

WeeklyReport

Engineering Weekly Report 3/20/2025 - 3/27/2025

<https://docs.mbari.org/internal/projects/Engineering/Weeklies/2025/>

Executive Council Notes

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Individual Activities

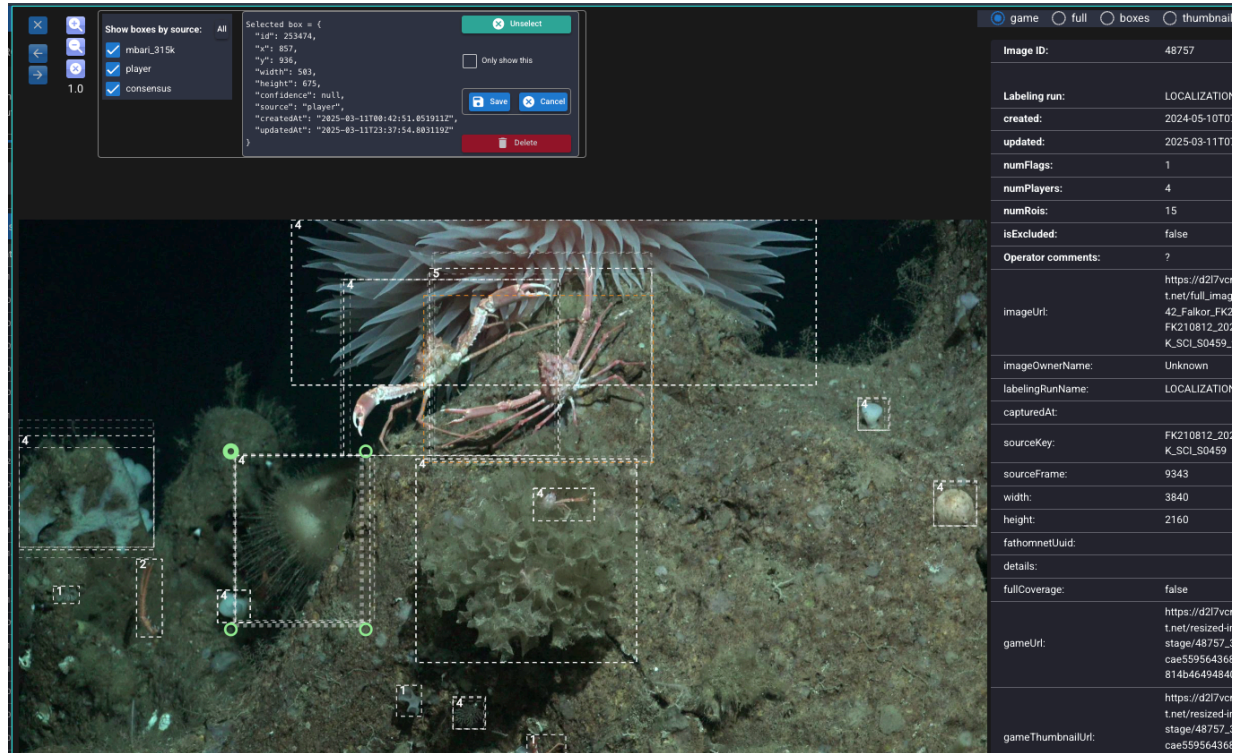
- Michael Anderson
- Kevin Barnard
 - Out of Office
 - Apr 3, 2025 – robotics competition
- Francois Cazenave
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Finished testing the PTO and put away equipment
 - Preparing mooring for deployment
 - 902106 - Niobicon-Based AUV Docking Development
 - Designed fixture for machining LRAUV shell on mill table
 - Project managements
 - Mooring preparations for deployment
 - Brizo upgrades for docking
- Danelle Cline
 - Out of Office
 - Vacation Tuesday, 3/25
- Duane Edgington
 - 901502 - Ocean Soundscape
 - Continued work evaluating google kaggle multi-species whale model against our MARS Pacific Ocean Sound recordings
 - 902111 - Carbon Flux Ecology
 - Team meetings regarding Planktivore
 - Overhead
 - Selected intern candidates for summer 2025 internships
- Jon Erickson
- Kevin Gomes
 - 200105 - Core Navigation - MDUC
 - We installed the upgraded Navproc and API system on the Carson and it ran well over the weekend.
 - Setting up shore-based timescaleDB server to be the shore based copy of the ship data
 - Working on syncing techniques to figure out how to best sync a subset of the data to shore when disconnected and then full resolution when connected.
 - 300070 - DMO Support - Ventana
 - Ported CTD GUI to windows 11
 - Overhead
 - Group tech meeting
 - Seminar

