

Engineering Weekly Report 11/23/2023 - 11/30/2023

<https://docs.mbari.org/internal/projects/Engineering/Weeklies/2023/>

Executive Council Notes

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Individual Activities

- Michael Anderson
- Kevin Barnard
 - Out of Office
 - LASS on Ventana/Rachel Carson cruise: Oct 10, 2023 – Oct 12, 2023
 - CSIRO: Oct 20, 2023 – Nov 5, 2023
 - MiniROV/Fulmar cruise: Nov 6, 2023 – Nov 9, 2023
- Francois Cazenave
 - 901221 - Midwater Time Series
 - Assembled magnetic cover and tow bail
 - Planned test at sea
 - 901405 - PowerBuoy Development
 - Working on new tether South Bay
 - 902106 - Niobicon-Based AUV Docking Development
 - Designing and order parts for Pontus latch
- Danelle Cline
 - Out of Office
 - Thanksgiving, November 22nd-November 24th.
- Duane Edgington
 - Out of Office
 - Nov 21 - 22: Vacation (PST) UTC-8
 - Nov 27 - Dec 1: Vacation (EST) UTC-5
 - Dec 10 - 16. NeurIPS 2023. (virtual) UTC-6
- Jon Erickson
- Kevin Gomes
 - 300059 - DMO Divisional Support - David Packard
 - Working on Kafka as messaging middleware for DP data system
 - 901009 - CANON
 - Per request from DMO, renamed some WaveGlider CCUs and migrated some data to make sure they aligned with named vehicles.
 - Some adjustments and data moving around for Crissy with respect to a SPOT drifter
 - 901915 - Improving MBARI Data Impact
 - Digging more into TimescaleDB
- Andy Hamilton
- Kent Headley
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Completed code review (with some modifications) for TRN in simulation loop for Dorado.

- Overhead
 - Hiring: application review, scheduling zoom screenings
- Out of Office
 - Nov 23-24
- Rich Henthorn
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Working on gazebo simulation
 - Training session with Kieft
 - 902305 - Event Detection using the Sedimentation Event Sensor
 - Reduced boot time of main controller
 - 902306 - SINKER
 - Camera controller
 - Out of Office
 - Dec 18 - 28: Holidays
- Brett Hobson
- Irene Hu
 - 901805 - Coastal Biogeochemical Sensing Program
 - Getting together QA procedure for nanofets
 - Trying to get stuff back from KAUST
 - Interviews for new lab tech
 - 901904 - Deep-Sea Coral Community Observatory
 - Drawings submitted for ROV housings
 - Overhead
 - Rec comm budget
 - Out of Office
 - Nov 21-27: Thanksgiving / bereavement
- Scott Jensen
- Brent Jones
 - 901112 - Monterey Bay Time Series
 - Diagnosed eeprom problem on sipper elmo. Updating software to move eeprom storage to pic24
 - 902004 - Planktivore
 - Debugging issues with clock sync between ptvr and lrauv
- Chad Key
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - 300082 - DMO Divisional Support - Wave Glider
 - Recovered waveglider hansen yesterday following blue whale observatory deployment
 - 300083 - DMO Divisional Support - LRAUV
 - Supporting Pontus piscivore deployment
 - 902101 - LRAUV Technology Development and Fleet Operations
 - Docking data analysis
 - Helping with host sim support for docking
 - 902102 - Multi-LRAUV Simulation Environment
 - Helping with gazebo sim support for Rock/TRN
 - Out of Office
 - 12/04-12/07 Phoenix (MST)
 - 12/25-12/29 vacation

