

Engineering Weekly Report 8/6/2026 - 8/13/2026

<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 deployments
- Laura Chrobak
 - Out of Office
 - CVPR Jun 1, 2026 – Jun 5, 2026
- Danelle Cline
 - 901221 - Midwater Time Series
 - Trained DINOv3 model and DINOv3 SSL training prep; hoping to kick-off long training run over the weekend.
 - 901502 - Ocean Soundscape
 - Inspecting output from STM model sweeps. Ariel did a great job on his summer intern presentation.
 - Title and bio for SMM workshop submitted
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Weekly meeting and discussion with collaborator about paper figures
 - Sarah did a great job on her intern presentation.
 - 902111 - Carbon Flux Ecology
 - SINKER deployment changes to log file sync and improved ansible deployment templates. Deployment going smoothly except ADCP failure. Checkout our dashboard at <https://sinker.shore.mbari.org/>
 - Supporting Fernanda ISIIS Voxel annotation loads for test verification
 - High mag Planktivore training data created in collaboration with CenCOOS is now available in FathomNet. Many thanks to the CFE lab, CenCOOS, and Laura Chrobak for collaborating to curate this dataset.
 - Overhead
 - Attended select intern presentations
 - Expense reports
 - Beginnings of NRP Nautilus Kubernetes Cluster exploration
 - 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
- Duane Edgington
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Sarah wrapped up her Seminar presentation Aug 12. Great job! And her parents got to come and view her presentation in the Pacific Forum. It was wonderful to meet them.
 - Starting work on MARINE26 workshop poster
 - Initiated collaborators agreement with Sarah Williams to produce a longer peer reviewed paper for Springer special issue publication.
 - 901502 - Ocean Soundscape
 - Starting work on IEEE Oceans poster.
 - Out of Office
 - September 8-13 ECCV conference. Present UAVS Yolo26/RFDETR model performance. Have reservations. Registered.
 - September 21-24 IEEE Oceans Conference, Monterey. Present poster on Perch-hoplite. Registered.
 - October 19-24 Pytorch Conference, San Jose. Present poster on Perch2.0 port to pytorch. Registered. Have reservations.
- 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
 - 300078 - DMO Support - AUV
 - met w/ Tad re Layered Control
 - taking a look at a potential corner case Tad found
 - 701147 - MARS O&M
 - Tank testing w/ Bryan and Knute
 - Found/fixed an issue (High Power Board environment messages missing on topside database). Root cause was a logic error to sync message generation in the i2c driver with the GUI/publisher loop.
 - There may be more to the story, as the root-cause variable value was somewhat of a surprise. Though no longer part of the message generation logic, it would be good to understand why it caused the fault in the first place.
 - 901007 - Benthic Biology & Ecology
 - reviewing i2map layered control behaviors
 - Out of Office
 - Sep 21-24: Oceans conference
- Rich Henthorn
 - Out of Office
 - August 10 to 13 - Vacation
 - August 31 to Sept 3 - Vacation
 - Sept 14 to 18 - Durkin Cruise
- Akshay Hinduja
 - 901809 - Deep Sea Bioinspiration
 - Group meetings, following up with Korneel on deployment results.
 - 902101 - LRAUV Technology Development

