

Engineering Weekly Report 8/10/2023 - 8/17/2023

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

Executive Council Notes

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Individual Activities

- Michael Anderson
- Kevin Barnard
 - 500055 - VARS, M3/RS, DSG
 - Investigating “vars-part-ingest” bounding box quality in VARS
 - Implemented feature requests for VARS GridView
 - 901809 - Deep Sea Bioinspiration
 - Provided feedback for several intern and lab presentations
 - 902204 - Scalable Robotics
 - Continuing to investigate loop closure issues on May 2023 LASS SLAM dataset
 - DQ2209 - Ocean AI 2
 - Prepared content for FathomNet AI/MBA volunteer workshop
- Francois Cazenave
 - 901405 - PowerBuoy Development
 - Monitoring buoy
 - 902204 - Scalable Robotics
 - Designing rov sled
 - Out of Office
 - 1 day of vacation
- Danelle Cline
 - Out of Office
 - SoundCoop Workshop, Boulder, CO October 24-25 2023
- Duane Edgington
 - 500055 - VARS, M3/RS, DSG
 - Preparation for the next meeting August 23. Reviewing action items; preparation for the next round of model training and dive inference.
 - Working on fix for issue renewing training from checkpoint (device out of space error)
 - 901103 - Biodiversity and Biooptics of Zooplankton
 - Prepared collaborator agreement with Tarun Sharma (Caltech Ph.D. Student, who just finished summer 2023 MBARI internship).
 - Code walkthrough with Tarun
 - Reviewing work plan and next steps
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations, and Outreach
 - Team meeting
 - Out of Office
 - Oct 16-18 2023. Pytorch conference. SFO (in person). PDT (UTC-7)
- Jon Erickson

- Kevin Gomes
 - 200105 - Core Navigation Data - MDUC
 - Worked with IS to fix some networking issues with navproc simulation hardware (thanks Adriana!)
 - Getting going on the logr utility again.
 - 300057 - Mooring Maintenance
 - Some attention needed over the weekend as the server elvis stopped responding which interrupted downloads
 - 901915 - Improving MBARI Data Impact
 - Looking into SuperToken for an open source authentication/authorization framework ... promising.
 - Overhead
 - MiniROV DiveLog API/Application working with IS to prototype Duo/OAuth
 - MiniROV/EE Hiring activity
 - Working with Joe on an issue where ActiveState is trying to up our annual subscription by 10x in cost.
 - Working on my presentation for the Monterey Data Conference next week.
 - Out of Office
 - Aug 22-24: Monterey Data Conference, Monterey, CA
 - Aug 28-Sep 12: Vacation
- Andy Hamilton
- Kent Headley
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Helping Rob run simulations
 - 901101 - Seafloor Mapping
 - Prepped sonars with TRN software for Pacific NW cruise
 - 902204 - Scalable Robotics
 - Docker images for multibeam SLAM pipeline
 - Overhead
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- Rich Henthorn
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Efforts to get Gazebo sim running with TRN on BSC
 - 902305 - Event Detection using the Sedimentation Event Sensor
 - SES mission on MARS - reset logs and restart mission
 - 902306 - SINKER
 - Checking on new controller
 - Overhead
 - Rec Com
 - Out of Office
 - Sept 5 - 7: Remote work, PDT
- Brett Hobson
- Irene Hu
- Scott Jensen
 - Out of Office
 - Vacation Aug 28- sept 1
- Brent Jones
 - 901502 - Passive Acoustic Sensing
 - Processing Wire Walker hydrophone data
 - 901805 - Coastal Biogeochemical Sensing Program

- Monitoring spray 34
 - Adding more tracking capability to WG
- Overhead
 - Hacking smbus on Dorado batts so they will work in M1 cell test
- Chad Kecz
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - Out of Office
 - 08/02 - 08/06 (EDT)
 - 08/06 - 08/09 (PDT)
 - 08/14 - 08/18 (PDT - vacation)
 - 09/26 - 10/04 (EDT)
- Denis Klimov
- Eric Martin
 - 300079 - DMO Divisional Support - Rachel Carson
 - Exail meeting on INS options
 - 901206 - Coastal Profiling Float
 - Tank tests going well. Collecting sleep data.
 - 901911 - ROVVR
 - Final presentations last week with Shovan, cleaning up the lab
 - 902204 - Scalable Robotics
 - Sprint 15 underway. Lots of work getting the sled in production.
 - Wiring drawings
 - PM work on 2024 budgeting.
 - Out of Office
 - Missed Monday due to flight delays on my return from vacation.
- Thom Maughan
 - 300078 - DMO Divisional Support - AUV
 - Discussed the scope of the planned work with Erik.
 - 300083 - DMO Divisional Support - LRAUV
 - LRAUV BatMan charger testing. Erik's design is working great so far. Using the old and throw away batteries from the LRAUV lab. Basic charge monitoring is in place. Working to understand and implement the more advanced features on the boards.
 - 901009 - CANON
 - Meeting with bio-informatics squad has been delayed due to Covid.
 - 901805 - Coastal Biogeochemical Sensing Program
 - Wirewalker bug investigation. No need for a point release, the fix will be rolled up in the end of August release.
 - Loaded code on the new nanoFET, ran some quick tests.
 - 902004 - Planktivore
 - Both Planktivore V1 and V2 passed the pressure test in Port Hueneme.
 - LED board hardware design updated and ready to send out for fab.
 - Planktivore+Ahi GoToSea weekly meeting setup - goal is mid-Sep deployment
 - Received the 'Plankti-Shell' from Elkhorn, looks good. Will test fit when paint is fully cured.
 - Met with Jim Barry regarding next years Coral deployment. The request is early in the year so am working to eval the state of the Deep BRS battery.
 - Overhead

