

Engineering Weekly Report 7/23/2026 - 7/30/2026

<https://docs.mbari.org/internal/projects/Engineering/Weeklies/2026/>

Executive Council Notes

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Individual Activities

- Michael Anderson
- Kevin Barnard
 - Out of Office
 - Working remotely May 11, 2026 – May 14, 2026
 - MIW May 18, 2026 – May 22, 2026
 - CVPR Jun 1, 2026 – Jun 5, 2026
- Francois Cazenave
 - DQ2445 - NOWRDC Uncrewed Systems
 - preparing mooring for deployment
- Laura Chrobak
 - Out of Office
 - CVPR Jun 1, 2026 – Jun 5, 2026
- Danelle Cline
 - Out of Office
 - September 21-24 Oceans Conference, Monterey
 - October 18th, SMM 2026 pre-conference Workshop: Evolving AI Applications in Modern Marine Mammal Science: From Computer Vision to Generic and Agentic AI, Puerto Rico
 - Vacation July 27th-31th
- Duane Edgington
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Great progress on summer work evaluating RFDETR and Yolo26 new models for object detection. We are running jobs on 3 GPU systems at MBARI plus on CoLab.
 - Sarah is making great progress and cranking out models and analysis. She is now focusing on project presentation and final report. She presented work to date at the team meeting July 28.
 - Paper drafted and submitted to [Workshop on Machine Vision 2026](#) to be held at ECCV Sept 2026.
 - Overhead
 - I am a reviewer for full paper submissions to Workshop on Machine Vision 2026. Reviewed the papers assigned to me.
 - Thanks Joe Gomez !! for calmly diagnosing a Google Drive “missing folders” problem, which turned out to be a bad python script deleting Google Drive folders. Thank goodness they went into the trash and were not actually deleted, so Joe could restore them. All good.
 - Out of Office
 - September 8-13 ECCV conference. Present UAVS Yolo26/RFDETR model performance. Have reservations.

- September 21-24 IEEE Oceans Conference, Monterey. Present Perch-hoplite poster.
 - October 19-24 Pytorch Conference, San Jose. Present Perch2.0 port to pytorch poster. Registered.
- Kevin Gomes
 - Out of Office
 - Jun 29 - Jul 1 : Vacation
 - Aug 25-27: Monterey Data Conference
 - Sep 21-24: Oceans conference
- Andy Hamilton
- Kent Headley
 - 701147 - MARS O&M
 - on standby for MARS tank testing, likely next week; frame prep/reassembly is starting this week.
 - 901101 - Seafloor Mapping
 - Tested TRN on mapping vehicle with Tad for Seafloor mapping test day next week (prep for Axial expedition)s
 - 902204 - Scalable Robotics
 - checked test tank Norbit sonar output w/ MB-System; unable to grid one data set (possible too close to the bottom to get good bathymetry?), one produced a sensible grid. Overall, the pipeline seemed to work.
 - Overhead
 - proposal review/staffing planning
 - misc admin
 - Out of Office
 - Jul 28: Work from home (car repair)
 - Jul 31, Aug 3: comp (open house, jul 4)
 - Sep 21-24: Oceans conference
- Rich Henthorn
 - 300062 - DMO Support - Doc Ricketts
 - More LASS cruise
 - Weathered out Thur July 23
 - 902401 - Geo-Sense
 - Prep for deployments in Europe
 - Out of Office
 - July 16 to 25 - Caress LASS cruise
 - July 29 - WFH Dr. appts in afternoon
 - August 10 to 13 - Vacation
 - August 31 to Sept 3 - Vacation
 - Sept 14 to 18 - Durkin Cruise
- Akshay Hinduja
- Brett Hobson
- Irene Hu
 - 901217 - Chemical Sensors
 - Muxer board drama. UW is suddenly out of rC Muxers and the rD version made by Chad two years ago is untested. 2 prototypes were sent to UW where they didn't work; Dana Swift did the troubleshooting and found some minor problems (eg missing bridges across jumpers etc). Sent parts to Dana to fix and continue testing. New rE of Muxer made with fixes incorporated. Josh did inventory of obsolete parts, there is still only one in rD/E.

