

Engineering Weekly Report 4/2/2026 - 4/9/2026

<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
 - OOO Apr 2, 2026
 - Working remotely May 11, 2026 – May 14, 2026
 - MIW May 18, 2026 – May 22, 2026
 - CVPR Jun 1, 2026 – Jun 5, 2026
- Francois Cazenave
- Danelle Cline
 - Out of Office
 - April 1-2, Vacation
- Duane Edgington
 - 901502 - Ocean Soundscape
 - Team meeting
 - Reviewing update to [OrcAI](#) repository. Plan to update my clone and run tests.
 - Running test of Amrit's [whalu](#) Pacific Sound data fetch and run inference tool. Looking to integrate with Perch2.0 foundation model.
 - Overhead
 - Teleconference, with Danelle, with intern candidate / collaborator candidate Nichols (Spain) AM April 10.
 - Out of Office
 - Dr. Appointments AM April 2, 6, 7
 - Working from home April 7 - 10
- Kevin Gomes
 - 200105 - Core Navigation - MDUC
 - A round of updates on both ships to bring OS up to date as well as align spare machine with mains.
 - 706008 - READi-net
 - Lots of support for deployments in Brazil, Montana
 - Merged pull request from Brent to combine puck reader code with Readinet web app on one RockPi, need to test more before deploying on remaining USGS FIDOs.
 - 902403 - Expedition DB Modern
 - Starting to migrate older python/perl scripts to more modern python with Prefect, Prometheus and Grafana.
 - Overhead
 - Proposal workshop meetings/prep
 - Working on proposal form automation into Adaptive Insights

- LRAUV candidate interviews
 - Oceans 2026 LOC activities
 - Weekly Report script debugging
- Andy Hamilton
- Kent Headley
 - 701147 - MARS O&M
 - UW APL is shipping the remaining MARS hardware spares, and the team has effectively moved on.
 - 901101 - Seafloor Mapping
 - met w/ Tom O re MB-Systems graphics port to get an overview of the architecture (Qt, VTK, C++), and reviewing the existing codebase
 - Dave C gave me some pointers on using mbeditviz, and we discussed the graphics port and related build issues.
 - Posted significant update to TRN code; primarily a refactoring of the LCM front-end for using TRN in an ROV context, along with various bug fixes and some updates to initialization in TRN Client classes.
 - 901221 - Midwater Time Series
 - pending test opportunity for layered control updates
 - 902204 - Scalable Robotics
 - Using MB-System to process Norbit data from the March cruise. Mostly this is an exercise to help develop a tool chain/pipeline that could be used on the Falkor, and also to become familiar with the MB-System graphical tools
 - Overhead
 - Hyperion meeting
 - directors dialog
 - misc admin
 - Out of Office
 - Apr 17 - Rachel Carson Caress/Troni LASS cruise
 - Apr 20-24 (personal travel, available by phone/online)
- Rich Henthorn
 - 300078 - DMO Support - AUV
 - Tricky process of closing the LRAUV loop with TRN updates
 - 902111 - Carbon Flux Ecology
 - SINKER deployment on MARS during Durkin cruise
 - 902305 - Event Detection Using the Sedimentation Event Sensor
 - Preparing for Durkin cruise SES mooring deployment
 - Swapped flooded LF modem with spare we picked from ESP inventory reduction sale a couple years ago
 - Out of Office
 - Apr 9 to 13 - Durkin Packard Cruise
 - Apr 15 and 16 - Rachel Carson LASS
 - May 18 to 28 - Vacation
 - June 29 to July 6 - Vacation
- Akshay Hinduja
 - 901809 - Deep Sea Bioinspiration
 - TritonCAM, triton-detection and lrauv-backseat communication debugging.
 - “Important” messages relay frames processed, but inexplicably don’t relay counts
 - Would need to setup pipeline to test offline and offshore
 - DeepPIV support for setting up pipeline on lab computers, and meeting with CVision
 - 902101 - LRAUV Technology Development

- Meeting to discuss current standing for TFTA, future requirements of hardware, possible proposal to write
- 902204 - Scalable Robotics
 - Test SBN pipeline with Packard cruise data
 - Setup Atuncito with pipeline
 - Generate new profiles for docker mbari_deploy_mbes
- Out of Office
 - Apr 14, 2026 Rachel Carson LASS
- Brett Hobson
- Irene Hu
 - 901805 - Coastal Biogeochemical Sensing Program
 - Alkalinity
 - Continued long tests on self-titrating behavior. Latest hypothesis is a large cloud of acid that lingers in the area
 - Picking out and probing some more chips to send back to Lionix
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Weekly meeting; checks on Harlequin for testing
 - 902305 - Event Detection Using the Sedimentation Event Sensor
 - In tank tests, SES modem flooded (pinched Oring?). Replaced with old SES modem (directional), with some older batteries installed. Overnight mission triggering TT seemed to work.
 - Calibrated pH sensors
- Scott Jensen
 - 901205 - ESP SURF Center
 - Installed FIDO-Marina (002) on Brazilian Research vessel
 - Assisted with installation of ESP-Koa on Tupan UASV
 - Returned home from Brazil
 - Supported delivery and commissioning of first USGS FIDO instrument
 - Out of Office
 - May 11-24 (vacation)
 - June 29-July 7 (vacation)
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- Brent Jones
 - Out of Office
 - 1 day vacation
- Chad Kecz
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - 300078 - DMO Support - AUV
 - Hyperion meeting this week
 - 300082 - DMO Support - Wave Glider
 - Piloting this weekend
 - 300083 - DMO Support - LRAUV
 - CFE lab deployment. Supporting Ahi/Triton
 - 902101 - LRAUV Technology Development
 - More TRN!
 - Opah deployment today testing smaller prop and PH sensor
 - 902607 - Autonomous Surface Vessel Replacement
 - NDA received from seasats