- Sim runs show good performance from look ahead algorithm, able to clear 8-15m from bottom across tests
 - Group meetings and terrain following meeting
- 902204 - Scalable Robotics
 - Tried out BEV architecture on bathydata for place recognition. Top 1 leads to 10% correct match probability, and Top 5 (5 nearest cells to GT) leads to 80% accuracy. Needs more fine tuning.
 - Tried out new coarse localization technique using Sparse Gaussian Process Maps and particle filters to recover from initial drift. Can drop ~15m drift down to ~2-4m.
 - Working on using above estimate as prior for fine matching using submap SLAM pipeline to get error down to 1m.
- Brett Hobson
- Irene Hu
 - 901101 - Seafloor Mapping
 - ORP measurements in seawater produced drifting numbers close to 0. Not enough signal in normal seawater. Currently looking into ORP standards compatible with the sensor, and setting up battery-driven voltages to check circuit stability
 - 901805 - Coastal Biogeochemical Sensing Program
 - Alk
 1. Luke installed a new working chip in DSL012 housing, but AC sweep read 100 pF of capacitance (too low to be functional). After taking the chip out again, the 500 ohm pad-to-anode resistance has become 95k, which is not completely open but indicative of perhaps a crack. This one is now on the table for SEM analysis (which is still being scheduled around the availability of the SEM facility).
 2. Ongoing circuit updates to address various issues identified in trials. We will likely sense current on both anode and cathode sides, since I can't confirm they're equal (without a working chip). May be a useful diagnostic down the line.
 - Nanofet
 1. revC board is laid out pending minor changes to test points. Having some issues finding a US fab house
 - Overhead
 - EEtech interviews
- Scott Jensen
 - Out of Office
 - August 13 -14 (vacation)
- Brent Jones
 - 901112 - Monterey Bay Time Series
 - Investigating other motor controllers for SIPPER in case Maxon EPOS4 is declared unusable
 - 901502 - Ocean Soundscape
 - Unleashing claude on hydrophone to try to find clicks and filter out EK echosounder
 - Made better plots on the website for sensor failure diagnosis and stuck on the bottom incidents
 - 901805 - Coastal Biogeochemical Sensing Program
 - Bringing up nanoFET debugger on my desktop.
 - Overhead
 - Interviews for EE tech
 - Diagnosis of Toro-M1 Viper comms drop outs
 - Made an M1 comms status dashboard for daily inspection

- Chad Key
 - 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
 - 901101 - Seafloor Mapping
 - Reviewing MB-System's [Pull Request for Screened Poisson mesh generation](#) addition
 - 901910 - Plankton Taxonomic Groups from AUVs
 - Analyzing QC steps needed for auv-python's LRAUV
 - Overhead
 - Listened to all the Intern presentations
 - 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
 - 706008 - READI-Net
 - Supporting FIDO deployment on David Packard with Barry Lab
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Improving flight request system
 - 902101 - LRAUV Technology Development
 - LRAUV Recovery Bail
 - Out of Office
 - June 26 to July 6th
 - July 30 to Aug 10
- Tom O'Reilly
- Mike Risi
 - 200105 - Core Navigation - MDUC
 - Starting CTD GUI Web App
 - Working on navproc-process documentation
 - 300062 - DMO Support - Doc Ricketts
 - Support for co-pilot pan and tilt interface dev. and overlay changes
 - 300070 - DMO Support - Ventana
 - Reviewed lapbox board with Chad
 - Continuing work VISCA pan and tilt process for the AccuPositioner
 - 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
 - August 17, 2026 - vacation
 - September 8, 2026 - September 10, 2026 - vacation
- Paul Roberts
 - 901513 - Targeted Sampling by AUVs
 - ROIs for IEEE paper submission
 - 901809 - Deep Sea Bioinspiration
 - Monocular tracking
 - DP cruise preparation
 - 902004 - Planktivore
 - Open hardware/software release packaging
 - 902111 - Carbon Flux Ecology
 - Sinker maintenance planning
 - 902204 - Scalable Robotics
 - Line scan system scoping
 - 902603 - Miniature 4K Subsea Optics
 - Project kickoff planning
 - 902606 - Low Altitude Survey AUV
 - Voyis camera testing
 - "Solid-state" battery testing
- Brent Roman
 - 901205 - ESP SURF Center
 - Supporting GLERL deployment on ASV in Lake Superior
 - 902204 - Scalable Robotics
 - Working with George Stern to integrate Rock 3C CPU into Mola
 - Out of Office
 - Sept 8 - Oct 16 (vacation)
- Carlos Rueda
 - 901502 - Ocean Soundscape
 - Ariel did a great job with his internship project presentation.
 - 902101 - LRAUV Technology Development
 - LRAUV-ESP: Brizo deployment completed, with all ESP interactions going smoothly.
 - TethysDash: WHOI has already been running dash4 [4.99.37](#) and the significant backend [4.99.97](#) release. All satisfactory there with actual operations.
 - TethysDash: merged the big branch into main after all the satisfactory validation during real operations.
 - Overhead
 - Attended a few internship project presentations
 - Out of Office
 - Sept 8-11: vacation
 - Sept 21-24: IEEE Oceans Conference. Along with our Soundscape intern, Ariel Raizman, will present a poster about humpback whale song structure.
 - Nov 11-12: vacation
 - Dec 9-10: vacation

