

Engineering Weekly Report 1/11/2024 - 1/18/2024

<https://docs.mbari.org/internal/projects/Engineering/Weeklies/2024/>

Executive Council Notes

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Individual Activities

- Michael Anderson
- Kevin Barnard
 - 500055 - VARS, M3/RS, DSG
 - Finished implementation and testing of JWT refresh in VARS GridView
 - 901809 - Deep Sea Bioinspiration
 - Working through interactive review comments on DeepSTARia for Frontiers in Marine Science
 - 902002 - FathomNet
 - Laid out tasks and timelines for 2024 prior to kickoff meeting
 - 902204 - Scalable Robotics
 - Project kickoff: planning development tasks for 2024
 - Overhead
 - Completed performance feedback training
- Francois Cazenave
 - 901221 - Midwater Time Series
 - New light bars
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - PTO maintenance
 - 902106 - Niobicon-Based AUV Docking Development
 - Buoy troubleshooting
 - Latch assembly
 - 902204 - Scalable Robotics
 - Subastian ROV bracketry
- Danelle Cline
- Duane Edgington
 - 901103 - Biodiversity & Biooptics
 - Continued analysis of model training results.
 - Plan to run inference on several dive videos using the model I trained late December, to evaluate performance.
 - 901502 - Ocean Soundscape
 - Team meeting Jan 17. Discussed detection of Orca sounds.
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Team meeting Jan 16. Labeling of clusters continues.
 - 902111 - Carbon Flux Ecology
 - Kickoff meeting Jan 18.
 - Out of Office
 - April 12 - 21, 2024 EGU
 - Oct 21 - Nov 8, 2024. Vacation

- Jon Erickson
- Kevin Gomes
 - 300070 - DMO Support - Ventana
 - Checked in on data paths during first cruise post 4D Nav install configuration
 - 706008 - READI-Net
 - Met with group to discuss cellular and satellite communication options
 - Overhead
 - Performance review work
 - Working on extension of the script that pulls ships' schedules into an internal calendar to integrate MBARI holidays. This is a request from Krystle.
 - Out of Office
 - March 12-21: Vacation
 - March 25-29: Data Council Conference: Austin, TX
- Andy Hamilton
- Kent Headley
 - 300078 - DMO Support - AUV
 - met w/ Erik re various planning topics
 - 901101 - Seafloor Mapping
 - test build MB-System release
 - 902204 - Scalable Robotics
 - cruise prep : will be running Gemini sonar on 1/18 cruise
 - Overhead
 - resource request
 - review prep
 - misc admin
 - hiring
 - Out of Office
 - 1/18 (Rachel Carson)
- Rich Henthorn
 - 902305 - Event Detection Using the Sedimentation Event Sensor
 - Project team meeting
 - 902405 - Precision Control Technologies
 - Finishing up a CoNav/TRN LRAUV comms interface class
 - Encapsulates translation of LrauvLcmMessage TRN message for clients and servers
 - Overhead
 - Measurement Seminar
 - Out of Office
 - Jan 22 - 25: WFH
- Brett Hobson
- Irene Hu
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Working on controller board and fixing jbox board
- Scott Jensen
 - 706008 - READI-Net
 - Working to define NFC data and its format
 - Modified copy 2 to include NFC transceiver
 - Discussion with Minivalve to determine more suitable valves for pucks
 - 901205 - ESP SURF Center
 - Supporting lab operations and continuing instrument builds
 - Overhead

