

Engineering Weekly Report 5/11/2023 - 5/18/2023

Executive Council Notes

Individual Activities

- Michael Anderson
- Kevin Barnard
 - 902002 - FathomNet
 - Worked on FathomNet beta-2.3 backend tasks
 - 902204 - Scalable Robotics
 - Participated in RC cruise; fixed lots of issues with RTAB-Map SLAM
 - DQ2209 - Ocean AI 2
 - Led discussion with OVAI Programmers Working Group
- Francois Cazenave
 - Out of Office
 - Took ½ day off to take care of sick child
- Danelle Cline
- Duane Edgington
 - 901009 - CANON
 - Team meeting May 11, May 18
 - 901103 - Biodiversity and Biooptics of Zooplankton
 - Continued work with Danelle on clustering and active learning tools for midwater images and concepts
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations, and Outreach
 - Continued work with Danelle on unsupervised clustering and active learning tools for UAV images and concepts
 - Team meeting May 18
- Jon Erickson
- Kevin Gomes
 - 200105 - Core Navigation Data - MDUC
 - Looking over documents that I got access to in order to understand signal routing
 - 300059 - DMO Divisional Support - David Packard
 - Attended meeting with CyberSecurity contractor for the ship and things are much clearer now and many of the main concerns were clarified.
 - 706008 - READI-net
 - Meeting with contractor
 - 901009 - CANON
 - CANON readiness meeting
 - More work on Echosounder web application for viewing products.
 - Overhead
 - Fixed bug in Telepresence app that was causing the join to the zoom meetings to fail
 - I was notified that the MINIROV DiveLog app would not run after machine was upgraded from Monterey to Ventura. I'm able to replicate the failure, but it's deep in the ODBC driver somewhere and having a difficult time diagnosing the problem.

- Still thrashing on MSSQL connection for dive log and contemplating moving to a web app entirely, but having issues connecting from my laptop via NodeJS too ... WTH???
 - Abstract submissions
- Out of Office
 - Aug 28-Sep 12: Vacation
- Andy Hamilton
- Kent Headley
 - 300057 - Mooring Maintenance
 - Figured out why gpssclock driver stopped working: a reset reverted back to a retry configuration value that doesn't work; updated the default config
 - Worked with Karen to restore downloads on 2023M1 test system
 - Now metsys, gps and gps clock are all working on 2023M1
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Helped Rob w/ some git operations
 - 901101 - Seafloor Mapping
 - Participated in last Fri Carson cruise to test TRN on ROV. Encountered several technical issues upstream, so couldn't fully exercise TRN code, but did find some bugs and got a lot of useful context for running TRN w/ LASS and other use cases.
 - 902204 - Scalable Robotics
 - Participated in last Wed Carson cruise to test gemini sonar driver image capture and LCM publishing. That was successful, and determined that hard disk speed is a potential bottleneck at the data rates we were using
 - Overhead
 - SE-EAD interviews this week and next
 - AOSE phone screening and application review
 - Misc admin
- Rich Henthorn
 - 901405 - PowerBuoy Development
 - Weekly meeting with OSRF
 - Test sim_pblog updates
 - 902305 - Event Detection using the Sedimentation Event Sensor
 - Automating data extraction from SES while on MARS
 - Overhead
 - A pair of schedules appointments Mon and Tues mornings
 - Out of Office
 - June 1 - 9: Vacation
 - June 29 - July 10: Vacation
 - July 24 - 27: Vacation
 - July 31 - Aug 4: WFH
- Brett Hobson
- Irene Hu
 - 901805 - Coastal Biogeochemical Sensing Program
 - Created (from old B draft) nanofet A-1-1 schematic with small changes, and sent to Jose's group for assembly of 2 more nanofets
 - Created new nanofet B schematic to be a multipurpose small controller with integrated battery; changes ongoing pending battery decisions and parts arrival/evaluation
 - Added missing resistors to existing nano1 and nano2; nano1 to Joe for titration test
 - Borrowed Yokogawa from Paul M to measure bias battery current consumption. Bias battery appears to be parasitically powering other parts of circuit after it falls asleep
 - 901904 - Deep-Sea Coral Community Observatory