- Overhead
 - Interview candidate today (Nick)
 - Reviewed Marc's DVM paper using LRAUVs
- Out of Office
 - 4/9-10 (MST)
- Denis Klimov
 - 702106 - CeNCOOS
 - IFCB technical conference this week; our IFCB has a rotary valve issue.
 - 901112 - Monterey Bay Time Series
 - IFCB technical conference this week; our IFCB has a rotary valve issue.
 - 902004 - Planktivore
 - Assembly drawing for the low resolution optics side is completed; working on the harnesses into the central controller housing.
 - 902305 - Event Detection Using the Sedimentation Event Sensor
 - Preparing for SES deployment; a number of runs in the Test Tank, to get some familiarity with how the instrument runs.
 - Handling flooded LF modem and flooded/ corroded (DDR) battery pack; parts cleaned up and the board stack was washed and backed in the oven.
 - 902401 - Geo-Sense
 - Dealing with post-deployment action items; removing battery packs from glass spheres for recycling; ordering the fiber optic inspection tool.
 - Testing DAS clock drift at 6C in OFF state in the environmental chamber in the building G which so far produces inconsistent results.
 - Overhead
 - LSO: LIDAR operation in the Test Tank this week. Laser cutter TWA is on hold; but data collected for the TWA seems to be sufficient.
 - BSO: we are ordering a range of emergency supplies for batteries in a DDR or thermal run-away state; so far for a Test Tank area, and building A. Talking with Kaya about propagating some of those solutions to DMO.
- Eric Martin
- Thom Maughan
 - 300078 - DMO Support - AUV
 - Hyperion Power supply design update finished. BOM uploaded for fab and assembly at JLCPCB. Holding off submitting the order until partial build assembly issues are resolved.
 - Hyperion Power Supply, second partial stuffing. Most of the small form factor chips had solder issues. Many iterations of reflow and reattach. The 6 layer PCB has lots of copper for high current and thermal dissipation and this is believed to be the culprit.
 - Reviewing next steps with Paul and Erik. Recommendation is to modularize and for the near term violate the 11mm component height goal.
 - 300083 - DMO Support - LRAUV
 - Wiring upgrade on Galene is nearly complete. Tested the optimum camera / lights port and the drop is now 1v at 6v instead of 2v.
 - Battery discharge, charge cycle with no issues. It's ready for closeout in prep for tank test.
 - Ahi+Planktivore has 28 out of 62 sticks not reporting. It's a contender for battery upgrade after we qualify Galene with at sea testing.
 - 901217 - Chemical Sensors
 - Investigating a Bug where the MSC3 fails to sleep. This has happened 3 times out of 50 4 day K0 calibration runs. Jess has setup a sampling / sleep interval test program to

- run on one of the test boxes to try and reproduce. Implemented an error log and reset handler in case of sleep fxn fail.
 - Working on MMS v2. Jess analyzed hundreds of floats including Seabird Suna to get the integration time setting from 2014 to 2025. As expected, SUNA required much less integration time due to higher optical signal. Reducing integration time will reduce power consumption and increase float battery life - the goal is to halve the power consumption of ISUS. Planning another lab talk on April 30 to go over the details and timing of an ISUS sample.
- 901805 - Coastal Biogeochemical Sensing Program
 - MoSoS v5.2, not much this week.
 - Installed CCS on a loaner laptop in an effort to help Brent Jones.
- 902004 - Planktivore
 - Weekly meeting. Build is on hold waiting for Denis's time
 - Meetings with science users to get input for Planktivore abstract.
- Out of Office
 - A week vacation in second half of April (TBD)
 - Ten days mid-June (dates tbd) for Norway Planktivore collaboration with Tidal and imaging workshop in Sweden.
- Mike McCann
 - Out of Office
 - 19 April: Serving as a judge for a CSUMB hackathon
 - 19 June - 10 July: Vacation
 - 18-24 July: SIGGRAPH in LA
- Enoch Nicholson
 - 706008 - READI-Net
 - Completed Bozeman elevation troubleshooting and filed root-cause case study
 - Began vacuum fix to FIDO sampler code branch
 - Investigated FIDO 6 nitrogen capsule depletion anomaly (volume counter / suspected slow leak)
 - Delivered READI-Net summary to USGS
 - Scoped FIDO vacuum valve install for mechanical wrap-up
 - 901007 - Benthic Biology & Ecology
 - Performed BRS pump teardown and inspection; identified hydraulic pump tubing damaged by fluorinert
 - Purchased replacement tubing for hydraulic pumps
 - Submitted machine shop request for additional BRS pump housings
 - Assembled pump test equipment and trialed clamp tool
 - 902111 - Carbon Flux Ecology
 - Moved SINKER to the dock and loaded supplies onto the Packard
 - Overhead
 - Finalized prototype dive jar design and sent ordering info
 - Onboarded more users to the vault
- Tom O'Reilly
- Mike Risi
 - 200105 - Core Navigation - MDUC
 - LASS process documentation
 - Updated OS of deployed navproc machines
 - Removed soon to be deprecated App passwords from repos
 - 300070 - DMO Support - Ventana
 - Changes to external control interface to allow UDP effort requests

