

WeeklyReport

Engineering Weekly Report 10/16/2025 - 10/23/2025

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

Executive Council Notes

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Individual Activities

- Michael Anderson
- Kevin Barnard
 - 500055 - VARS, M3/RS, DSG
 - Tweaked some settings in Donnager for video processing jobs
 - 800163 - Sustaining OVAI
 - Met with Roboflow to explore potential for collaboration
 - 902504 - Scalable Semantic Mapping
 - Debugged issues in RTAB-Map database viewer graph optimization
 - Implemented functions to export SLAM graph link info and tweak link covariances by type in database viewer
 - Created plan for running SLAM on MOLA AUV
 - Began implementation of XFeat and LighterGlue into RTAB-Map SLAM visual odometry pipeline
 - Out of Office
 - Oct 27, 2025 - Oct 31, 2025 : UCSB NCEAS Innovation in Digital Assets workshop
- Francois Cazenave
 - 901221 - Midwater Time Series
 - Assembled camera housing for deployment
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Recovered buoy
 - 902204 - Scalable Robotics
 - Starting work on next camera drawer
- Danelle Cline
- Duane Edgington
 - Out of Office
 - Oct 28 Doctor appt
 - Oct 20 - 24, 2025. Pytorch Conference, San Francisco.
- Jon Erickson
- Kevin Gomes
- Andy Hamilton
- Kent Headley
 - 300078 - DMO Support - AUV
 - The test day last week ran into some snags, but one of the test missions for layered control mods was successfully completed (test real-time clock start/end times for behavior). Remaining tests are for a new macro feature (repeatable behavior sequences).
 - 3000xx - DMO Support - MARS O&M

- Wrote and tested an improved implementation of a GUI bug fix to address incorrect relay state indication. In the new version, hardware write results are used to indicate success/failure, eliminating the need to maintain relay state in the GUI.
- 902405 - Precision Control Technologies
 - Continuing to test TRN reference application with Steve Rock, and updating documentation.
- Overhead
 - hiring : interview
 - Hyperion software meeting
- Out of Office
 - 10/27 medical (online in afternoon)
- Rich Henthorn
 - 901221 - Midwater Time Series
 - i2MAP 4K video capture
 - 902305 - Event Detection Using the Sedimentation Event Sensor
 - Data pull from SES recent deployment
 - Begin documentation effort
 - Out of Office
 - Mon Oct 20 - Tue Oct 21: Sick leave
 - Fri Oct 24 - Wed Oct 29: Vacation (Fri and Wed) and remote work (Mon and Tue)
 - Mon Nov 10 - SES recovery from Carson
 - Dec 19 - Jan 1: Vacation
- Akshay Hinduja
- Brett Hobson
- Irene Hu
 - 901805 - Coastal Biogeochemical Sensing Program
 - Continual monitoring of mini ISUS dev - deployed on Monday on ROV w/ DISCO dive
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Deployment of coral hugger on Monday went well
 - Out of Office
 - Nov 5-6: WFH / vacation
- Scott Jensen
 - Out of Office
 - McCloud Recovery Oct 27-28
- Brent Jones
 - 901112 - Monterey Bay Time Series
 - Recovered Wire walker. Diagnosing bad pH sensor. Turn around for deployment
 - Integrating maxon epos4 into pic32
 - Overhead
 - Help recover piscovore LRAUV
- Chad Kecz
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - Out of Office
 - 07/23
 - 07/28-08/01 (MST)
 - 08/25-29 (PDT)
 - 9/15-30 (UTC+2)
- Denis Klimov
- Eric Martin

- 901101 - Seafloor Mapping
 - Follow-up tasks from 10/6-10/8 Expedition
 - Documenting Lidar bugs & transmitting to Kraken (3D@Depth)
 - Phinstasmic analysis
 - Rebooting the concept design work
- 902504 - Scalable Semantic Mapping
 - Prep work for 11/12 cruise
 - Assembled drawer parts, brought up the full sensor suite.
 - Event camera support
 - End of year purchases.
- Overhead
 - Testing the streaming to offices server.
- Out of Office
 - Vacation Week of 10/27
 - Vacation this friday 10/24
- Thom Maughan
 - Out of Office
 - Vacation 15 Oct to 24 Oct.
- Mike McCann
 - 200109 - Core Mooring Data - MDUC
 - Fixed problem with last 30 days M1 plots: [adjusted Tomcat to allow "\[\]"](#) in query string
 - 901009 - CANON
 - Attempting to clean up some glitchy LRAUV data that affects the location of some ESP Samples
 - 901101 - Seafloor Mapping
 - Met with capstone students who are showing good progress on fixing up mbgrd2gltf
 - Wrote [m1_soundspeed.py script](#) for using during Paull's Packard cruise next month
 - 901221 - Midwater Time Series
 - Reprocessed i2map data with auv-python as I discovered that last April's processing had failed
 - 901910 - Plankton Taxonomic Groups from AUVs
 - Working [adding on LRAUV data processing](#) to auv-python
 - Overhead
 - Gave "tech talk" on takeaways from ESIP, SIGGRAPH, and Web 3D conferences
 - Out of Office
 - 24 October – Vacation day
 - 27-30 October – Remote work
- Paul McGill
 - Out of Office
 - I've been busy sleeping in because I'm retired!
- Enoch Nicholson
 - 706008 - READI-Net
 - Calibrated FIDO liquid reagent delivery pumps and nitrogen dispensing tool
 - Started PR to merge restock sampler feature into main codebase
 - Continued FIDO restock testing and bug fixes
 - Purchased FIDO puck bucket mounting rails
 - Overhead
 - ME group meeting
 - Out of Office
 - Thursdays at MLML
- Tom O'Reilly
- Mike Risi