- Code written for comms to LED ring
 - Replaced resistors to increase voltage to LED current source regulator; troubleshot and fixed problem with digital pot; characterized new LED I-V points at a few pot settings and measurement durations
- Overhead
 - Rec comm meeting, and planning Bike to Work
- Out of Office
 - May 25-26 reunions
- Scott Jensen
 - 706008 - READI-net
 - Reviewing Sampler electronics prototype for fabrication
 - 708178 - Marine E Development NAV
 - Diagnosing full Docking Buoy communications setup
 - 901205 - ESP SURF Center
 - Recovered Clifton Forebay installation of instrument Waldo
 - Out of Office
 - Vacation May 11-15
 - Vacation June 30-July 5
 - Vacation July 24-28
- Brent Jones
- Chad Key
 - 901101 - Seafloor Mapping
 - Participated in the LASS cruise on the Carson last week (W-F)
 - Need to order (or build) an additional Y-Strobe cable.
 - Moving forward with revB designs
 - Paragon Battery Upgrades
 - Received final BSC approval.
 - Working with Jared and Ian on final proposal wording
 - Prepping to order parts (and making a test plan)
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - Out of Office
 - 06/09 (PDT)
 - 06/19 - 06/29 (EDT)
 - 07/03 - 07/07 (TBD)
 - 07/17 - 07/28 tentative (TBD)
 - 08/03 - 08/07 (EDT) alternate
 - 08/16/ - 08/19 (EDT)
 - 09/26 - 10/04 (EDT)
- Denis Klimov
- Eric Martin
 - 901101 - Seafloor Mapping
 - Three offshore days on the R/V Rachel Carson last for 901101 and 902204. They were successful, albeit with shortening due to high winds.
 - The sled made for Doc Ricketts seems to work fine for station keeping, so we can use the platform more flexibly now.
 - 901206 - Coastal Profiling Float
 - Troubleshooting SDcard corruption issues, blocking the sleep on anchor feature.

- 901911 - ROVVR
 - Improving camera driver
 - Prepping for intern.
- 902012 - Telepresence
 - Tests offshore last week were successful on starlink, checking in with Kevin about site improvements.
- 902204 - Scalable Robotics
 - Offshore with 901101.
 - DOEST Prep
 - Mini Tank Calibration
 - Knowledge dump from Bastián about how to run the 6DOF for DOEST and after he leaves.
- Overhead
 - SEESC hiring this thursday, meeting last week.
 - Handed off a raspberry pi to the docking buoy project for a quick test.
- Out of Office
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- Thom Maughan
 - 300083 - DMO Divisional Support - LRAUV
 - Battery backplane controller firmware, aka, batman. Working on i2c driver coming up to speed on MCUXpresso.
 - 901009 - CANON
 - Coming up to speed on docker. Got an example docker file from Brian S.
 - 901805 - Coastal Biogeochemical Sensing Program
 - Attended meeting on nanoFET size reduction, gave several suggestions.
 - 902004 - Planktivore
 - Prep Planktivore V1 for use by Durkin lab off Paragon in the coming weeks. Held training for Crissy at the test tank.
 - Opportunistic training deployment of Planktivore v1 on Tuesday May 16. CPF recovery, fishing for anchovy, 10 minute dip of Planktivore v1 + Noot.
 - Overhead
 - Planktivore Abstract for proposal. Board Bullets
 - Orcad and EDM installed with a much appreciated overview by Jose.
 - Out of Office
 - Vacation June 26 - July 12
- Mike McCann
 - 901009 - CANON
 - Spinning up replacement kraken2 internal stoqs server with lots of help from Peter
 - Running pg_restore for all existing stoqs databases into kraken2's postgres version 15 server
 - Out of Office
 - 23 May: Vacation day
 - 7-11 August: SIGGRAPH in LA
- Rob McEwen
- Paul McGill
 - 901618 - Pelagic-Benthic Coupling
 - Processed all available Rover fluorescence images.
 - Completed 90% of my poster for ASLO Mallorca.
 - 901700 - Acoustical Ocean Ecology
 - Helped Brett with building a Faraday shield for LRAUV Simrad sonar.
 - 902304 - Piscivore Cam