- 901101 - Seafloor Mapping
 - Working with Chad to testing LASS system changes
 - Training for Both Jenny P. and Rich H. on refactored control system interface
- 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
- Paul Roberts
 - Out of Office
 - June 13 - June 20, 2026 MidSEC, Sweeden
- Brent Roman
 - 708184 - ESP Monitoring PNW
 - Helped diagnose camera troubles
 - Ended up shipping a replacement camera
 - 901205 - ESP SURF Center
 - Helped Jim Brich debug his puckreader/scanner app
 - Worked with Kevin Gomes to package it into the FIDO SDcard image
 - 902204 - Scalable Robotics
 - Finished conversion to DepthAlv3
 - Identified that framerate was being limited by network bandwidth
 - Revised sen_oakd_lcm_cpp driver to compress images with MJPEG
 - Resulting in 3x increase in framerate (from 12 fps to 30 fps)
 - Fixed a few long standing bugs in sen_oakd_lcm_cpp
 - 902304 - Piscivore Cam
 - Brought up camera app on CV28 lower-power camera
 - Pitched investigating RockChip's RV1126B
 - Ordered 2 RV1126B camera boards
 - Working with Rockchip's tools to convert YOLO models
- Carlos Rueda
 - Out of Office
 - April 1-2: Drs. appt, plus vacation
- Karen Salamy
 - 200103 - Core CTD Data - MDUC
 - Reviewed emails from Rob but still need to implement his updates. I will get to that today or tomorrow.
 - 300057 - Mooring Maintenance
 - Watching the M1, OA1 and OA2 downloads since the addition of satellite infrastructure.
 - 901101 - Seafloor Mapping
 - Received a new request from Jenny P. for citation filtering on the SMDB. I am scoping out the amount of work and time to do this.
 - 902101 - LRAUV Technology Development
 - The LRAUV UI has been the bulk of my work this past week. I have been running through Github Issues for the Dash5 and addressing updates for the team. Many of these updates are being reviewed by Zack Lyon. Once they are approved, I am pushing them to the dash5-staging development server for staging prior to adding them to the production server (dash5),. I am hopeful that many of these updates will be on the production server in the near future.

- Last week, I spent time as PIC on the LRAUV deployments.
 - 902111 - Carbon Flux Ecology
 - Re-deployment this week. I spent some time updating the SINKER UI to deal with system and instrument sensors/failures/disabled, etc in RT. The next step will be graphing and charting of data to the UI in RT.
 - Overhead
 - Director's talk
 - Lots of meetings.
 - Out of Office
 - On-campus 3 days/week (**T, W, TH**). New OFFICE - G106.
- Brian Schlining
 - Out of Office
 - April 6 - April 24: Vacation
 - Jun 11 - Jun 19: Midwater Science and Engineering Community Conference, Sweden.
 - Jun 22 - Jun 26: Vacation
- Quinn Shemet
 - 300062 - DMO Support - Doc Ricketts
 - Finished approximately feature-complete presets process, just need to clean up a little
 - 300078 - DMO Support - AUV
 - Monthly Hyperion meeting and LRAUV application code review
 - 902101 - LRAUV Technology Development
 - Triton network debug and Iridium weirdness
 - DQ2445 - NOWRDC Uncrewed Systems
 - Planning for summer deployments
 - Overhead
 - Interviewing
 - First Aid
- Alana Sherman
- George Stern
 - 902106 - Niobicon-Based AUV Docking Development
 - Subsea can troubleshooting, testing and mods
 - 902204 - Scalable Robotics
 - Completed PoE can harnessing schematics
 - RPi test code, created test harnesses and board checkout of the switch matrix card - working
 - Switch matrix card fixturing in PoE can
 - Rewired PoE can and oakD 1500m and began system level bench tests - not working, but getting close.
 - 902304 - Piscivore Cam
 - LRAUV re-integration on upgraded makai with new 8pin bulkhead and prep for Gen3 camera deployment hopefully later this week
- Justin Tucker
 - Out of Office
 - OOO 3/27-4/3
- Johann Voigtlander
 - 902204 - Scalable Robotics
 - Forklifted some rowe packs from ESB
 - 902208 - Mini ROV Operations
 - Changed the oil on the thrusters. Replaced filter board O-rings
 - Opened EPOD and moved fiber bulkhead locations. Increased RX dB by ~5

- Tested all cables for ground faults. Inspected and cleaned the ends