- 200105 - Core Navigation - MDUC
 - Integrating ROV navigation instruments into navproc
- 300062 - DMO Support - Doc Ricketts
 - Working on external control interface for November 6th testing at sea
- 902405 - Precision Control Technologies
 - Testing mid-water tracking controller changes for November 5th cruise
- Out of Office
 - Offsite on Tuesday and Friday
 - March 3 - March 6, 2025 - vacation
 - June 2 - June 6, 2025 - vacation
 - June 16, 2025 - vacation
 - July 2, 2025 - vacation
 - July 29 - August 1st - vacation
 - November 10 - November 14 - vacation
 - January 19, 2026 - January 30, 2026 - vacation
- Paul Roberts
- Brent Roman
 - 708184 - ESP Monitoring PNW
 - Added signal quality logging to cell modem tester shipped to APL last week.
 - 901205 - ESP SURF Center
 - Installing Debian T2 chip equipped MacBook pros is “interesting”
 - Got most everything working except suspend/hibernate
 - Worked with Adrianna to alter policy on DP-Guest
 - To allow ESPs to create WiFi APs with DP-Guest as uplink
 - Helped Scott debug I2C Bus electrical issues on 3G's Cartridge bus
 - 902304 - Piscivore Cam
 - Evaluating gen3 camera video from last week's deployment
 - Looks really good this time, much improved exposure range than gen2
- Carlos Rueda
 - 901502 - Ocean Soundscape
 - New PBP standalone distributions (for macOS, Linux, and Windows), with initial but satisfactory (internal) testing so far. The main goal is to facilitate use by users that are not very technical, not even needing to have python, conda, pip, or other dependency management tools installed.
 - 902101 - LRAUV Technology Development
 - Dash4 releases this week: [4.97.2](#), [4.97.3](#), [4.97.4](#).
 - TethysDash backend [4.99.10](#), with a couple of more endpoints migrated to quarkus.
 - Prepared some slides for Brett's upcoming project update presentation.
 - 902504 - Scalable Semantic Mapping
 - Dial: dependabot alerts addressed, and other various dependency updates
 - Overhead
 - CentOS 7 EOL:
 - Migration complete for [tethystest](#).
 - Advancing [tethysdash2](#) and [docs](#).
 - Out of Office
 - 2025-10-20: out sick
- Karen Salamy
 - Out of Office
 - Working from home today due to a sinus infection
 - On-campus 3 days/week (**T**, **W**, **TH**). New OFFICE - G106.
- Brian Schlining

- 500055 - VARS, M3/RS, DSG
 - Completed [migration of VARS services](#) to new servers. Still a few pending items to complete related to SSL certs.
 - A number of updates to [vars-cli](#) (currently at v1.0.11). All support tasks are now being run using vars-cli.
 - Added [flyway schema migration](#) to [annosaurus](#), [vampire-squid](#), and [oni](#) and deployed it.
 - Updated the [vars-query](#) to handle returns from very large queries (tested up to 600,000 annotations returned in a query). This requires disabling some of the fancier features on-the-fly when the dataset gets above a certain size. Also [addressing various issues/feature requests](#) before our upcoming project update.
- Alana Sherman
 - 902208 - Mini ROV Operations
 - Thruster refresh effort
 - Ordered encoder and RDC (resolver digital converter) for testing with new Maxon controller
 - Thinking about ordering some Elmo's as well if other groups want to go in on a purchase
 - 902401 - Geo-Sense
 - Working with vendors and Aaron S to finalize the purchase of line-counter electronics
 - Read the manuscript for Aaron's paper on MARS data
 - I spent most of my time researching FO connector options for the AUV test, but most are expensive and take forever to arrive.
 - Took inventory of remaining spares, going to order more
 - Going to take a look at the budget today and figure out what we can afford to buy this year.
 - Aaron and I prepared a short presentation on our goals to use DAS with LRAUV.
 - Overhead
 - Interview committee meeting for Micallef research specialist position
 - Seminars and meetings
 - Out of Office
 - Helped with school activity 10/17
- George Stern
 - 902204 - Scalable Robotics
 - Continued build/testing on HSI light housing
 - Got DMA driven PWM working (scope) and finished code to send USB uart throttle commands and translate them into Dshot PWM messages; next step is to test it with Mola ESCs and motors.
 - 902304 - Piscivore Cam
 - Looked at more gen3 footage to compare different camera settings
 - 902306 - SINKER
 - Programmed controller in the first battery housing to facilitate closed can charging
- Justin Tucker
 - Out of Office
 - Out 10/27-11/7
- Johann Voigtlander
 - 902204 - Scalable Robotics
 - Improved code for Eventcam
 - Shrunk housing to use GroupB without the extension
 - Investigating a better lens option with Paul R
 - 902208 - Mini ROV Operations
 - Learning more about Maxon drivers for thrusters

- 902402 - CSEM
 - Met with Aaron & Eliana to discuss Antarctic deployment logistics
- Out of Office
 - Dec 16th - Jan 10th - Vacation
 - May 30th - June 5th
 - Oct 9-13th