

Engineering Weekly Report 7/11/2024 - 7/18/2024

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
 - 500055 - VARS, M3/RS, DSG
 - Designed and implemented ultralytics inference for local Docker and Amazon SageMaker
 - Processing detection & tracking pipeline for new YOLOv8 models
 - 902204 - Scalable Robotics
 - Developed ROS2 service and action server semantics for LCM
 - Out of Office
 - MBARI Open House comp day Jul 19, 2024
- Francois Cazenave
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Monitoring buoy
 - Working of new tether quote with Falmat
 - 902106 - Niobicon-Based AUV Docking Development
 - photosensor repair
 - Power transfer device upgrades and assembly
 - Project management
 - Pontus deployment
 - 902204 - Scalable Robotics
 - Designing brackets for cameras, laser.
- Danelle Cline
 - 902111 - Carbon Flux Ecology
 - Finishing up detection, clustering and visual search inference pipeline design in preparation for processing ISIIS data
 - 901502 - Passive Acoustic Sensing
 - Working on adding PBP time coverage plot
 - Summer intern cloud assistance
 - Team meeting
 - Brainstorming on PBP roadmap with PBP team
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations, and Outreach
 - Finishing up detection, clustering and visual search inference pipeline design
 - Loaded backlogged mission images to mantis and populating vss database
 - Evaluating per class performance metrics

- Overhead
 - Gave an invited Zoom talk to an enthusiastic summer camp of STEM achievers at a program hosted by [Mercy College](#). So many questions from this group of young explorers. It was a ton of fun.
- Out of Office
 - Vacation July 26th
 - Oct 7-10 - 5th Marine Imaging Workshop in Monterey
- Duane Edgington
 - 901502 - Ocean Soundscape
 - Continued exploration of orca work. Data sets, published work.
 - Some support of intern Suzanne on AWS.
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Team meeting
 - Out of Office
 - June 15 - 16. Medical leave
 - Sept 17 - 20, 2024. PyTorch Conference, San Francisco
 - Oct 21 - Nov 8, 2024. Vacation UTC+1
- Jon Erickson
- Kevin Gomes
 - Out of Office
 - Jun 21
- Andy Hamilton
- Kent Headley
 - 901101 - Seafloor Mapping
 - Attended Qt update code review w/ O'Reilly, Caress
 - 902204 - Scalable Robotics
 - Finished Oculus sonar driver
 - Testing Oculus and Gemini sonar drivers
 - Overhead
 - Proposal: labor spreadsheet prep, proposal review
 - Planning for new group member
 - Group lead meeting with Antje Boetius
 - Misc admin
- Rich Henthorn
 - 902305 - Event Detection Using the Sedimentation Event Sensor
 - Communicated with SES while at MARS for SINKER
 - 902306 - SINKER
 - Instrument test at MARS
 - 902405 - Precision Control Technologies
 - Developing test utilities for TRN and CoNav that take data from Rock
 - Out of Office
 - July 16: SINKER test on Carson
 - Aug 5 - 8: WFH
 - Aug 26 - Sep 11: Vacation
- Brett Hobson
- Irene Hu
 - 901217 - Chemical Sensors
 - Troubleshooting MSC3 Tiva module. Previous connector was mirrored. Inability to load code traced to watchdog, fixed with some jumpers
 - Soldered FRAM boards for Thom and worked out connections, but board is having I2C issues

- 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Troubleshooting power on second jbox board; after some back and forth, it now also works, though unclear why (same as first board)
 - Test of jbox with 10 pucks connected. One puck had LEDs always on, traced to a bad solder joint
 - Working out mods on controller board to allow stacking
- Scott Jensen
 - 300078 - DMO Support - AUV
 - Looking into options for bulk capacitors
 - 706005 - eDNA Grass Carp Sandusky
 - Instruments have been recovered
 - 706008 - READI-Net
 - Tuned up puck counting sensor and adding into puck loading functions
 - Preparing for PCB layout with design review
 - Out of Office
 - July 18-23 vacation
 - July 24-29 vacation
- Brent Jones
- Chad Key
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - Out of Office
 - 05/27-06/21 (GMT+2)
 - 07/08-07/12 (GMT -10)
 - 07/16-07/22 (EDT)
 - 07/29-07/02 (EDT)
- Denis Klimov
- Eric Martin
 - Out of Office
 - Vacation Friday June 7th
- Thom Maughan
 - Out of Office
 - July 1-5 Vacation canceled, working on the 4th
 - July 20 to July 26 Vacation
 - Aug 2nd half, maybe a week or so
 - Oct two to three weeks vacation Colorado.
- Mike McCann
 - Out of Office
 - 20 June - 19 July: Vacation
 - 22 - 25 July: ESIP Federation Summer meeting, Asheville, NC
 - 28 July - 1 August: SIGGRAPH, Denver, CO
- Rob McEwen
- Paul McGill
- Enoch Nicholson
 - 706008 - READI-Net
 - Prototyping reagent bottles
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Designed Striver camera port
 - 902306 - SINKER