- Designed and built improved Piscavore Camera controller I/O board. Tested it with George S. and it works.
 - Preparing latest camera for deployment next Tue.
 - 902305 - Event Detection using the Sedimentation Event Sensor
 - Wrote code to process SES macro images.
- Enoch Nicholson
 - 706008 - READI-net
 - Waiting on parts
 - Transferred CAD data to PDM Vault
 - 771131 - Great Lakes PCM/HAB
 - Produced and submitted drawings for phase separator / pump mounting bracket and electrical enclosure mounting plate.
 - Built phase separator.
 - 902306 - SINKER
 - Transferred CAD data to PDM Vault
 - Ordered aquarium and completed design of printed aquarium components.
 - Worked on PBC layouts: Module board and its daughter board, System Controller.
 - Began conceptual layout of SINKER frame.
 - Overhead
 - Detailed notes on housing design.
- Tom O'Reilly
 - 808012 - OPC IFCB
 - Helped remote troubleshooting of IFCB deployed on power buoy
 - 901513 - Targeted Sampling by AUVs
 - Helped with first deployment of Wave Glider sensor management computer (SMC) version 2, in support of front tracking experiment by Zhang and Rueda
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations, and Outreach
 - Carried out flights to assess visibility of underwater targets, using Secchi disk
 - Assessed UAV launch/land locations in Santa Cruz county near Soquel Point, which is near 'upwelling shadow' and associated thermal/biological features in Monterey Bay.
 - 902101 - LRAUV Technology Development and Fleet Operations.
 - Implemented and tested 'bridge' between Wave Glider hotspot and LRAUV dashboard, such that LRAUV acoustic messages received by hotspot are relayed to shore, and from there to LRAUV dashboard, where message content is displayed.
- Mike Risi
 - Out of Office
 - Out of office on Fridays
 - May 30 - June 6
- Paul Roberts
 - 901809 - Deep Sea Bioinspiration
 - Chiton deployment for CANON
 - 902001 - Ventata 4k camera
 - Optics testing
 - Lens control firmware updates
 - Sizing laser integration
 - 902004 - Planktivore
 - Abstract submission
 - 902306 - SINKER
 - Sediment camera optics modeling
 - finalizing CAD models

- Overhead
 - SE interview
- Brent Roman
 - Out of Office
 - May 26 - June 6
- Carlos Rueda
 - Out of Office
 - Possibly ~2 days working from home this or next week due to office layout upgrades
- Karen Salamy
 - 200103 - Core CTD Data - MDUC
 - Updated several ROV CTD Data to the EXPD for vnta dives from last week. A new CTD was installed on the ROV which unfortunately encountered some failures for several of the dives.
 - 300057 - Mooring Maintenance
 - Helped Kent restore downloads to the 2023 M1 test deployment directory on coredata
 - Updated T-String information for the 2023 M1 test directory for Jared
 - 902101 - LRAUV Technology Development and Fleet Operations
 - Working with map updates for the team.
 - Brian wants to show the new Dash5 to the Board for the DOEST in June. Lots to do beforehand to try and get ready.
 - Have requested to have a meeting with Brian K. sometime this week or next to go over Dash5 and expectations from both Sumo Creations as well as myself.
 - Overhead
 - Working with the SE team to turn out an Abstract and proposal for the EXPD modernization.
 - Meeting with Mike M. today to discuss the proposal as well.
 - Awaiting word from facilities regarding my new office being completed (hopefully today). I will try and move by the end of this weekend or early next week.
 - Out of Office
 - VACATION: June 19-23, 2023
 - Now in the office 3 days/week M, T, Th..
- Brian Schlining
 - Out of Office
 - May 8 - 16 - Out of office
 - Jul 28 - Aug 6 - Vacation
- Alana Sherman
- George Stern