- Denis Klimov
- Eric Martin
 - Out of Office
 - Sick day on Tuesday, 11.07.2023
- Thom Maughan
 - 300083 - DMO Divisional Support - LRAUV
 - Ahi battery analysis. Drained aft pack as an experiment to reset the SMBus controller in the batteries to fix the i2c address bus hang. ~45A-hr of expected 150A-hr capacity. Next step is to remove the two packs and diagnose at the cell level.
 - Working plans to get Ahi's battery capacity for next year Planktivore and also working plans to get new battery backplane installed for testing. We're not going to use BPC2 on Ahi as a test vehicle.
 - Delivered Parts and PCBs to Indtec to build two more backplane/charger sets.
 - 901009 - CANON
 - Not much activity. Planning to setup deepedna1 to the same configuration as deepedna2.
 - 901805 - Coastal Biogeochemical Sensing Program
 - Working on commandline mods to address review comments.
 - Updating QA procedure for 100 board checkout
 - Interview for Liz F.
 - Helping Irene debug NanoFET hardware.
 - Support for Miguel at Scripps
 - 902004 - Planktivore
 - Rebuilt Planktivore v1 and with help from Aaron S. got it tested and delivered to the Durkin lab for two days of 100m deployments.
 - Working on hardware updates.
 - Budgets and labor.
 - Out of Office
 - Vacation in Nov. TBD, Colorado (cancelled)
 - Vacation in Dec, couple days around Xmas
 - Jan 9 - 12 CES
 - Feb 9 - 14 Vacation Colorado
 - Feb 18 - 23 OSM24
- Mike McCann
 - 200105 - Core Navigation Data - MDUC
 - Still looking at using HTMX for updating emdb dive records with Data Validation Codes
 - 300083 - DMO Divisional Support - LRAUV
 - Gave tutorial to Steve Ruberg & Kristen Rosier for getting data from [stogs_greatlakes2023](https://stogs.greatlakes2023)
 - 901910 - Plankton Taxonomic Groups from AUVs
 - Attempting to understand optical backscatter data processing and units from Dorado & Pontus
 - Out of Office
 - Nov 28: Vacation
 - Dec 11-15: AGU
- Rob McEwen
- Paul McGill
 - Out of Office
 - Was on vacation Thu and Mon
- Enoch Nicholson
 - 706008 - READI-net
 - Supporting puck development
 - 902306 - SINKER

- Housing & Wiper pressure testing
 - Chassis assembly
 - Wiper tank testing
- 901205 - ESP SURF Center
 - Calibration fixture design
- Tom O'Reilly
- Mike Risi
 - Out of Office
 - Out of office on Fridays
 - May 30 - June 6
 - August 21
 - September 5 - September 7
 - November 20 - 23, 2023
 - March 4 - March 8, 2024
- Paul Roberts
 - 901809 - Deep Sea Bioinspiration
 - Ordering parts for EyeRIS/Chiton
 - Updating Chiton system controller
 - 901904.99 - Corral Camera System
 - Ordering parts and finishing PSU schematics
 - 902204 - Scalable Robotics
 - Ordering parts for SOI integration
 - 902306 - SINKER
 - Assembly and sediment camera bring up
 - Image acquisition software
 - Out of Office
 - Dec. 25 through Jan. 1 2024
- Brent Roman
 - 901205 - ESP SURF Center
 - Step up tools to calibrate the new ESP 3G heater boards
 - 901913 - Wet Wifi
 - Got Gstreamer's RTSP RTCP working only to discover that their gst-launch tool does not allow access to all the parameters needed to configure it.
 - Created a revised "gst-rtsp-client" from gst-launch that includes the necessary config magic
 - Hardcoded for now, plan to shape it into something more versatile soon.
- Carlos Rueda
 - Out of Office
 - Nov 15-16: (virtual) Generative AI (AI Barcelona)
 - Nov 20-22: vacation
 - Nov 27-30: Working from home some of these days
- Karen Salamy
 - 200103 - Core CTD Data - MDUC
 - Ed is buried with hazmat issues and the MARS node recovery and pressure vessel safety due to decomposition products from arcing. I will be on hold with ROV CTD QC until he has finished with this task.
 - 300057 - Mooring Maintenance
 - Checking in with some of the download failures with M1, OA1 and OA2. The two latter moorings appear to go through intermittent connection losses but re-establish after 10-12 attempts.
 - 902101 - LRAUV Technology Development and Fleet Operations
 - Continue working on Measurement control in Dash5

- Out of Office
 - On-campus 3 days/week (**T, W, TH**).
 - Back from Jury Duty.
- Brian Schlining
 - 500055 - VARS, M3/RS, DSG
 - Shout out to Kevin Barnard for setting up [Uptime Kuma](#) for system monitoring.
<http://rocinante.shore.mbari.org:3001/status/m3-prod>
 - 902308 - M3/VARS for the Masses
 - Added complete test coverage to [vampire-squid](#) (video asset manager) for Postgres and Sql Server databases. Added history/change tracking to vampire-squid databases. All APIs are available via openapi. Because this update requires schema changes, Brian will work with IS to set up a migration plan to the shore and ships.
 - DQ2209 - Ocean AI 2
 - Set up a production and development postgres database. There's a nightly cron job that generates a backup of the production db and loads it into the development db.
 - An NGINX proxy is set up for the CMS application. <https://ovai.mbari.org/cms/>
 - Some support to help [Ocean Networks Canada submit an image set](#) to FathomNet.
- Alana Sherman
- George Stern