

Engineering Weekly Report 5/23/2024 - 5/30/2024

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

Executive Council Notes

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Individual Activities

- Michael Anderson
- Kevin Barnard
- Francois Cazenave
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Monitoring buoy
 - 902106 - Niobicon-Based AUV Docking Development
 - Preparing mooring for deployment
 - Documentation
- Danelle Cline
 - Out of Office
 - Vacation June 5-19
- Duane Edgington
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Discussion on 2025 proposal and on-board real time AI use cases.
 - 902111 - Carbon Flux Ecology
 - Start work on 2025 proposal
 - Overhead
 - Updated Olivia cuda, tensorflow, keras, pytorch via Lambda stack
 - Benchmark YOLOv8x 736x1280 vs 384x640 video frames.
 - Out of Office
 - June 10 - 21, 2024. Vacation UTC-8
 - Sept 17 - 20, 2024. PyTorch Conference, San Francisco
 - Oct 21 - Nov 8, 2024. Vacation UTC+1
- Jon Erickson
- Kevin Gomes
 - 200105 - Core Navigation - MDUC
 - Created repo for tracking data system configuration on the Packard
 - Looking into InfluxDB as a possible data storage mechanism on the Packard since ROV pilots are considering its usage as well.
 - Discussions with InfluxDB about best architectures given the pending release of InfluxDB 3 which is based on Parquet and Apache arrow, but not yet available.
 - 300059 - DMO Support - RV David Packard
 - Bi-weekly meeting
 - Decision made on Marine Traffic plan, will get that ordered this week
 - Working on possibly using the Starlink dish's GPS as a source for tracking the Packard on the ODSS during its trip to its new home

- Overhead
 - Preparation for DOEST talk
 - Lots of meetings with ML related efforts to gather information for talk
- Andy Hamilton
- Kent Headley
 - Overhead
 - hiring: interview, feedback review, job description etc.
 - Out of Office
 - Jun 4-7
- Rich Henthorn
 - Out of Office
 - May 28 - June 5: Vacation
 - June 20: SES deployment on Carson
 - July 3 - 11: Vacation and WFH
 - Aug 26 - Sep 11: Vacation
- Brett Hobson
- Irene Hu
 - 901805 - Coastal Biogeochemical Sensing Program
 - Working on presentation / documentation of all sensor boards, for lab meeting next week
 - Setup and wiring harnesses for mini ISUS FPGA board programming and comms
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Code for serial command interface communications with new boards
 - Discussions and ordering of targets for imaging
- Scott Jensen
 - Out of Office
 - June 17-21 vacation
 - July 18-23 vacation
 - July 24-29 vacation
- Brent Jones
- Chad Keczy
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - Out of Office
 - 05/27-06/21 (GMT+1)
 - 07/08-07/12 (HST)
 - 07/16-07/22 (EDT)
- Denis Klimov
- Eric Martin
- Thom Maughan
 - Out of Office
 - May 10 days. May 20 - 30 (or so). Colorado
 - Aug two to three weeks vacation Colorado.
- Mike McCann
 - 901101 - Seafloor Mapping
 - Changed SMDB's expeditions and compilations pages to use crispy_forms with bootstrap 5
 - Rolled out .xlsx -> db -> .csv spreadsheet processing to production and did more testing
 - 902101 - LRAUV Technology Development
 - Reprocessed stoqs_greatlakes2022 to pick up missing ESP Samples that Chris P. identified
 - Overhead

- Wrote short abstract for demo to give at the ESIP Federation meeting
- Out of Office
 - 24 June - 19 July: Vacation
 - 22 - 25 July: ESIP Federation Summer meeting, Asheville, NC
 - 28 July - 1 August: SIGGRAPH, Denver, CO
- Rob McEwen
- Paul McGill
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Did further testing of focus stepper motor driver, and can now operate it through VirtualHere running on the Raspberry Pi
 - 902304 - Piscivore Cam
 - Found another timing bug in camera controller code, fixed it, and have been running verification tests
 - Loaded correct firmware into two cameras for Monday's deployment on LRAUV
 - 902305 - Event Detection Using the Sedimentation Event Sensor
 - Rich and I got new acoustic modems covered with tape for scratch protection and mounted on both the SES and the Trigger Trap
 - Overhead
 - Went to Bay Photo in Scotts Valley to pick up our awesome new Monterey Bay panorama map on display outside the Pacific Forum
- Enoch Nicholson
 - 706008 - READI-Net
 - Received and unpacked parts for FIDO
 - 901007 - Benthic Biology & Ecology
 - Completed first tank test of BRS troubleshooting project
 - 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
- Paul Roberts
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - multispec targets
 - 902004 - Planktivore
 - RIMS data ingest
 - 902111 - Carbon Flux Ecology
 - Minion housing optics
 - 902204 - Scalable Robotics
 - PoE interface rebuild
 - 902306 - SINKER

- Planning for July cruises
- Overhead
 - DOEST
 - Intern project
- Out of Office
 - June 21, 28
- 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 NOAA.
 - 902101 - LRAUV Technology Development
 - TethysDash system: Saab support. Created a special docker image release to facilitate guidance and the setup of their instance. I also put together a small zip with a basis to launch the three key containers (backend, database, dash4). This basis works OK as tested on macOS(arm) and Centos7(intel). However, their dash is still having issues with the ssh key to access bitbucket. More updated documentation along the way.
 - 902204 - Scalable Robotics
 - Dial now [0.8.1](#) with ability to play any LCM log files under the `/compas` share (with controls for getting status and stopping). All of that functionality is supported by the [dialserv API](#).
 - Out of Office
 - June 10–13: vacation
 - July 2–3, 22–25: vacation
- Karen Salamy
 - Out of Office
 - I will be out several days this month (May 21-22) for shoulder surgery.
 - On-campus 3 days/week (**T, W, TH**).
- Brian Schlining
 - 500055 - VARS, M3/RS, DSG
 - Migrated Mini ROV annotations to the shore database.
 - Continuing work on the VARS KB replacement at <https://github.com/mbari-org/oni>
 - 701165 - OVAI Phase II
 - Set up a job to back up the CMS database running on Amazon RDS to a share on titan.
 - Overhead
 - Some admin stuff on our GitHub account
 - Wrote code for Danelle to fetch EXPD data at a specific time/rov.
 - Out of Office
 - May 16-21 - Vacation
 - Jun 10-14 - Setting up video lab at OSU
 - 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
 - Mola network troubleshooting
 - 902304 - Piscivore Cam

- Mechanical design and fabrication of the sensor enclosure
 - tweaked layout and fabricated new light sensor board to increase light sensitivity in darker conditions
- 902306 - SINKER
 - Finish electrical design of the motor interface board
 - replanned battery board build
- Johann Voigtlander
 - 902204 - Scalable Robotics
 - Investigated various IMU options
 - Purchased replacement latch for the BlueBoat
 - 902208 - Mini ROV Operations
 - Conducted several ice drill tests, and managed to drill ~2.5" deep.
 - 902402 - CSEM
 - Stored the bulk of the gear @ESB
 - Purchased GPS receiver for trigger box, and investigated GPS options for the buoys
 - Refurbished one of the transmitters
 - Drying out receivers for long-term storage
 - Overhead
 - Completed 2x Moxie media training courses
 - Out of Office
 - April 16th - May 7th Germany CSEM
 - May 8th - May 12th Vacation