- Wastewater ISUS: glued some small lenses into their holders, awaiting a tool before assembling LED excitation setup.
- 901805 - Coastal Biogeochemical Sensing Program
 - Alkalinity
 1. Various convos with Claude about failing chips. Latest hypothesis is two separate problems, 1) platinum flaking; 2) trace-to-pad connection breaking. Next steps are various SEM tests to confirm and further narrow down problem. Reaching out to some SEM facilities.
 2. Start incorporating various changes into rC of Alk board, including various critical and non-critical fixes to the Howland current pump.
 - Nanofet
 1. Bias battery disable circuitry incorporated into nano rD, sent out for layout
- Overhead
 - July 29: Bike to Work
- Scott Jensen
 - 901205 - ESP SURF Center
 - Due to a few pump failures a redesign of the control algorithm is required. This caused the program to grow large enough that the free version compiler would not work. Now we have plenty of room to add some features.
 - Provided support for the FIDO check out going on in Bozeman.
 - 901405 - Wave-Energy Conversion for Oceanographic Application
 - The new batteries have been installed into the battery box. Thank you Jose and Denis. Capacity testing shows that at least one battery is sub par and will need to be replaced.
 - Out of Office
 - August 13 -14 (vacation)
- Brent Jones
 - 901112 - Monterey Bay Time Series
 - Added a secondary zenor diode circuit to feed SIPPER hall sensor output direct to microcontroller instead of EPOS4 (that was the input failing on the EPOS4)
 - 901502 - Ocean Soundscape
 - Analyzing “stuck” episodes where Wire Walker stays at the bottom and fails to come up
 - 901805 - Coastal Biogeochemical Sensing Program
 - Building first nanofet2
 - 902004 - Planktivore
 - Dealing with broken download computer for data offload
 - Overhead
 - Wrote Oasis drivers for running a cell modem instead of the Vipers
 - Claude and I came up with an onshore simulator for above
- Chad Kecz
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - Out of Office
 - 07/17-07/22 (GMT -4)
 - 07/26-08/07 (GMT +9)
 - 08/26-08/28 (GMT -4)
 - 08/29-09/02 (GMT -5)
- Denis Klimov
- Eric Martin

- Thom Maughan
 - Out of Office
 - Vacation Sep 8,9,10
- Mike McCann
 - 200109 - Core Mooring Data - MDUC
 - Added a “Verify that you’re not a bot” link to the [Oasis contour CTD plot](#) page
 - 901101 - Seafloor Mapping
 - Examining and advising on mbmesh code that capstone team is writing for MB-System
 - 901910 - Plankton Taxonomic Groups from AUVs
 - Fixed some regressions with the auv-python deployment plotting code
 - Overhead
 - Trying to clean up my email and Slack inboxes
 - Out of Office
 - Half time schedule: Generally away Mondays, Fridays, and alternate Thursdays
 - 21-24 September: Oceans Conference
 - 12-16 October: Web3D Conference
- Enoch Nicholson
 - Out of Office
 - June 26 to July 6th
- Tom O'Reilly
- Mike Risi
 - 200105 - Core Navigation - MDUC
 - Working on navproc-process documentation
 - 300062 - DMO Support - Doc Ricketts
 - Helped swap the main camera pan and tilt with spare
 - 901101 - Seafloor Mapping
 - Misc. support of lass-control for LASS expedition
 - Out of Office
 - Offsite on Tuesday and Friday
 - January 2, 2026 - vacation
 - January 19, 2026 - January 30, 2026 - vacation
 - March 4-5, 2026 - vacation
 - March 16, 2026 - vacation
 - March 30, 2026 - vacation
 - May 18, 2026 - vacation
 - June 22, 2026 - vacation
 - June 29, 2026 - July 1, 2026 - vacation
- Paul Roberts
 - 901809 - Deep Sea Bioinspiration
 - Triton / Galene deployment
 - Monocular tracking software
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Barry DP cruise support
 - 902004 - Planktivore
 - Opah integration and testing
 - 902204 - Scalable Robotics
 - Aug 5 sled modifications
 - 902606 - Low Altitude Survey AUV
 - Voyis camera testing and integration

