

Engineering Weekly Report 8/22/2024 - 8/29/2024

Engineering Weekly Report

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

Executive Council Notes

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Individual Activities

- Michael Anderson
- Kevin Barnard
 - Out of Office
 - MBARI Open House comp day Jul 19, 2024
- Francois Cazenave
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Monitoring buoy
 - 902106 - Niobicon-Based AUV Docking Development
 - Organizing lab
 - Project management
 - 902204 - Scalable Robotics
 - Designing brackets for benthic sled. Assembly
 - Out of Office
 - 1 day vacation
- Danelle Cline
 - 902111 - Carbon Flux Ecology
 - Working on apache-beam aipipelines for images
 - Updated [ai documentation](#)
 - 901103 - Biodiversity and Biooptics of Zooplankton
 - Ansible deployment of REDIS fastapi-vss service to doris
 - Working on apache-beam aipipelines for video
 - Updated [ai documentation](#)
 - 901502 - Ocean Soundscape
 - PBP upgrades to pbp-meta-gen code
 - Travel planning for upcoming workshop
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations, and Outreach
 - Team meeting with presentation on progress
 - Ansible deployment of REDIS fastapi-vss services to doris
 - Loaded recent deployment images to mantis
 - Refining metric graphs and scores for cross model comparisons
 - Working on apache-beam aipipelines for images
 - Updated [ai documentation](#)
 - Out of Office
 - September 24/25 NOAA SoundCoop workshop Boulder, CO

- Oct 7-10 - 5th Marine Imaging Workshop in Monterey
- Duane Edgington
 - 500055 - VARS, M3/RS, DSG
 - Project team meeting focused on metrics
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Team meeting including presentation of results from our recent model training
 - Planning next steps for improving automated detection and classification of items in images.
 - Overhead
 - iNaturalist seminar
 - Out of Office
 - Oct 21 - Nov 8, 2024. Vacation UTC+1
 - Dec 8 - Dec 17, 2024. [Neurips](#) Conference. Vancouver, BC.
- Jon Erickson
- Kevin Gomes
 - 200105 - Core Navigation - MDUC
 - More work on specifying terminal servers and comms architecture for Packard.
 - Overhead
 - Follow up activity post NVIDIA meeting
 - Meeting and follow up with Oracle
 - Proposal revisiting and review
 - Out of Office
 - Aug 16: Vacation
 - Sep 16: Vacation
 - Oct 7-11: Vacation
- Andy Hamilton
- Kent Headley
 - Out of Office
 - 08/27-29 Rachel Carson (tentative)
- Rich Henthorn
 - Out of Office
 - Sick leave, WFH Aug 14 - 22
 - Aug 26 - Sep 11: Vacation
- Akshay Hinduja
- Brett Hobson
- Irene Hu
 - 901217 - Chemical Sensors
 - Modifications to MSC3 Tiva module and baseboard; new regulator circuit
 - MSC3 design review prep
 - Inrush current testing - somewhat concerning
 - 901805 - Coastal Biogeochemical Sensing Program
 - Continued testing of current draws
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Tested some LED pucks, 2 out of 6 had issues
 - Out of Office
 - Sept 16: planned Carson day
 - Sept 23-Oct 2: potential OCEANS
- Scott Jensen
 - 300078 - DMO Support - AUV
 - Determining pin usage
 - Design of logic and isolated power supply

- 706008 - READI-Net
 - Supporting build up of the pre-production units
- 901205 - ESP SURF Center
 - Maintenance run to the McCloud Deployment site
- 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Preparations for attending battery convention
 - Investigating dock-PB-LRAUV integration
- 902106 - Niobicon-Based AUV Docking Development
 - Chasing down of a Qualcomm datasheet
- Out of Office
 - September 16-20
- Brent Jones
 - 901112 - Monterey Bay Time Series
 - Designing bracketry to better mount Xeos ApolloX11 tracker and nanobeacon
 - Diagnosing battery charging error
 - 901502 - Ocean Soundscape
 - Looks like difference in processing for Python and Julia lies not in the filters or Teager EO, but in the combination of impulses. Continuing to diagnose
- Chad Keczy
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - 300083 - DMO Support - LRAUV
 - Supporting planktivore/sampling deployment going on now
 - Troubleshooting issues with puck sensor and CTD hysteresis on Daphne.
 - 706007 - LRAUV USGS Great Lakes Prey Fish Assessment
 - Triton and associated gear have arrived home! Will get to data download shortly
 - 901009 - CANON
 - Preparing for CANON sampling mission with intravehicle acomms. Testing Yanwu's missions.
 - Preparing makai for test ESP deployment
 - Setting up acomms testbed via LRAUV dock to test eavesdrop functionality on Waveglider. Test loaded firmware on benthos modem to simulate a load at sea. Somewhat risky
 - 901513 - Targeted Sampling by AUVs
 - Issues with Ahi responding to acomms mission terminate from Daphne. Initial tests worked well the other direction. Investigating.
 - 902101 - LRAUV Technology Development
 - Random bug fixes including ESP dual lcb turn off
 - Cradlepoint configs switched back to domestic
 - Working with Saab to replace their developer Ilya and get some momentum rolling on tech transfer.
 - 902106 - Niobicon-Based AUV Docking Development
 - Lots of docking work this week. Swapped a drop weight on pontus yesterday and got it back out.
 - New docking record of spending over 24 hours on the dock charging.
 - Overhead
 - Coordinated pressure testing of foam pack with nature conservancy collaborator
 - Prepping for visit from Oshen to test microvessel wind powered ASV Sep 16.
- Denis Klimov
- Eric Martin
- Thom Maughan

