

300083 - DMO Support - LRAUV

Week 51

1. Brian Kieft
 - a. 3 vehicles deployed this week. Supporting planktivore testing and MBTS.

Week 50

1. Brian Kieft
 - a. Supporting Daphne piscivore deployment this week
2. Thom Maughan
 - a. BPC2 revB parts kitting, PO, handbuild bpc2, discussed with jose about resource availability next couple weeks.
 - b. Parts kit for 10 BPC2 revB delivered to Indtec by Varsha. Waiting for PO to be signed.
 - c. Two (half) packs on a cart and an RS232 multidrop cable has been made
 - d. BPC2 RevA boards are all updated to LPC11e37 (more program space). Debugging odd behavior, looking into datasheet differences between the lpc11e14. Details: RevA backplane is reading 15 sticks and not reading the other 16 sticks after getting the processor updated to LPC11E37 - debugging it..
 - e. Parts for BPC2 Rev B handbuild expected to arrive on Tues Dec 10. \$1100 spent (budget available is \$400).
 - f. Evan has modified the spacer to fit the charger board and to tweaked some of the holes for better connector access. Evan 3D printed and verified the fit on RevA. Evan will hold off making proto build until we get the RevB BPC2 handbuilt for final verification.
 - g. Duane delivered a 'how I do this' document for PCB layout and fab. I shall miss working with Duane and wish him the best in retirement.

Week 49

1. Brian Kieft
 - a. Supporting Daphne deployment
2. Thom Maughan
 - a. Backplane pcbs are expected Dec 5, working with Varsha on Indtec kitting. EE Techs will be building 2 backplanes.
 - b. Charger boards expected from Indtec mid Dec.
 - c. Serial protocol doc updated to v0.81 and sent to Quinn.
 - d. Tasks/status meeting with Quinn and Varsha. Hardware is on track for RevB builds. Varsha has two packs assembled and multi-drop rs232 dev/test starting after we get cabling and cart setup complete.

- e. Working with Brett on WHOI needs
- f. Many thanks to Kent for budget transfer to cover backplane assembly - a big help to the schedule.

Week 48

- 1. Thom Maughan
 - a. Charger boards are at Indtec for assembly
 - b. Backplane layout review, Duane sent out for fabrication and has parts kits on order. Very appreciative of Duane Thompson and will dearly miss work with him when he retires.
 - c. Backplane assembly may be delayed due to budget shortfall. Helping work option for alternate budget source.
 - d. Varsha finished build of 2 packs with backplane updated to LPC11e37. Verified my chip support library is compatible with 11e37.

Week 47

- 1. Thom Maughan
 - a. Working with Varsha and Duane on 2nd rev of BPC2 backplane and charger. Delivered Charger parts kit to Indtec and introduced Varsha to Trinh and Loni - got a quick tour.
 - b. Duane finished backplane layout, reviewed and boards are sent out.
 - c. All four first rev backplanes are updated to LPC1137 which has enough flash to finish development
 - d. Delivered draft of serial protocol to Quinn.

Week 43

- 1. Thom Maughan
 - a. Backplane hardware review with Duane, Varsha and Erik.
 - b. Working on port expander i2c driver for exercising charge current control
 - c. Various meetings

Week 42

- 1. Thom Maughan
 - a. Working a day a week. Duane has hardware changes. Cole tasked with LPC11e37 chip support library, validate backplanes.
 - b.

Week 41

- 1. Brian Kieft
 - a. Assisting in testing Daphne satcom issue. Water detected in connector.
- 2. Thom Maughan

- a. Reviewed the hardware changes with Erik and Varsha. Delivered the hardware changes to Duane Thompson for layout. Varsha will be point of contact with Duane and we'll meet to discuss. Working on bringing up two backplanes.

Week 40

- 1. Brian Kieft
 - a. Supported CANON/EcoHAB deployments. Issues that required on call response mostly involved fouling, failed control, and failed comms.

Week 39

- 1. Brian Kieft
 - a. Supporting CANON and EcoHAB field programs

Week 37

- 1. Brian Kieft
 - a. Supporting MBTS run with Daphne
- 2. Thom Maughan
 - a. Reviewing hardware notes on backplane in prep for meeting with Duane and Erik.

