

Engineering Weekly Report 5/9/2024 - 5/16/2024

<https://docs.mbari.org/internal/projects/Engineering/Weeklies/2024/>

Executive Council Notes

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Individual Activities

- Michael Anderson
- Kevin Barnard
- Francois Cazenave
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Deployed the wave energy buoy
 - 902106 - Niobicon-Based AUV Docking Development
 - Preparing for deployment
 - Out of Office
 - Took sick day on tuesday
- Danelle Cline
 - Out of Office
 - Vacation June 5-19
- Duane Edgington
 - 500055 - VARS, M3/RS, DSG
 - Testing deepsea-ai ecsshutdown command
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Abstract work
 - 902111 - Carbon Flux Ecology
 - AWS instance selection and quota work
 - Overhead
 - Group brownbag
 - Prep for DOEST meeting
 - Out of Office
 - June 10 - 21, 2024. Vacation UTC-8
 - Sept 17 - 20, 2024. PyTorch Conference, San Francisco
 - Oct 21 - Nov 8, 2024. Vacation UTC+1
- Jon Erickson
 - 901217 - Chemical Sensor Program
 - Waiting on board design
 - 902010 - Mesopelagic LRAUV
 - Still working on the VB system components.
- Kevin Gomes
- Andy Hamilton
- Kent Headley
 - 300078 - DMO Support - AUV
 - review Erik T scheme for layered control dynamic tasking
 - Overhead

- hiring: application review, screening/interview prep, draft job description
 - abstract review
 - attended DAS design review
 - misc admin
- Out of Office
 - Jun 4-7
- Rich Henthorn
 - 300078 - DMO Support - AUV
 - Discussed multi-mission processing with Erik Trauschke
 - 902305 - Event Detection Using the Sedimentation Event Sensor
 - SES testing and development at Test Tank
 - McLane Trigger Trap
 - 902401 - Geo-Sense
 - Weekly meeting
 - 902405 - Precision Control Technologies
 - CoNav/TRN LCM
 - Overhead
 - Rec-Comm stuff
 - Out of Office
 - May 28 - June 5: Vacation
 - July 3 - 11: Vacation and WFH
 - Aug 26 - Sep 11: Vacation
- Brett Hobson
- Irene Hu
 - Out of Office
 - May 3-15: Taiwan
- Scott Jensen
 - 300078 - DMO Support - AUV
 - First pass design of Bridge has been entered.
 - Utilizing previous design for isolated communications path
 - Working on power supply and over voltage protection
 - 706005 - eDNA Grass Carp Sandusky
 - Successfully completed install of two ESP instruments on the Maumee and Sandusky rivers
 - 901205 - ESP SURF Center
 - Control methodology complete for Seatrac two pump system
 - Hardware assembled
 - Out of Office
 - June 17-21 vacation
 - July 18-23 vacation
 - July 24-29 vacation
- Brent Jones
 - 901112 - Monterey Bay Time Series
 - Upgraded RBR cervello and Maestro. Beginning assembly for testing in test tank
 - 901805 - Coastal Biogeochemical Sensing Program
 - Flying SN34 in support
 - 902004 - Planktivore
 - Flew Ahi
 - Meetings
 - Overhead

- Integrated BME280 PTH sensor in M1 cell telemetry package. Final assembly. Ready to be installed on M1 turnaround
- Chad Key
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - Out of Office
 - 05/27-06/21 (GMT+1)
 - 07/08-07/12 (HST)
 - 07/16-07/22 (EDT)
- Denis Klimov
- Eric Martin
 - 901101 - Seafloor Mapping
 - Checking on lidar development
 - Cleaning up the lab, getting ready for sled disassembly
 - Paper review for JOE submission
 - 901217 - Chemical Sensor Program
 - Energy analysis
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Minor support on deployment
 - 901911 - ROVVR
 - Rack PC research
 - 902204 - Scalable Robotics
 - Supporting Mola upgrades and testing
 - 902312 - Seafloor Processes
 - Participated in design review for DAS system
 - Overhead
 - SEE-EAD Hiring committee meetings
- Thom Maughan
 - 300083 - DMO Support - LRAUV
 - I2c port expander on charger
 - 901805 - Coastal Biogeochemical Sensing Program
 - Big push on getting ISUS Nitrate sensor running on Tiva processor. Its not realistic this week but should be running soon after return. Dev setup will go to Colorado.
 - Functions are in place and compiling, though some of the CF2 based functions are stubbed. Working i2c drivers. Persistent data is moving from RTC SRAM to FRAM.
 - 902004 - Planktivore
 - Wrapped up fourth science deployment. Durkin lab use of Ahi + Planktivore went well.
 - Lessons learned meeting. Very good input from Sebastian on LRAUV and Planktivore.
 - Overhead
 - ODSS Abstract, draft submitted.
 - Out of Office
 - May 10 days. May 20 - 30 (or so). Colorado
 - Aug two to three weeks vacation Colorado.
- Mike McCann
 - 901101 - Seafloor Mapping
 - Implementing [spreadsheet processing](#) to get QC data into the SeafloorMappingDB
 - 901910 - Plankton Taxonomic Groups from AUVs
 - Gave input on STOQS development scoping for 5 year project renewal proposal
 - 902403 - Expedition DB Modern

