

Engineering Weekly Report 8/8/2024 - 8/15/2024

Engineering Weekly Report

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

Executive Council Notes

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Individual Activities

- Michael Anderson
- Kevin Barnard
 - Out of Office
 - MBARI Open House comp day Jul 19, 2024
- Francois Cazenave
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Monitoring buoy
 - 902106 - Niobicon-Based AUV Docking Development
 - Assembled and tested 2nd photosensor
 - Project management
 - 902204 - Scalable Robotics
 - Designing brackets for mini roV
- Danelle Cline
 - Out of Office
 - September 24/25 NOAA SoundCoop workshop Boulder, CO
 - Oct 7-10 - 5th Marine Imaging Workshop in Monterey
- Duane Edgington
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Working with Danelle on building a model.
 - Out of Office
 - Aug 15, 2024. Doctor Appt.
 - Oct 21 - Nov 8, 2024. Vacation UTC+1
 - Dec 8 - Dec 17, 2024. [Neurips](#) Conference. Vancouver, BC.
- Jon Erickson
- Kevin Gomes
 - Overhead
 - Proposal Review
 - Proposal Group Lead Meetings
 - Out of Office
 - Aug 16: Vacation
 - Sep 16: Vacation
 - Oct 7-11: Vacation
- Andy Hamilton
- Kent Headley

- 901101 - Seafloor Mapping
 - start ROV TRN configuration for possible LASS dives
- 902204 - Scalable Robotics
 - prototyping an oculus sonar visualization/UI in Qt
- 902405 - Precision Control Technologies
 - converting axial TRN data sets to help Steve Rock evaluate it
- Overhead
 - proposal review (Tu - Fri)
 - misc admin
- Out of Office
 - 08/27-29 Rachel Carson (tentative)
- Rich Henthorn
 - 902305 - Event Detection Using the Sedimentation Event Sensor
 - Code repo management
 - Overhead
 - Rec-Com stuff
 - Out of Office
 - Some sick leave
 - Aug 26 - Sep 11: Vacation
- Akshay Hinduja
 - 902101 - LRAUV Technology Development
 - Working on getting Irauv simulator setup on laptop, faced some issues with broken docker image. Trying internal one
- Brett Hobson
- Irene Hu
 - 901217 - Chemical Sensors
 - Various circuit fixes and modifications to MSC3 Tiva module and baseboard
 - Kicked off 40 mcaps and 2 baseboards
 - 901805 - Coastal Biogeochemical Sensing Program
 - Power measurements on entire suite of sensors using Yokogawa
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Pressured tested UV tester puck- did not turn yellow even with current under pressure. Swapping UV LEDs on 12 pucks.
 - Camera to controller connection set up, tested, and troubleshot (using camera software). Now works with a few small issues
 - Set up desktop computer with necessary software
 - Wiring diagrams
- Scott Jensen
 - 300078 - DMO Support - AUV
 - Time spent deciding upon DC-Link capacitance with regard to value, pressure tolerance and prototyping
 - 706008 - READI-Net
 - Lots of work adjusting scripts to production guild prototype a
 - Running in to an issue of filter seal during nitrogen purge
 - 901205 - ESP SURF Center
 - Supporting instrument preparations
 - Out of Office
 - September 16-20
- Brent Jones
 - 901112 - Monterey Bay Time Series

- Diagnosing GPS failure in CPF on last mission. Problem recreated, root cause not yet identified
- 901502 - Ocean Soundscape
 - Running click detection on a single month and comparing to Sam's click detection routines. Working on Python code optimization and tuning
- 901805 - Coastal Biogeochemical Sensing Program
 - Deployed and flying spray29 in support of Yui's experiment
- Chad Key
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - Out of Office
 - 07/29-0802 (EDT)
- Denis Klimov
- Eric Martin
 - Out of Office
 - Vacation Friday July 29-30
- Thom Maughan
 - Out of Office
 - Aug 23 to 27
 - Oct two to three weeks vacation Colorado.
- Mike McCann
 - 200109 - Core Mooring Data - MDUC
 - Removed *19700101* files from the M1 202306 deployment and reprocessed to fix met data
 - Will be adding a "rm *19700101*" step to the routine ssds processing of mooring data
 - 902101 - LRAUV Technology Development
 - Reprocessing stoqs_denmark2024 to properly load all ESP Samples for Chris P.
 - Encountered edge case in LRAUV-ESP consolidated message that Carlos is fixing
 - Added activity__maptrack column to the STOQS activityparameter API response for Chris P.
 - 902403 - Expedition DB Modern
 - Bringing prototype <https://expd.shore.mbari.org> server back up for REST API testing
 - Overhead
 - Dealt with Matlab jobs (due to expired license) taking down Hyrax and TDS services on elvis
 - Processed Gulper mission 2024.226.00
 - Out of Office
 - 25-27 September 2024: Web3D Conference
 - 30 September - 3 October 2024: Vacation
- Rob McEwen
- Paul McGill
- Enoch Nicholson
 - 706008 - READI-Net
 - Supporting part orders
 - Helping with logo / mfg review discussion
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 - 902306 - SINKER
 - Design of Sinking camera assembly
 - 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
 - Worked Helios simulator for ROS pan and tilts
 - Completed HD lapbox process and tested with pan and tilts
 - 300062 - DMO Support - Doc Ricketts
 - Working on external control interface for SMD control system
 - 901101 - Seafloor Mapping
 - Working on LASS control system refactoring
 - Finished gss-telem-bridge and tested on Rachel Carson
 - 902204 - Scalable Robotics
 - Helped with August 8th cruise deployment
 - 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
 - September 3 - September 9, 2024 - vacation
- Paul Roberts
 - 702108.99 - 6-eye camera-compute mod
 - Design and concept review
 - 901809 - Deep Sea Bioinspiration
 - Chiton 1500 nvme drive testing
 - 902004 - Planktivore
 - Prep for Aug 22 deployment
 - software updates
 - 902204 - Scalable Robotics
 - Mola central camera optics
 - 902306 - SINKER
 - Side-looking camera chassis fab
 - Overhead
 - Intern mentoring
 - Out of Office
 - Aug. 16 2024 - CES Northstar
 - Aug. 30 2024 - CES China Peak
- Brent Roman
 - Out of Office
 - June 20 - June 31 (gunkholing in the Sacramento Delta)
 - July 1 - Aug 31 (Vacation in Japan)
- Carlos Rueda
 - 901502 - Ocean Soundscape
 - More PBP work. All progressing well.
 - 902101 - LRAUV Technology Development
 - Saab: regular meeting. Met a new person that will be replacing Ilya L. as point of contact for TethysDash aspects.
 - WHOI: exchanges continue regarding issues with `unserialize`, which so far seem only involving the lrauv-application side of things.