- Out of Office
 - Mar 24 - Vacation
- Andy Hamilton
- Kent Headley
 - 901101 - Seafloor Mapping
 - Cruise next week cancelled (see precision control)
 - 902405 - Precision Control Technologies
 - Worked on running TRN using a scalable robotics data set (norbit multibeam on minirov)
 - Making progress, but still some anomalies; working to isolate code issues from data issues
 - Setting up TRN configuration for LASS cruise (cancelled)
 - Overhead
 - Hiring
 - Office move
 - Aim to sit in on meeting w/ Louise Poubel
 - Misc admin
 - Out of Office
 - 3/24... tentative (jury duty)
 - July 14-31/TBD (vacation)
- Rich Henthorn
 - 902401 - Geo-Sense
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 - 902405 - Precision Control Technologies
 - Completed merge of TRN updates for LRAUV including closing the loop during navigation
 - Reviewing TRN documentation
 - Out of Office
 - Mar 31 - Apr 3: WFH and PTO
- Akshay Hinduja
 - 902204 - Scalable Robotics
 - Working on s7k conversion tool for Norbit WBMS
 - Met Dave to understand more details on MB system requirements
 - Focusing on record 7027 to reach minimal viable product to test in tank
 - Write module to tie in nav messages into 7027
 - Familiarize with mutlibeam submap module.
- Brett Hobson
- Irene Hu
 - 901805 - Coastal Biogeochemical Sensing Program
 - Prototyped alk circuit on breadboard
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Working on code for SWIR camera
 - Overhead
 - OBS research specialist interviews
- Scott Jensen
 - 808015 - Monitoring McCloud
 - Mapping out installation hardware needs
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Batteries, batteries, batteries. Charged, Internal resistance, capacity all checked and 24 identified
 - Installed into Buoy
 - Out of Office

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- Brent Jones
 - Out of Office
 - Dr appointments for injured hand
- Chad Keczy
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - Out of Office
 - Mid April - TBD
- Denis Klimov
- Eric Martin
 - 901101 - Seafloor Mapping
 - Lots of lidar meetings
 - FAT will be 3/31
 - Sled prep in test tank, slight ground fault but everything is working now.
 - 901103 - Biodiversity and Biooptics of Zooplankton (ROVVR Support)
 - Tank cal
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Tether wiring
 - 902204 - Scalable Robotics
 - Project management
 - Bulkhead order
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 - 902504 - Scalable Semantic Mapping
 - MiniROV Van computer installation
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 - 902505 - 2025 Arctic Expedition
 - CSEM offshore training day last thursday.
 - Out of Office
 - Traveling 3/30-3/31 to Colorado for lidar FAT
- Thom Maughan
 - Out of Office
 - Working remote 15 Mar to 26 Mar
- Mike McCann
 - 901221 - Midwater Time Series
 - Pointed Rob to expd.shore.mbari.org's rovctddata endpoint for getting "raw" data
 - Discovered that RovctdDataServlet has a "raw" option and showed him how to modify the Matlab script to get that plot
 - Why do we have all these different ways to access rovctd data?
 - 901910 - Plankton Taxonomic Groups from AUVs
 - Read through our DSR paper / reviewers comments and contributed some edits
 - Reviewing particulate backscatter calculation from instruments on Dorado and the LRAUVs
 - 902403 - Expedition DB Modern
 - Ran a django inspectdb against EXPD_NEXT on foggy and saw lots of ForeignKeys, Yay!
 - Started long-running expd-next branch in expd-django to track the new database changes
 - Out of Office
 - 8-9 May
- Paul McGill
 - 902401 - Geo-Sense

- Writing code to process Geo-Sense DAS data
 - Looking at MARS DAS data for signs of gravity-flow event
- 902402 - CSEM
 - Helping Johann troubleshoot ground-fault issue in CSEM power supply
- Overhead
 - Helping Bryan T-S trouble issue with noise in hydrophone power supply
- Enoch Nicholson
 - 706008 - READI-Net
 - Writing conference paper
 - 901007 - Benthic Biology & Ecology
 - Handed off components for test build to chris.
 - Discussed schedule for assembly & testing of new components before June deployment
 - Troubleshooting hydraulic pump system.
 - 902306 - SINKER
 - Writing conference paper.
 - Overhead
 - PDM Setup with hawkridge
- Tom O'Reilly
- Mike Risi
 - Out of Office
 - Offsite on Tuesday and Friday
 - March 3 - March 6, 2025 - vacation
 - June 2 - June 6, 2025 - vacation
- Paul Roberts
 - 702108 - Deployable AI
 - Galene deployment support
 - 901513 - Targeted Sampling by AUVs
 - Planning for adaptive yoyo testing
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - SWIR controller assembly and testing
 - 902306 - SINKER
 - station light assembly and testing
 - Ordering WiSub hardware
 - 902405 - Precision Control Technologies
 - Interface can upgrades
 - Code migration to tensorbook2
- Brent Roman
 - 708184 - ESP Monitoring PNW
 - Discovered timing bug in low-light camera Linux kernel driver
 - Due to using new “approved” user mem copy functions for newer kernels
 - Believe “Fixed” by *only* using those functions in newer kernels!
 - Certus modem quit working after shipment to PNW
 - But started again after a issuing a firmware “factory_reset”
 - Decided to deploy without Satcoms in April, with in August
 - Not enough time to test.
 - 901205 - ESP SURF Center
 - Investigating use of refrigerated bath for “cold” temp. Calibration point
 - 902304 - Piscivore Cam
 - Wrote LOI to Oclea to get a preview of their SDK before committing to purchase
- Carlos Rueda