- Reviewing capstone teams work on an API using Flask and Google authentication
- Overhead
 - Attending CSUMB CS capstone festival Friday morning
 - Giving tour of MBARI to the two capstone teams mentored this semester Friday afternoon
- Out of Office
 - 24 June - 19 July: Vacation
 - 22 - 25 July: ESIP Federation Summer meeting, Asheville, NC
 - 28 July - 1 August: SIGGRAPH, Denver, CO
- Rob McEwen
- Paul McGill
 - 300070 - DMO Support - Ventana
 - Tested new Hall sensor for prop RPM on vehicle
 - Continuing to help DJ with load cell for tether management system
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Ordered focus stepper motor drivers. Working out wiring and connectors to connect focus stepper motor to driver board
 - 902304 - Piscivore Cam
 - Testing bug fixes for camera controller code—each test takes days, but so far, so good
 - Trying to figure out how to increase resolution for video from Raspberry Pi cameras
 - 902305 - Event Detection Using the Sedimentation Event Sensor
 - Trying to get quotes for Impulse connectors required for acoustic modem to talk to McLane controller
 - 902401 - Geo-Sense
 - Received power supplies for Deepsea Connect, working on wiring design
- Enoch Nicholson
 - 706008 - READI-Net
 - Continued to wrap up design of instrument last week
 - Finished Model
 - Started ordering parts
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Proposal writing
 - Out of Office
 - April 5-10 Vacation (Available via Slack & Email)
 - April 14-18 IEEE Oceans (Available via Slack & Email)
 - April 19-23 Vacation (Unavailable)
 - September 19-24 Vacation (Available via Slack & Email)
- Tom O'Reilly
- Mike Risi
 - 200105 - Core Navigation - MDUC
 - Install of navproc in building D, currently interfaced to SMD control system
 - Working on getting Digi terminal servers going in building D to start interfacing with ROV sensors and actuators (e.g. CTD, digiquartz, pan/tilt units, etc.)
 - 901101 - Seafloor Mapping
 - Working with Chad on bring up of rev-c trigger board stack
 - 902405 - Precision Control Technologies
 - Continuing work on sonar simulation for obstacle avoidance
 - Out of Office
 - Offsite on Tuesday and Friday
 - January 16 - January 19, 2024
 - February 22, 2024

- March 4 - March 8, 2024 - vacation
 - April 24, 2024 - vacation
 - May 20 - May 24, 2024 - vacation
 - June 17 - June 18, 2024 - vacation
- Paul Roberts
 - 902001 - Ventana 4k Camera
 - abstract submission for spare camera
 - 902004 - Planktivore
 - RIMS data ingest and testing mapping tools
 - Testing Tator with Planktivore images
 - 902111 - Carbon Flux Ecology
 - Preparing for bringing Planktivore and Chiton images into clustering pipelines
 - 902204 - Scalable Robotics
 - PoE can rebuild
 - Overhead
 - Preparing for DOEST
 - Preparing for intern project
 - Out of Office
 - May 17
- Brent Roman
 - Out of Office
 - June 20 - June 31 (gunkholing in the Sacramento Delta)
 - July 1 - Aug 31 (Vacation in Japan)
- Carlos Rueda
 - 902101 - LRAUV Technology Development
 - TethysDash related support to Saab Inc. Updating some documentation along the way.
 - 902204 - Scalable Robotics
 - Transferred Dial repo to [CoMPASLab/dial](#). Rather surprisingly, the webhook for documentation generation continues to work just fine as long as there's also the mbari-org/dial repo.
 - As part of delineating some future development for Dial, put in an IS ticket to mount the **compas** Titan share on **compaslabdev**.
 - Overhead
 - Setting up my new computer.
 - IE mtg. Gave a quick presentation about the [just](#) handy tool.
 - Out of Office
 - June 10–13: vacation
 - July 2–3, 22–25: vacation
- Karen Salamy
 - Out of Office
 - I will be out several days this month (May 21-22) for shoulder surgery.
 - On-campus 3 days/week (**T, W, TH**).
- Brian Schlining
 - 500055 - VARS, M3/RS, DSG
 - Continuing work on the knowledgebase replacement at <https://github.com/mbari-org/oni>
 - 701165 - OVAI Phase II
 - Completed ML OPs candidate interviews
 - 902002 - FathomNet
 - Coordinating with NOAA for image archiving.
 - Overhead
 - Met with NOAA's Deep Coral Group to discuss strategies for video annotation.

- Released Windows builds of [VARS Annotation](#) and [jsharktopoda](#) for NOAA's Deep Coral Group to test with.
 - Working with IS to set up a Windows VM for the SE IE group to use for building Windows applications.
- Out of Office
 - May 16-20 - Vacation
 - Jun 10-14 - Setting up video lab at OSU
 - Jul 15-24 - Vacation
 - Aug 19-22 Vacation
 - Sep 5-9 - Vacation
 - Oct 7-10 - 5th Marine Imaging Workshop in Monterey
- Alana Sherman
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Helping as needed with small details on the
 - 902401 - Geo-Sense
 - Following up from review last week - collecting notes
 - Trying to order FO penetrator this week
 - Conference call with TMT to discuss termination of the cable
 - 901205 - ESP/Readinet
 - Updated otpto circuit, looking for 3V dc-dc and regulator for the flow sensor
 - Out of Office
 - Out on a class field trip on Weds morning
- George Stern
 - 902304 - Piscivore Cam
 - Tested existing Pcam LED to verify it couldn't support 10x increase in power
 - Layed out a new AI backed led pcb with boost converter and analog light sensor/dimmer and ordered parts
 - Preliminary design of a housing/potting form
 - 902306 - SINKER
 - Continued detailed design of motor control board
 - Final layout updates to the battery housing PCBs
- Johann Voigtlander
 - 902208 - Mini ROV Operations
 - Refurbished manipulator gripper to spin concentrically for ice coring
 - 902402 - CSEM
 - Working on spare parts/budgeting
 - Overhead
 - Completed Moxie Media marine survival
 - Completed Moxie Media safer seas act
 - Out of Office
 - April 16th - May 7th Germany CSEM
 - May 8th - May 12th Vacation