- Brent Roman
 - 901205 - ESP SURF Center
 - Tested piecewise-linear carousel position calibration on ESPmv2 in lab
 - Updated MBARI ESP Ruby to handle GC errors more gracefully
 - 902204 - Scalable Robotics
 - Led meeting in which we discussed using USB to replace 100Mbit Ethernet on Mola
 1. Team does not want to do this on the current vehicle – but on Mola2
 - 902304 - Piscivore Cam
 - Uploading 1.3T of video over 100Mbit Ethernet takes 2 days!
 - DQ2435 - GLERL AK
 - Worked with GLERL to craft firewall rules our ESP on their SeaTrack ASV
 - Out of Office
 - Sept 8 - Oct 16 (vacation)
- Carlos Rueda
 - 901502 - Ocean Soundscape
 - Ariel Raizman continues to make good progress on his internship project.
 - 902101 - LRAUV Technology Development
 - TethysDash:
 1. Completed the migration of all pending endpoints to JAX-RS, except [POST /dataLink](#), the only one used by the LRAUV, due to issues that have been tricky to investigate. Fortunately, these have finally been diagnosed! I have a workaround on the TethysDash side but, as a proper solution, submitted this [PR](#) to make DataOverHttps.cpp more HTTP compliant and robust.
 2. Also, [completed the migration of the database access mechanism](#) to Flyway/Jdbi (DataNucleus/JDO is gone). This is still in a branch, but already deployed in production for a few days and with ongoing LRAUV operations with no regressions.
 3. Added database related metrics for observability, exposed now [here](#).
 - [TethysDash](#): Reached waypoints are now populated again! This long-standing (but unnoticed) regression was caused by a change in the LRAUV involving how such events are reported.
 - [Dash4](#): Enhanced admin interface in the 'Manage users & roles' page.
 - Saab: regular meeting with a general review of TethysDash setup steps.
 - 902504 - Scalable Semantic Mapping
 - Dial now [2.4.1](#), with various enhancements (thanks Eric M / Dave C for the great feedback) and several dependency updates that also address many dependabot alerts.
 - Out of Office
 - July 13-14: medical leave
 - Sept 8-11: vacation
 - Sept 21-24 (1-2 days) IEEE Oceans Conference.
 - Nov 11-12: vacation
 - Dec 9-10: vacation
- Karen Salamy
 - 300057 - Mooring Maintenance
 - Built scripts needed for the upcoming OA1 mooring turn/deployment. The system is now on the dock for testing of the radio. I am monitoring data flow and downloads and working with Jason and Jules on last minute changes.
 - 901101 - Seafloor Mapping
 - Addressing an issue Jenny requested to troubleshoot Falkor (too) AUV mapping tracks not showing in SMDB

- 902101 - LRAUV Technology Development

- Deployments

- 1. Current staging tag: v5.2.18 (tagged Jul 15) — no new tag cut this week. Several fixes are ready but accumulating on develop and local branches (multiple open PRs awaiting review). Once the review backlog clears, the next tag will bundle issues #796, #797, #798, #799, and the mission list reload fix.

- Code Review

- 1. Reviewed PR #781 (Emme — replace native confirms with custom dialog) - awaiting requested changes from Emme before merging.

- Features

- 1. SBD chunk progress boxes on Schedule and Comms — Adds Dash4-style SBD chunk in-transit progress boxes to the Schedule row and the mission Review step, including a quiet chunk count indicator. (Issue #797, in PR #793)
 - 2. Mission modal: "Send again" skips wizard — From the Schedule log, clicking "Send again" on a prior mission bypasses the mission picker and goes directly to the parameter step. (Issue #799)
 - 3. Watch Summary tab (**draft**) — New vehicle drawer tab showing the 8-hour depth sparkline with comms event overlay, last-data time indicator, and filterable event timeline (Command, Comms, Critical, Emergency, Fault, Important, Mission, Note). (Issue #777, draft PR #778). Waiting on comments from the requestor (Bill Ussler) before moving forward with the rest of the team on the issue.