- Due to computer failure, spent time building up intermediate laptop so work can continue
- Brent Jones
 - Out of Office
 - 3 days
- Chad Keczy
 - Out of Office
 - Jan. 22- Potential Jury Duty
 - Out of office on Fridays
- Brian Kieft
 - 300083 - DMO Support - LRAUV
 - Prepped Pontus for deployment
 - 706007 - LRAUV USGS Great Lakes Prey Fish Assessment
 - Dealt with data unserialize issue from summer deployment. All sample data is now unserialized appropriately.
 - 901513 - Targeted Sampling by AUVs
 - Assisted with sim debug
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Planning for coordinated ops Friday at Terrace Pt.
 - 902101 - LRAUV Technology Development
 - Debug of vertical control issue during buoyancy controlled depth causing vehicle stall on initial dive.
 - Did Thruster HE component testing to attempt to provide more startup torque. Interesting issues with drawing lots of current when spinning very slow. Continuing to investigate with Scott.
 - Initial lab MMP testing commenced following the latest fixes. Looking good so far.
 - Dataviz lockfile issue solved.
 - Tested ingest of plankton predictor outputs on Pontus. Will test at sea next.
 - 902106 - Niobicon-Based AUV Docking Development
 - Lots of docking up until this Saturday when vehicle and dock failures caused the suspension of docking tests until the mooring is recovered.
 - 902405 - Precision Control Technologies
 - Met with team to test initial ingest of TRN data. Rich is making updates to publish lat/lon solution and we'll ingest and use it as a fix. I need to fix the sim to start over the test site at Portuguese ledge.
 - DQ2322 - Denmark Windfarm
 - Met with team to discuss initial logistics and sampling plan
 - Out of Office
 - 01/17 (afternoon CPR renewal)
 - 02/12-02/16 (MST)
 - 04/04-04/10 (CST)
 - 04/15-04/19 (GMT+8)
 - 06/03-06/18 (GMT+1)
- Denis Klimov
- Eric Martin
 - 300078 - DMO Support - AUV
 - D4 Integration testing help with ASO group
 - 901101 - Seafloor Mapping
 - Lab Kickoff Meeting
 - Strokes troubleshooting
 - Adaptor Review
 - 901405 - Wave-Energy Conversion for Oceanographic Applications

- Troubleshooting of load cell and laser rangefinder complete
 - Load cell electronics packaging for RMA
- 901911 - ROVVR
 - HMC meeting
- 902204 - Scalable Robotics
 - Falkor (too) Prep
 - Paragon Perception Trials offshore
 - Paragon Perception Data Sharing with GIM Robotics
 - Lab Kickoff Meeting Slides
- Overhead
 - Reviews
- Thom Maughan
 - Out of Office
 - Jan 9 - 12 CES
 - Feb 9 - 14 Vacation Colorado
 - Feb 18 - 23 OSM24
- Mike McCann
 - 901910 - Plankton Taxonomic Groups from AUVs
 - Added direct regressions for pontus ecopuck to dorado HS2 to auv-python's 6.1 Notebook
 - Adding some methods text to Monique's paper
 - 902101 - LRAUV Technology Development
 - Provided details for consolidating ESP Sample message in this [Jira ticket](#)
 - 902403 - Expedition DB Modern
 - Writing some capstone project definitions to tease out some of our user stories
 - Overhead
 - Leftover ROV Nav work: added form for updating data_validation_code on Dive detail page
 - Reviewing different ways to do role based table updates for emdb
 - About finished HTMX course — wishing to use it in the emdb application
- Rob McEwen
- Paul McGill
 - 701147.99 - MARS IV Node Upgrade
 - Got second serial splitter assembled and tested.
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Repaired WABO Iridium beacon and will now test outdoors
 - 902304 - Piscivore Cam
 - Commencing long-term testing of new controller software.
 - Troubleshooting intermittent controller battery connection issue on rear-facing camera
 - 902401 - Geo-Sense
 - Working on system interconnects and connector selection with Alana
 - Out of Office
 - Had medical appointment on Tue
- Enoch Nicholson
 - 706008 - READI-Net
 - 2024 Sampler CAD Modeling - Core instrument mostly complete
 - 902306 - SINKER
 - Sinking Column Housing Assy & Viewport ring finishing
 - Battery Housing drawing check & MFG discussion
- Tom O'Reilly
- Mike Risi
 - Out of Office

