

Engineering Weekly Report 8/24/2023 - 8/31/2023

<https://docs.mbari.org/internal/projects/Engineering/Weeklies/2023/>

Executive Council Notes

- Kevin Gomes gave an invited talk to the Monterey Data Conference in Monterey, CA. From the conference website: “The Monterey Data Conference is an annual invitation-only meeting in Monterey which brings together researchers from DOE national laboratories, facilities, universities, and industry to showcase and discuss the latest advances and open challenges in scientific data analysis and computing.” For more information visit the site at: <https://www.montereydataconference.org/>

Individual Activities

- Michael Anderson
- Kevin Barnard
 - 500055 - VARS, M3/RS, DSG
 - Rolled out several VARS GridView feature requests
 - Continued integration of VARS GridView with Sharktopoda 2
 - 902002 - FathomNet
 - Gardened FathomNet community feedback issue tracker
 - Populated web UI issues to be tackled in the near future
 - 902304 - Piscivore Cam
 - Met with team to review ML workflow and outline improvements
 - Scoped process for ingesting bounding box proposals into VARS
 - Reviewed Lonny's code
 - DQ2209 - Ocean AI 2
 - Scoped FathomVerse CMS functional requirements
- Francois Cazenave
 - 902204 - Scalable Robotics
 - Finished ROV sled design
 - Reviewed stereo camera design
 - Out of Office
 - Took 1 day of vacation
- Danelle Cline
 - Out of Office
 - SoundCoop Workshop, Boulder, CO October 24-25 2023
- Duane Edgington
 - 500055 - VARS, M3/RS, DSG
 - Testing/debug updates to deepsea-ai process command
 - Team meeting Aug 30
 - 901502 - Passive Acoustic Sensing
 - Proposal response discussions.
 - Reviewing Alexa status
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations, and Outreach
 - Proposal response discussions

- 902004 - Planktivore
 - Proposal response discussions
- Overhead
 - Minor AWS work for 902204
 - Proposal response discussions 902111
 - DEI seminars
- Out of Office
 - Oct 16-18 2023. Pytorch conference. SFO (in person). PDT (UTC-7)
- Jon Erickson
- Kevin Gomes
 - Out of Office
 - Aug 22-24: Monterey Data Conference, Monterey, CA
 - Aug 28-Sep 12: Vacation
- Andy Hamilton
- Kent Headley
- Rich Henthorn
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - mbtrnpp simulation interface
 - 902305 - Event Detection using the Sedimentation Event Sensor
 - Acoustic modem purchase
 - Project meeting
 - Controller upgrade
 - 902306 - SINKER
 - Camera controller testing
 - Overhead
 - Rec Com stuff
 - Out of Office
 - Aug 30: Afternoon appointment
 - Sept 5 - 7: Remote work, PDT
- Brett Hobson
- Irene Hu
 - 901805 - Coastal Biogeochemical Sensing Program
 - Finishing nanoB current tests; titrations look good
 - Testing nanoB modifications to reduce noise
 - Prepping AEC instrument for tank dunk; convo with Stanford team; planning for Saudi Arabia
 - 901904 - Deep-Sea Coral Community Observatory
 - Planning meeting
 - Overhead
 - Helping George with SINKER cables - looked over materials
 - Rec comm meeting
 - Out of Office
 - Sept 4-8: vacation
- Scott Jensen
 - Out of Office
 - Vacation Aug 28- sept 1
- Brent Jones
 - 901805 - Coastal Biogeochemical Sensing Program
 - Diagnosing and fixing comms problems between pH and spray
 - Diagnosing excessive corrosion on spray pcase
 - 902004 - Planktivore

- Diagnosing and fixing network issues between LRAUV and planktivore
 - 902101 - LRAUV Technology Development and Fleet Operations
 - Processing GL data. Still gaps in LCM data flow
- Chad Key
 - 901101 - Seafloor Mapping
 - revB stack is now installed in housing; integration testing next
 - Paragon Battery Upgrades
 - Mock-up is 95% wired and have begun system level tests with the batteries
 - Overhead
 - Many Zoom interviews for Elec Assembler position
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - Out of Office
 - 09/18-09/21 (EDT)
 - 09/25 - 09/29 (EDT)
- Denis Klimov
- Eric Martin
 - 901101 - Seafloor Mapping
 - Kearfott Driver
 - 901206 - Coastal Profiling Float
 - Merging in changes from the sleepOnAnchor feature, which is working well.
 - Gene is working on analyzing datasets.
 - 901405 - PowerBuoy Development
 - Thinking about the tether change if any.
 - 901911 - ROVVR
 - Met with Kelly for Phase 1 feedback
 - Help a remote Drew finalize Phase 2 feedback
 - Harvey Mudd Clinic this Thursday
 - 902012 - Telepresence
 - Paper revision
 - 902204 - Scalable Robotics
 - Phase 2 needed major effort overhauls
 - MiniROV Sled
 - Supporting OAKD developments
 - New visiting scholar this week, coordinating.
 - Getting new IMUs online
 - Overhead
 - MiniROV Hiring: interviewed an in-person candidate
- Thom Maughan
 - 300083 - DMO Divisional Support - LRAUV
 - Working on charge termination and other battery charging smbus features
 - Drafted a serial protocol doc and delivered to Quinn
 - 901009 - CANON
 - Drafted a document with the software installed on MBON-edna.
 - Met with Katy, Kobun, Sebastian and Jacoby to gather requirements for setting up the two high performance edna processing servers. Discussed docker and git. Plan is to start simple on edna1 and use edna2 for prototyping and experimental software.
 - 901805 - Coastal Biogeochemical Sensing Program
 - Testing pHFET-SOS for nanoFET