- DMO Support Ventana. Support DJ getting Ventana Ground Fault Xojjo app up and running. Found a number of problems on my Wago stack. Working on another Xojjo App to control the FOMicro modbus board.
 - Out of Office
 - Vacation Sep 27 - Oct 2 Ohio
 - Vacation Oct 12 - 18 Nevada Eclipse
- Mike McCann
 - 500055 - VARS, M3/RS, DSG
 - Adjust regex in vfbydive to parse new naming using fractional seconds for framegrabs
 - 901009 - CANON
 - Renewed Matlab license on elvis so that it no longer needed a reboot every few days
 - 901221 - Midwater Time Series
 - Reprocessed i2map data to get the latest auv-python goodness in [stogs_all_i2map](#)
 - 901910 - Plankton Taxonomic Groups from AUVs
 - Found problem with extrapolation with interp1d() in auv-python
 - Fixing remaining data quality issues before reloading [stogs_all_dorado](#)
 - Overhead
 - Attended CSUMB Capstone presentations last Saturday
 - Agreed to mentor CD/CD students in the Fall with an Expd Database modernization project
 - Out of Office
 - 17 August: Vacation
 - 12-20 September: Vacation
 - 9-11 October: Web3D 2023 Conference
- Rob McEwen
 - Out of Office
 - First two weeks of August.
- Paul McGill
 - 701147 - MARS O&M IV
 - Working with Knute to get UW subaward refunded to make up for shortfall.
 - Called Kandy Binkley at NSF to keep her in the loop.
 - 902304 - Piscivore Cam
 - Troubleshooting issue with last deployment where one of the cameras stopped recording part way through each day. We'll build a new camera module in case the old one has an intermittent failure.
 - 902305 - Event Detection using the Sedimentation Event Sensor
 - Finally resurrected Snappy TNG after tracking down an obscure error with the Timer1 asynchronous mode. Also corrected bug in Microchip's MCC-generated code.
- Enoch Nicholson
 - 706008 - READI-net
 - Sampler prototype built & troubleshooting
 - Out of Office
 - AAUS Class
- Tom O'Reilly
- Mike Risi
 - Out of Office
 - Out of office on Fridays
 - May 30 - June 6
 - August 21
- Paul Roberts
 - 701164 - SnoCam+ Research

- Status update meeting
- 901904.99 - Corral Camera System
 - Software eval and updates on lab system
- 902204 - Scalable Robotics
 - PoE Interface bench testing
 - Wider laser line generator
 - HSI refactor planning
- 902306 - SINKER
 - Battery pack modeling
 - Housing drawings
- Brent Roman
 - 771131 - Great Lakes PCM/HAB
 - Supported 3 ESPs deployed in the Lake Erie
 - Including first deployment on autonomous boat
 - 901205 - ESP SURF Center
 - Improved PID pressure servo to better cope with 3G ESP's pump pulsations
 - Coding enhancements to support new Function 3G ESP cartridges
 - 901913 - Wet Wifi
 - With Bret Hobson, designed experiment to test wetWiFi link to LRAUV loitering under Paragon
 - Out of Office
 - Aug 21 - Sept 1 (Aug 24 - Sept 31 off the net in the Grand Canyon)
- Carlos Rueda
 - Out of Office
 - July 21: sick
 - August 8–28: vacation (out of the country)
- Karen Salamy
 - 200103 - Core CTD Data - MDUC
 - Updating weekly ROV CTD-QC edits into the EXPD for Ed P.
 - 300057 - Mooring Maintenance
 - Weekly maintenance and operational checks
 - 902101 - LRAUV Technology Development and Fleet Operations
 - Worked with Jim J. to finally get the GoogleMapsApiKey to work smoothly in Dash5
 - Now have elevation working
 - Now have split-view pane between map and vehicle control working
 - Currently working on react-leaflet-measure code refactoring
 - Overhead
 - Continue to try and setup my new laptop before turning in my old one to IS
 - Spoke with Mike M. about setting up a requirements list for his class at Capstone. He will suggest they design and build a new UI similar to the one that we will take on for the new EXPD web UI at MBARI. This will allow new ideas from the students. Actually, a great innovative idea on how to approach the new EXPD web Form.
 - Out of Office
 - On-campus 3 days/week (**T, W, TH**).
- Brian Schlining
 - Out of Office
 - Jul 28 - Aug 6 - Vacation



- Aug 14 - 17 - Vacation
- Aug 21 - 22 - Vacation
- Alana Sherman
 - 706008 - READI-net
 - Working on block diagram of system
 - Looking for solenoid driver with higher startup current capacity
 - 902208 - MiniROV Support
 - Met with scalable robotics group to discuss new sled
 - Reviewed fiber connections and energy budgets
 - Going to load test Aux +415V circuit this week, as well as test fiber upgrade port
 - Overhead
 - One zoom interview this week for ASOE position
 - Hiring committee meeting for DMO position
- George Stern