- 901217 - Chemical Sensors
 - Reworked codebase to add newline config parm for cr vs cr-lf
 - Mms spec driver
- Out of Office
 - Aug 16 to Aug 19 - b'ment
 - Aug 26. Vacation. Tahoe Swim.
 - Aug 30 Vacation day
 - Oct/Nov two to three weeks vacation Colorado.
- Mike McCann
 - 902403 - Expedition DB Modern
 - Continuing to work on the Postcruise process, namely adding Dives to Expeditions
 - Overhead
 - Participated in GO-BGC/SOCCOM Database kickoff meeting
 - Out of Office
 - 25-27 September 2024: Web3D Conference
 - 30 September - 3 October 2024: Vacation
- Rob McEwen
- Paul McGill
 - Out of Office
 - Took vacation day Fri
- Enoch Nicholson
 - 706008 - READI-Net
 - Continued building instruments
 - 901007 - Benthic Biology & Ecology
 - BRS tap water and chlorinated water testing continued.
 - Trying to isolate corrosion
 - Out of Office
 - April 5-10 Vacation (Available via Slack & Email)
 - April 14-18 IEEE Oceans (Available via Slack & Email)
 - April 19-23 Vacation (Unavailable)
 - September 4-5 Vacation
 - September 19-24 Vacation (Available via Slack & Email)
- Tom O'Reilly
- Mike Risi
 - Out of Office
 - Offsite on Tuesday and Friday
 - January 16 - January 19, 2024
 - February 22, 2024
 - March 4 - March 8, 2024 - vacation
 - April 24, 2024 - vacation
 - May 20 - May 24, 2024 - vacation
 - June 17 - June 18, 2024 - vacation
 - September 3 - September 9, 2024 - vacation
- Paul Roberts
 - 702108 - Deployable AI
 - Planning for Oct. cruise
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - MSCC assembly
 - 902001 - Ventana 4k Camera
 - Assembly and testing

- 902004 - Planktivore
 - Plankton Proxies deployment
 - Data Ingest
- 902111 - Carbon Flux Ecology
 - Chiton data ingest
- Out of Office
 - Aug. 30 2024 - CES China Peak
- Brent Roman
 - Out of Office
 - June 20 - June 31 (gunkholing in the Sacramento Delta)
 - July 1 - Aug 31 (Vacation in Japan)
- Carlos Rueda
 - Out of Office
 - TBD a week or so in Aug/Sep: vacation
- Karen Salamy
 - Out of Office
 - Vacation: August 20-28, 2024
 - US React Summit Conference: November 19-24, 2024, NYC.
 - On-campus 3 days/week (**T, W, TH**).
- Brian Schlining
 - 902404 - 5th Marine Imaging Workshop
 - Draft program published at <https://miw2024.org/program2.html>
 - Out of Office
 - Aug 19-22 Vacation
 - Sep 5-9 - Vacation
 - Oct 7-10 - 5th Marine Imaging Workshop in Monterey
- Alana Sherman
 - Overhead
 - Finishing phase 1 proposal review
 - Out of Office
 - On vacation Mon Aug 26-Tues Aug 27.
- George Stern
 - 902204 - Scalable Robotics
 - Finalized interconnect planning for the lighting system and ordered parts
 - Completed power and control hub model
 - 706008 - (READI-net)
 - Completed handoff of tag NFC kicad project to layout team
 - Overhead
 - Follow on collaboration with UW MARS team
 - Preliminary layout review of the ESP Sampler board NFC circuits
- Justin Tucker
 - 300078 - DMO Support - AUV
 - INS housing preliminary “low pressure” 5300psi test completed with no issues.
 - Further pressure testing planned using DeepSea Power & Light’s facility for full working depth certification.
 - INS electronics bracketry completed and handed off for integration.
 - 901101 - Seafloor Mapping
 - LASS integration completed, joined for first expedition day
 - 902010 - Mesopelagic LRAUV
 - Successful pressure test including safety factor identification on sacrificial tubes.

- Johann Voigtlander
 - 902204 - Scalable Robotics
 - Found cabling solution for Norbit -> BlueBoat
 - 902208 - Mini ROV Operations
 - Rewired and fixed small issues with Focal box upgrade
 - Updated schematics and documentation
 - Created new schematics for benthic can 24V upgrade
 - Helped mount mapping equipment on benthic sled
 - Out of Office
 - April 16th - May 7th Germany CSEM
 - May 8th - May 12th Vacation