- Sinker test dive out to MARS
- 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 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
 - 902004 - Planktivore
 - Automated plankton identification testing
 - 902204 - Scalable Robotics
 - Mola optics
 - 902306 - SINKER
 - MARS deployment test on Ventana
 - Overhead
 - Intern mentoring
 - Open house comp time
- Brent Roman
 - Out of Office
 - June 20 - June 31 (gunkholing in the Sacramento Delta)
 - July 1 - Aug 31 (Vacation in Japan)
- Carlos Rueda
 - 901502 - Ocean Soundscape
 - Meeting with the PBP team and NOAA.
 - PBP is now 1.0.8 (both [python package](#) and [docker image](#))
 - Advancing PBP use in <https://mybinder.org/>
 - Group meeting
 - 902101 - LRAUV Technology Development
 - Added some material to the [operator training manual](#).
 - 902204 - Scalable Robotics
 - Integrating/advancing Dial components.
 - Overhead
 - Project time re-allocation discussion
 - [Tauri](#) tech exploration: Pretty successful with a (non-trivial) VueJS webapp as a native app.
 - Out of Office
 - July 22–25: vacation
- Karen Salamy
 - 300057 - Mooring Maintenance
 - Mooring download maintenance
 - Checked into a potential download race situation and updated the crontab to see if that fixes it.

- 902101 - LRAUV Technology Development
 - Finally figured out the issues with my Github account and am currently working to update the Dash5 main and push the changes out to okeanids.
- Overhead
 - Received notification from Cindy that my travel request to React Summit US in November has been approved. I spent some time setting up my lodging, registration and flights.
 - Worked with Kristin to determine my HSA enrollment changes for 2024-2025.
- Out of Office
 - On-campus 3 days/week (**T, W, TH**).
- Brian Schlining
 - Overhead
 - DARC has been upgraded to the latest and greatest. They are also the first to run the new KB server, [Oni](#). I'll roll the new KB service out when I return after Vacation.
 - Out of Office
 - Jul 8-11 - Updating video lab at DARC
 - Jul 15-24 - Vacation
 - Aug 19-22 Vacation
 - Sep 5-9 - Vacation
 - Oct 7-10 - 5th Marine Imaging Workshop in Monterey
- Alana Sherman
- George Stern
 - 902204 - Scalable Robotics
 - Completed detailed design and layout of LED board
 - Completed layout of the CTD board
 - Began detailed design of light control board
 - 902304 - Piscivore Cam
 - Camera sensor NDAs to get access to datasheets
 - Overhead
 - Open House
 - Read-net sampler controller schematic review
- Justin Tucker
 - 901101 - Seafloor Mapping
 - LASS plate, design for cable management spindle
 - Thermal experiment, Pump to motor coupler and mounting layout
 - 902010 - Mesopelagic LRAUV
 - Meeting and prepwork for Port Hueneme pressure test.
 - ANSYS mechanical and Helius composite tube model setup and comparison
 - Overhead
 - ANSYS training for multi design point DOE runs.
- Johann Voigtlander
 - 902204 - Scalable Robotics
 - Created a script that syncs the Raspberry Pi's time with GPS GPRMC sentences
 - I looked into using the InertialSense IMU for GPS YAW. It unfortunately doesn't send out GPHDT sentences. I am looking for alternatives.
 - Familiarizing myself with the new Norbit MBES, looking into integrating into the blueboat and the MiniROV
 - 902208 - Mini ROV Operations
 - Disconnected mini, clump, and winch and set up the display for the open house
 - 902402 - CSEM
 - Organizing ship time for either later this year or early 2025

- Out of Office
 - April 16th - May 7th Germany CSEM
 - May 8th - May 12th Vacation