- Out of office on Fridays
 - January 16 - January 19, 2024
 - March 4 - March 8, 2024
- Paul Roberts
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Internal mechanical mounting
 - Camera testing
 - 902001 - Ventana 4k Camera
 - Final assembly and testing
 - 902204 - Scalable Robotics
 - SOI integration and power system upgrades to PoE interface
 - 902306 - SINKER
 - Battery mechanics and electronics
 - Out of Office
 - Jan 9-Jan12 at CES
- Brent Roman
 - 706008 - READI-Net
 - Met with dev team to discuss radio communications approaches
 - Will investigate NB-IOT and making 2nd USB host port available
 - Wrote kernel module to allow interrupting USB host power to reset (hung) devices
 - 901205 - ESP SURF Center
 - Found and fixed long standing bug in handling brief losses of Ethernet carrier
 - Helped WHOI diagnose Ethernet hardware problem with one of their ESP carrier boards
 - Worked with Preston to understand desired changes in cartridge locking behavior for new carts
 - E-Waste bound iMac became the new "bufflehead" ESP lab server.
 - 901913 - Wet Wifi
 - Working with OceanComm to refine can design to accommodate depth sensor on cap
- Carlos Rueda
 - 901502 - Ocean Soundscape
 - Kickoff mtg / planning.
 - Hoping to have some progress done regarding google cloud file access by the Soundcoop meeting next week.
 - 902101 - LRAUV Technology Development
 - Dash4 now 4.60.1, and backend 4.61.0
 - Resuming efforts toward modernizing the TethysDash backend. Now on the latest Quarkus version! But this modernization goal is still very challenging given the many, many pieces involved.
 - 902204 - Scalable Robotics
 - Kickoff mtg / planning
 - Out of Office
 - Jan 22: Dentist appt.
- Karen Salamy
 - 200103 - Core CTD Data - MDUC
 - Still awaiting update from Ed P.
 - 300057 - Mooring Maintenance
 - Monitoring downloaded data from M1, OA1, and OA2 daily. M1 and OA2 are looking good. I am waiting for a mooring turn or maintenance update from Francisco, Jules or Chris W. The OA1 mooring appears to be completely out of power at the moment.
 - 901101 - Seafloor Mapping
 - First meeting of the year is currently scheduled for February.

- 902101 - LRAUV Technology Development
 - Spoke with Brian K. about progress on the React-Measuring application that I will be adding to Dash 5. He indicated that he liked what I have so far and asked me to make sure I took the time to take a subversive React course this year if possible.
- 902403 - Expedition DB Modern
 - I heard back from several of the science labs on how to improve their pre/postcruise experience moving forward as we consider mock-ups. I will bring the comments to the next meeting.
- Overhead
 - Coding tutorials, talks, surveys, emails, etc.
- Out of Office
 - **Feb. 29 - Mar 10** - Trip to east coast for personal family reasons
 - On-campus 3 days/week (**T, W, TH**).
- Brian Schlining
 - 500055 - VARS, M3/RS, DSG
 - Entering the home stretch for [the renovation of annosaurs internals](#). Currently, working on using [tapir](#) to [generate openapi docs so code and docs stay in sync going forward](#). Adding [tests for all endpoints](#) to look for subtle bugs.
- Alana Sherman
 - 902208 - Mini ROV Operations
 - Trying to figure out schedule for the year
 - 902401 - Geo-Sense
 - Worked through NRE issues with management team. Looks like we can write the PO for the DAS unit
 - 901205 - ESP/Readinet
 - Added highside switch for the pressure switches
 - Working on serial transceivers
 - Overhead
 - Wrote materials for and attended my performance review
 - Collating feedback and writing EE group reviews
 - Reading Postdoc applications
 - Out of Office
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- George Stern
- Johann Voigtlander
 - 902208 - Mini ROV Operations
 - Completed Aux Camera side mounts
 - Continuing building fiber optic focal box
 - 902402 - CSEM
 - Organizing R.V. Fulmar for Sept. Cruise