- Karen Salamy
 - 300057 - Mooring Maintenance
 - Worked with Jason A. and Jules F. to successfully deploy OA! Mooring yesterday. Data is successfully downloading to coredat8.
 - 901101 - Seafloor Mapping
 - Followed up with Mike on duplicate missions after the smdb-dev overnight sync (#314) (Aug 6)
 - In Review:
 1. #315 — FNV XML-header ValueError guard
 2. #307 — Mission-link origin + 3d Citations
 - 902101 - LRAUV Technology Development
 - Features
 1. Event ID on Schedule rows, including Default Mission (#825) (Aug 12)
 - Bug Fixes
 1. NextComm widget reads text_nextcomm from TethysDash (Dash 4 parity; Brizo CircleSample) (#820) (Aug 11)
 2. Schedule no longer shows “Unknown” operator for multi-SBD, queued, and camelCase missions (#825) (Aug 12)
 3. Follow-ups on open PRs: getScript Bearer token, Send again gate, sparkline cache, SBD timeout/tooltip (#805 / #810 / #813 / #814) (Aug 10–11)
 4. Markers layer review follow-through (#787) (Aug 10)
 - Issues Filed
 1. #816 — Map center ignores open Vehicle State / Depth drawers (Aug 10)
 2. #817 — Depth sparkline long-dive fallback clips dive profile outside 8h window (Aug 10)
 3. #818 — Brizo NextComm time in vehicle widget does not match Dash 4 (Aug 11)
 4. #821 — Accordion sections lose scroll position when switching between them (Aug 11)
 5. #822 — Schedule: clicking Event ID opens Logs accordion filtered to that event (Aug 12)
 6. #823 — Schedule shows “Unknown” operator for some missions (Aug 12)
 7. #824 — SBD chunk tooltip shows “pending” for timed-out missions (Aug 12)
 8. #826 — Map measurement tool always closes polygon; straight-line paths not supported (Aug 12)
 - Reviews
 1. Approved Emme’s custom confirm dialogs; merged to develop (#781) (Aug 10)
 - In-Review
 1. #825 — Unknown operator + Event ID on Schedule rows
 2. #820 — NextComm from TethysDash text_nextcomm
 3. #814 — Mission/Command modal polish
 4. #813 — SBD chunk progress boxes on Schedule and Comms
 5. #812 — Do not ACK cellsat on cell state:2 alone
 6. #811 — Script mission ID for set commands
 7. #810 — Depth sparkline for dives longer than 8 hours
 8. #809 — Reload mission list so new scripts appear in pickers
 9. #805 — Pending Schedule mission ID via getScript
 10. #787 — Restore Markers layer actions and persistence
 11. #790 — Gate map marker edits behind login
 - Out of Office
 - March 22-24, 2027 - Vacation

- On-campus 3 days/week (**T, W, TH**). New OFFICE - G106.
- Brian Schlining
 - 500055 - VARS, M3/RS, DSG
 - Fixes to [beholder](#) (image acquisition service) to account for quirks in i2MAP video encodings. Beholder is heavily used by [vars-gridview](#) to extract images from web-accessible videos and it is a key part of the current ML workflow.. Addressed issues with missing video colorspace metadata from AJA encoders. Learning more than I ever wanted to about how video codecs handle cropping. i2MAP ProRes videos sometimes have Clean Aperture metadata (clap atom) that defines usable regions of video that can yield [surprising video sizes unless explicitly managed](#). [h264 HD videos are actually 1920x1088](#) to account for 16pix macroblocks used by the encoder, but the bottom 8 pixels are normally cropped off as part of decoding. [Added backpressure, bounding the number of requests and timeouts for ffmpeg](#) calls as well as coalescing multiple requests for the same image into a single request as a first cut at [improving performance](#).
 - 901221 - Midwater Time Series
 - Out of Office
 - Jul 27 - Aug 6: Vacation
- Quinn Shemet
 - Out of Office
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- Alana Sherman
 - Out of Office
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- George Stern
- Justin Tucker
- Johann Voigtlander
 - 902208 - Mini ROV Operations
 - Completed Sonardyne acoustic release test with the head. Documented the required commands
 - Getting requirements for our Greek collaborator sensor deployments
 - 902312 - Seafloor Processes
 - Purchased components for bubble camera, started bench testing RPI and camera
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 - 902504 - Scalable Semantic Mapping
 - Working with Quinn and Michael to get the blueboat operational
 - Potted a cable for the imagenex to bluetrail
- Emme Wiederhold
 - 902101 - LRAUV Technology Development
 - helped write rinse.tl mission to be used in the new freshwater rinse tank