- Bug Fixes

- 1. Mission set commands now use script mission ID — Fixed a bug where set parameter commands were built using the .tl filename instead of the script's internal mission ID, which could cause mismatches on the vehicle. (Issue #796)
 - 2. cellsat multi-part ACK fix — Fixed premature ACK on cellsat transmissions: the schedule no longer marks a mission as Received before all SBD chunks have arrived. (Issue #798)
 - 3. Mission modal: Cancel closes the full flow — Fixed Cancel button in the mission modal to close the entire flow rather than leaving the modal open. (Issue #799)
 - 4. Mission modal: fixed full height across all steps — Modal no longer resizes as the user steps through mission wizard pages. (Issue #799)
 - 5. Mission list reload — Fixed stale mission picker: newly added .tl scripts now appear without requiring a page reload. (Issue #792, PR #793)
 - 6. Auth gating UX — Addressed review feedback on login-gating for write actions; refined UX so read-only views remain accessible to anonymous users. (Issue #786, PR #789)
 - 7. Marker edit state cleanup — Fixed marker draft label sync with external renames, reset add/edit mode on map unmount, and shared edit gating logic between overview and vehicle maps. (Issue #794, PR #790)
 - 8. SBD orange flash — Fixed spurious orange timeout flash appearing on any timeout path during SBD transmission. (Issue #797)

- Out of Office

- March 22-24, 2027 - Vacation

- On-campus 3 days/week (**T, W, TH**). New OFFICE - G106.

- Brian Schlining

- Out of Office

- Jul 13 - 17: Vacation

- Jul 27 - Aug 6: Vacation

- Quinn Shemet

- 300083 - DMO Support - LRAUV
 - Oncall for Bioinspiration Lab deployment
- 902101 - LRAUV Technology Development
 - BPC2 final lab validation
- 902204 - Scalable Robotics
 - DeltaT scoping/validation
- DQ2445 - NOWRDC Uncrewed Systems
 - Planning and mission discussion
- Overhead
 - Staff council
- Out of Office
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- Alana Sherman
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Mega camera prep
 - 902401 - Geo-Sense
 - Cruise packing
 - 902600 - Davidson Seamount Hot Spot
 - Camera prep for Barry cruise
 - Overhead
 - MTeam proposal review
 - Out of Office
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- George Stern
 - 300078 - DMO Support - AUV
 - Got boards back from DSPL after 40cycle 9600psi test and began inspection - no obvious damage; need to electrically test them and spot check under higher mag.
 - 902204 - Scalable Robotics
 - Completed routing and ordered DF13 breakout boards, need to order parts
 - Continued working on schematic for ESC controller board
 - Meeting and then scramble to improve cooling on RockPi 3C which will be installed next week
 - 902304 - Piscivore Cam
 - Finished routing and ordered Light board, need to order parts
 - Continued working on lighting power board
 - Ordered Gen4 mcmaster parts and light potting material
- Justin Tucker
 - 902606 - Low Altitude Survey AUV
 - Functional Requirements and Derived Requirements document review
 - Overhead
 - Doc Ricketts Trust Link V2 design
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- Johann Voigtlander
 - 902204 - Scalable Robotics
 - 3D printing corals for Javi
 - 902208 - Mini ROV Operations
 - Packing the MiniROV up for Greece
 - 902312 - Seafloor Processes
 - Successful Italy CSEM trip
 1. Deployed twice, packed the system up for the next survey in Svalbard.

- 902504 - Scalable Semantic Mapping
 - Working with Quinn to integrate the DeltaT sonar on the BlueBoat
- Emme Wiederhold