- 901502 - Ocean Soundscape
 - Implemented pre-commit for PBP
- 901513 - Targeted Sampling by AUVs
 - Various tests over the last few days, including data access with file `ecosamples.txt` on the smc-1 (from smc-2) as indicated by Chris. I think we are close to being ready for an actual patch tracking exercise in the field.
- 901809 - Deep Sea Bioinspiration
 - Advancing CMS UI for handling of image boxes (selection/filtering, deletion, graphical editing).



- 902101 - LRAUV Technology Development
 - Set up subdomain for dash5-staging.
- 902504 - Scalable Semantic Mapping
 - Dial development. Thanks Kevin B. for a fix to the quaternion-to-yaw conversion.
 - Met with Sebastián to delineate some tasks. Then, some more reprioritization.
- Karen Salamy
 - Out of Office
 - Vacation March 3-11, 2025 - Holiday Vacation
 - On-campus 3 days/week (**T, W, TH**). New OFFICE - G106.
- Brian Schlining
 - 500055 - VARS, M3/RS, DSG
 - Continuing to work with Neil and the video lab to plan a smoooooooooth migration of video data from titan to thalassa.
 - 901809 - Deep Sea Bioinspiration
 - Discussions around adding the LRAUV optim video to VARS.
 - 902403 - Expedition DB Modern
 - Ran the [first migration](#) of EXPD to EXPD_NEXT, a candidate for the new database design.
 - Started work on a [REST API](#) for the new database. Currently testing performance related to consolidating the yearly data tables into single tables.
 - Overhead
 - Fixes for the docker set up on the MiniROV vars computer.
 - Out of Office
 - Mar 28 - Apr 2 - Vacation

- Alana Sherman
 - Out of Office
 - Out sick Monday and Tuesday and last Thursday
- George Stern
 - 300078 - DMO Support - AUV
 - Casually looking into automating small pressure chamber to accommodate many cycle testing, current large chamber does not reach 6km pressure.
 - 902304 - Piscivore Cam
 - Identified framos parts for GMSL3 test
 - Almost got NDA for GMSL3 but ADI now plans to publicly release datasheets in a month!
 - 902306 - SINKER
 - Updating electrical architecture so the battery cans don't have to be opened for charging
 - Began writing software to support new con ops
 - Began ordering hardware
 - 902106 - Niobicon-Based AUV Docking Development
 - Tested newly arrived backup modems and accidentally discovered both sets only enumerate at 1Gbps which isn't compatible with existing 10/100 switch, also a bit large - looking for alternatives again, no good options...
 - Ordered Nb for contact area test
- Justin Tucker
 - 300062 - DMO Support - Doc Ricketts
 - Finalize material, welding, and heat treatment plans for lifting bracket
 - Experimented with electrical conductivity measurements for heat treatment QC
 - 901007 - Benthic Biology & Ecology
 - Troubleshooting flush pump valve assembly
 - Misc print prep for auxiliary parts
 - 901101 - Seafloor Mapping
 - New INS bracket design
 - Graphics for abstract creation
 - Out of Office
 - Expected leave April 1st - 30th
- Johann Voigtlander
 - 902204 - Scalable Robotics
 - Remounted RTK GPS antennas further towards the bow
 - Found GPS offsets
 - Organized harbour deployment for later this week
 - 902208 - Mini ROV Operations
 - Synchronized Atlas to the MiniROV Raids with the help of Neil Connor. Purchased spare NAS raid
 - Organized control van, helped cable management
 - 902402 - CSEM
 - Completed mob, deployment (x2), and demob on the Fulmar. Deployments went smoothly and were successful
 - Compiled and organized all the data and notes
 - Purchased GFCI test cable to debug potential issues with power supply
 - 902505 - 2025 Arctic Expedition
 - Sent CSEM load shackle notes to Mr. Shin
 - Out of Office
 - Dec 16th - Jan 10th - Vacation