- Working on adding calibration coefficients for pressure and K2. User manual entry and file import.
 - M2m protocol
 - Investigating Spray ground fault. Sent a proposal with options to Yui for an experimental sniffer technique.
- 902004 - Planktivore
 - Disassembled Planktivore V2.
 - ChargR testing. Hand assembled board failed. Paul built another set. Ran several charge / discharge cycles. Mounted ChargR, battery bracket and battery.
 - Added ethernet switch
 - Testing with a plan to button up housing on Thursday. Working towards a mid-Sep deployment.
- Out of Office
 - Vacation Sep 27 - Oct 2 Ohio
 - Vacation Oct 12 - 18 Nevada Eclipse
- Mike McCann
 - 300078 - DMO Divisional Support - AUV
 - Adding product generation code to auv-python: ODV Gulper files first, then quick look images
 - 901910 - Plankton Taxonomic Groups from AUVs
 - Started reload of stoqs_all_dorado with PAR data addition
 - Overhead
 - Reduced some labor items in response to Phase 2 for Expd Database Modernization
 - Still adding to requirements document for Expd Database Modernization capstone
 - Still copying everything over to new computer
 - Out of Office
 - 12-20 September: Vacation
 - 29 September: Vacation
 - 9-11 October: Web3D 2023 Conference
- Rob McEwen
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Completed simulation of Caress's Axial mission. This includes both the flight code and mbtrnpp.
 - The simulation was successful. Recent word was that Trn worked up there a few days ago, as predicted by the simulation.
 - Working on eliminating duplicate multibeam code from the simulation.
- Paul McGill
 - Out of Office
 - On vacation until Sep 6
- Enoch Nicholson
 - 706008 - READI-net
 - Printing adjusted components to improve instrument fit.
 - 902306 - SINKER
 - Drafted and submitted Housing A drawing package for peer review.
 - Built compensated wiper.
 - Added optics mount to test aquarium.
- Tom O'Reilly
- Mike Risi
 - Out of Office
 - Out of office on Fridays
 - May 30 - June 6
 - August 21
 - September 5 - September 7

- Paul Roberts
 - 901809 - Deep Sea Bioinspiration
 - Electrical support for minions camera bringup
 - 901904.99 - Corral Camera System
 - Planning design review of ROV camera
 - 902004 - Planktivore
 - V2 battery integration
 - 902204 - Scalable Robotics
 - PoE can testing
 - HSI camera on the MiniROV concept modeling
 - 902306 - SINKER
 - Internal chassis for sediment camera
 - Internal chassis for sinking camera
- Brent Roman
 - Out of Office
 - Aug 21 - Sept 1 (Aug 24 - Sept 31 off the net in the Grand Canyon)
- Carlos Rueda
 - 901009 - CANON
 - Per Jenny's inquiry, looked into changing the displayed name of a couple of assets on the ODSS map. I did the updates in the mongo database, but somehow they got overwritten after a few seconds, likely by some external process or by ODSS using some cached info. Will discuss with Kevin when he's back from vacation.
 - 901502 - Passive Acoustic Sensing
 - Group meeting.
 - 902101 - LRAUV Technology Development and Fleet Operations
 - Addressing various requests. Dash4 is now [4.52.6](#).
 - As noted on the lrauv-operations slack channel: "fyi I just signed off several of you as PIC or On-Call associated with Brizo/Galene/Makai. As a reminder, it is now expected that operators explicitly sign off while entering an estimate of actual time spent during the watch-standing. My manual signing-off above is to facilitate the "transition" to the new protocol"
 - Overhead
 - Soundscape group meeting to discuss proposal phase 2.
 - Input to Brett re hour allocation reduction for LRAUV proposal phase 2.
 - Post-doc review committee.
 - Out of Office
 - August 8–28: vacation (out of the country)
 - Working from home August 29-31.
- Karen Salamy
 - 200103 - Core CTD Data - MDUC
 - Weekly updates of ROV CTD QC to EXPD
 - 300057 - Mooring Maintenance
 - Weekly checks and maintenance.

I continue to work on fine-tuning various functionality of the LRAUV Dash5 UI for the team.
 - Out of Office
 - On-campus 3 days/week (**T, W, TH**).
 - Out-sick T, W.
- Brian Schlining
 - 500055 - VARS, M3/RS, DSG
 - Reviewing changes to external data embargoes and implementing them.
 - Iron Mountain video imports. We're almost done!!!!

- 902002 - FathomNet
 - [Migrating to Micronaut 4](#)
 - Meeting with WoRMs team to discuss ML image analysis and integration.
 - Meeting to review requirements for game content management system.
- 902304 - Piscivore Cam
 - Investigating issues with metadata extraction from Piscivore videos.
- Overhead
 - Proposals
- Out of Office
 - Sep 20 - Oct 13 - Working remotely
- Alana Sherman
 - 706008 - READI-net
 - Working on block diagram and components in orcad
 - 902208 - MiniROV Support
 - Conducting interviews
 - Epod wired up again
 - Testing re wired epod
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 - 902312 - Seafloor Processes
 - Meeting with cable company
 - Work on phase 2
 - Overhead
 - Phase 2 conversations
 - Out of Office
 - Working remotely weds
- George Stern