Week 36

- 1. Thom Maughan
 - a. Working with Varsha

Week 35

- 1. Brian Kieft
 - a. Supporting planktivore/sampling deployment going on now
 - b. Troubleshooting issues with puck sensor and CTD hysteresis on Daphne.

Week 34

- 1. Thom Maughan
 - a. Working with Varsha on 2nd battery pack build. Serial terminal debugging, etc. Git pulled the code and Varsha/Tad found and fixed chip support lib linkage - great teamwork.

Week 32

- 1. Thom Maughan
 - a. Working with Varsha on BPC2 Charger input protection testing and debug
 - b. Eval board purchased, Varsha and Tad made great progress
 - c. Working with Varsha and team on assembly of 2nd LRAUV battery pack.

Week 31

1. Brian Kieft
 - a. Standard on call for deployments happening in Monterey Bay. Currently that's Daphne and Ahi.

Week 30

1. Brian Kieft
 - a. On call for Daphne/Pontus deployments

Week 28

1. Thom Maughan
 - a. Getting a BPC2 ready for work with Varsha.

Week 27

1. Thom Maughan
 - a. Met with Erik to discuss options for accelerating BPC2 rev2 hardware. Met with Varsha and George.

Week 26

1. Thom Maughan
 - a. BatMan proposal discussions

Week 23

1. Thom Maughan
 - a. Working i2c driver for charger board

Week 20

1. Thom Maughan
 - a. I2c port expander on charger

Week 19

1. Brian Kieft
 - a. Lots of work with existing deployments: optim, piscivore, Durkin Lab, Monique, and engineering tests.
 - b. Worked with WHOI/Carlos to get backup dash up and running to facilitate power off Friday recovery and provide future backup if/when MBARI goes dark.
 - c. Provided beacon ids to ship for current deployments. Working on automation in ODSS.
2. Thom Maughan

- a. Sent hardware change list to Duane T
- b. Working on pcal6416 driver
- c. Brizo battery diagnostics

Week 18

- 1. Thom Maughan
 - a. Sent BPC2 / Charger change list to Duane Thompson.

Week 17

- 1. Thom Maughan
 - a. Battery tests on Ahi with capacity below 20%. Ran tests on temperature rise with 8amp unattended charging (0.8 C rise on external hull). Internal, batteries at 24C. Reviewed the proposed change from 4A to 8A unattended charging with Brett and Erik and others.
 - b. Preparing cart for mobile BPC2 development with Cole and Varsha.

Week 16

- 1. Brian Kieft
 - a. Supporting Synchro deployment
 - b. Supported MBTS deployment. Daphne recovered.
 - c. Diagnosed sampler data ingest issues for MBTS. New solution offered.
- 2. Thom Maughan
 - a. Brief meeting with Brett and Cole on the decision to prioritize Cole's time on BatMan v2 controller. Getting ready for a meeting on Thursday with Erik to discuss needed changes for the electrical

Week 14

- 1. Brian Kieft
 - a. Supported Daphne MBTS run
 - b. Investigated data issue with sampler following false start on sampling mission. Attempting to streamline sampler files to stakeholders.

Week 11

- 1. Brian Kieft
 - a. Launched LRAUV daphne Monday for MBTS.
- 2. Thom Maughan
 - a. Working on task list to help coordinate work with Cole and Varsha.
 - b. Getting parts to build up another battery pack

Week 10

1. Thom Maughan
 - a. LRAUV BatMan status and alignment meeting. Working thru alignment with WHOI battery protocol and whether it's possible to deliver asap. Conclusion was the LRAUV team will handle the WHOI protocol in the battery component and then thru config handle the MBARI protocol.
 - b. Working with Erik to use his team for some of the remaining hardware board bringup in order to focus on finishing the firmware.

Week 8

1. Thom Maughan
 - a. Brett has requested a schedule. Working to update task list.

Week 6

1. Thom Maughan
 - a. BPC2 firmware

Week 4

1. Brian Kieft
 - a. Supported MBTS deployment
2. Thom Maughan
 - a. Defined and implemented a battery pack health message. Health will be the default message with Quinn's new battery software component. Battery details message will be requested infrequently.
 - b. Board checkout of two new backplanes / chargers.

Week 3

1. Brian Kieft
 - a. Prepped Pontus for deployment

Week 1

1. Thom Maughan
 - a. BPC1 diagnosis. Reviews of BPC1 schematics with Denis
 - b. BPC2 firmware implementation