- ESPComponent: Per Mike M.'s observation, [fixed and submitted a PR](#) to handle previously uncovered edge cases involving the consolidated message about each ESP filtering sequence.
 - 902204 - Scalable Robotics
 - Working on orchestration of Dial components.
 - Assisted Sebastián in having an instance of Dial running on a new machine (including LWS).
 - Overhead
 - Attended couple of intern presentations.
 - IE group mtg.
 - We got a new VM with Ubuntu for purposes of migrating or current CentOS7 based [docs](#)
 - Some ESIP COR related exchanges and responses to feedback, arising from a session about the ORR and COR during the recent ESIP summer mtg.
 - Out of Office
 - TBD a week or so in Aug/Sep: vacation
- Karen Salamy
 - 200103 - Core CTD Data - MDUC
 - Completed the last of the Ventana CTD O2 EXPD updates for Ed Peltzer before his retirement.
 - I believe Rob Sherlock will be taking over the duties of “chemist” moving forward.
 - 300057 - Mooring Maintenance
 - Data download issues appear to have resolved with my last cronjob update on coredata8. Slight changes in the processing times seemed to do the trick on the data downloads “stepping” on one another.
 - 902101 - LRAUV Technology Development
 - I have spent a lot of time adding code updates onto the okeanids dash5 server for the LRAUV UI. Despite much effort, my knowledge of React coding has not materialized fast enough for the team.
 - Overhead
 - Watching intern talks today
 - Out of Office
 - Vacation: August 20-28, 2024
 - US React Summit Conference: November 19-24, 2024, NYC.
 - On-campus 3 days/week (**T, W, TH**).
- Brian Schlining
 - 500055 - VARS, M3/RS, DSG
 - Added release [C1](#) to most of the VARS services.
 - Updated dependencies for all VARS services and published new releases. This includes testing against hibernate 6.6.x.
 - Meeting to discuss DSG and Query revamp.
 - Fixed doc generation in [Oni](#)
 - 701165 - OVAI Phase II
 - Meetings to discuss quality controls and actions for submitted annotations.
 - 902002 - FathomNet
 - [Updated FathomNet to handle zip archives of images](#), allowing researchers to submit annotated images to NCEI/NOAA for archiving and publishing. Deployed in [fathomnet-web-ui](#) v1.4.0
 - 902304 - Piscivore Cam
 - [Imported latest deployment](#)
 - 902404 - 5th Marine Imaging Workshop
 - Early-bird registration is closed.
 - Organizing the science program.
 - Out of Office
 - Aug 19-22 Vacation

- Sep 5-9 - Vacation
 - Oct 7-10 - 5th Marine Imaging Workshop in Monterey
- Alana Sherman
 - 902208 - Mini ROV Operations
 - Advising Johann as needed on EPod upgrades
 - 901205 - ESP/Readinet
 - There are a few more things on the board. We realized that adding a 5V regulator for the Vacuum pump would make several things easier, so I need to implement that. James is working on making all the pumps, etc.
 - Overhead
 - The proposal review is this week. I spent Friday and Monday reading through my remaining share. After Tuesdays discussions, I have spent Wednesday working on a labor plan to level the EE group given the Phase 1 requests.
 - Out of Office
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- George Stern
 - 902204 - Scalable Robotics
 - Completed initial uC software for laser, led and camera synchronization and control
 - Initial tank test of new LED lighting to verify spread and flux; spread looked fine, but there is a potential opportunity to save additional power by decreasing flux, need to update luxonis camera driver to set maximum camera exposure and retest
 - 902304 - Piscivore Cam
 - Began looking at Rhonda SW bid
 - Begged Framos to provide access to Sony image sensor software manual and datasheet, need to escalate with Sony... thankfully we have access to OnSemi hyperlux series or choices for the next Pcam camera system would all be terrible.
 - 902306 - SINKER
 - Prepared for battery interface board layout
 - Overhead
 - UW MARS IPB schematic review
- Justin Tucker
 - 901101 - Seafloor Mapping
 - Reassembly of LASS and miscellaneous part completion
 - Overhead
 - Continuing work on Ricketts lifting assembly
 - Out of Office
 - Aug 20-21 - Port Hueneme pressure testing
- Johann Voigtlander
 - 902204 - Scalable Robotics
 - Debugging VN300 integration issues
 - 902208 - Mini ROV Operations
 - EPOD Focal Upgrade:
 - Installed new 907+ Remote motherboard
 - Installed additional CWDM yelloBrik module
 - Confirmed all serial ports functional
 - Confirmed aux cameras work
 - Purchased Focal 907 debug PCB
 - Out of Office
 - April 16th - May 7th Germany CSEM
 - May 8th - May 12th Vacation

