connect. (Week 19)
- Preparing for shipping equipment (Week 21)
- Packing for trip to UofW/APL (Week 22)

- Visited UofW APL with power buoy electronics to perform a demonstration test of MBARI electronics operating APL's tidal turbine. Trip was successful and report is being worked on. (Week 24)
- Some effort on the trip report (Week 29)
- Work toward report completion (Week 31)
- Report writing (Week 32)
- Submitted first draft of trip report to APL (Week 33)
- Pushing ideas around solidworks for power electronic integration (Week 35)
- Meetings about next steps (Week 37)
- Reviewed drawings of electronics mounting on new endcap (Week 39)
- Rearrangement request for a flat flex circuit (Week 39)
- Work toward solutions for physical mounting of hardware into housing (Week 42)
- Closing in on a final design for the housing cap to mount the electronics (Week 46)
- Had optocouplers changed on boards after an over voltage event (Week 46)
- Received the progress approval from UofW which means detailing of the design for the remaining design details. (Week 50)
- Reviewing Design of new end cap for mounting MBARI power electronics (Week 51)

Out of Office

- June 9-10 for UofW/APL visit
- June 20-22 Ohio recovery
- June 27-July 8 vacation
- July 25- 29 Vacation
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- Out last week due to COVID exposure
- On travel 9/18-21
- On leave 10/20-25
- Until further notice, working from home as possible.

Overhead

- Building G with Flad (Week 2)
- Hiring committees (Week 16)
- EE hiring committee (Week 29)
- EE-tech hiring committee (Week 29)
- Interviews for EE and EE-tech (Week 32)
- Lots of hiring meetings (Week 33)
- Interview process (Week 35)
- EE interview (Week 37)
- EE-hire meetings (Week 42)
- E-Tech hiring, reviewing resumes (Week 49)
- Harassment Training (Week 49)