

Engineering Weekly Report 9/21/2023 - 9/28/2023

<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
 - Fixed IPv4/IPv6 UDP socket issue in Sharktopoda client library
 - Implemented feature requests in VARS GridView
 - Handle annotations made on different-resolution source video
 - Refit image detail view on ROI selection change
 - 902204 - Scalable Robotics
 - Implemented visual loop closure multi-candidate registration
 - DQ2209 - Ocean AI 2
 - Ran OVAI Programmer Working Group meetings
 - Gave OVAI-wide FathomNet product update
 - Overhead
 - Raben focus group
 - Out of Office
 - CSIRO: Oct 20, 2023 – Nov 5, 2023
- Francois Cazenave
 - 901221 - Midwater Time Series
 - Brainstorming on towing plan
 - 901405 - PowerBuoy Development
 - Monitoring buoy
 - 902106 - Niobicon-Based AUV Docking Development
 - Assembling mooring
 - 902204 - Scalable Robotics
 - Assembling sled
- Danelle Cline
 - Out of Office
 - SoundCoop Workshop, Boulder, CO October 24-25 2023
- Duane Edgington
 - 500055 - VARS, M3/RS, DSG
 - Continued work on VARS-ML-SE tasks. Finished testing of flags/parameters AWS. With Danelle, testing of docker service on Olivia local machine.
 - Out of Office
 - Oct 11-13 2023. virtual conference on Generative AI. PDT (UTC-7)
 - Oct 16-18 2023. Pytorch conference. SFO (in person). PDT (UTC-7)
- Jon Erickson
- Kevin Gomes

- 200105 - Core Navigation Data - MDUC
 - Working on message bridging from navproc once log writing complete
 - Investigating OpenRVDAS as possible consumer of lcm bridge
- Overhead
 - Quarter 4 group check ins
 - Met with cyber security contractor
- Andy Hamilton
- Kent Headley
- Rich Henthorn
 - 300078 - DMO Divisional Support - AUV
 - Met with team to discuss OTH comms
 - How the Dorado system may be modified for remote missions
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Running gazebo simulation with TRN
 - 902306 - SINKER
 - Programming camera board with integrated Moteino M0
 - Issues programming after burning bootloader
 - Out of Office
 - Sep 27 (today): Afternoon only for appointment
 - Oct 16 - 19: Remote work, PDT
 - Dec 18 - 28: Holidays
- Brett Hobson
- Irene Hu
 - 901805 - Coastal Biogeochemical Sensing Program
 - Packing for KAUST trip and last minute parts modifications
 - Figured out how to rewire ADV harness for two-connector endbell; tools, pins, etc on order
 - Chat w/ Peter Berg
 - Overhead
 - Rec comm BBQ
- Scott Jensen
 - 708178 - Marine E Development NAV
 - Received plate and beginning to evaluate
 - 901205 - ESP SURF Center
 - Preparing for Sampling meeting on Oct 10-12
 - Overhead
 - Interviews for E-Tech
 - Out of Office
 - Family leave
- Brent Jones
 - Out of Office
 - Sick leave
- Chad Keczy
 - 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
 - 901112 - Monterey Bay Time Series

- Looks like McLane is going to ship parts for IFCB repair this week
- 902101 - LRAUV Technology Development and Fleet Operations
 - PAR sensor debugging on AHL, turned out it was the control analog card, not the sensor. Once the board was configured, the PAR channel started working. We might have to look at calibrating this unit once the vehicle is back.
- Overhead
 - Lab B232 configuration is well underway. We are looking at configuring the rest of the shelving on the left side of the lab before the other projects move-in.
- Eric Martin
- Thom Maughan
 - Out of Office
 - Vacation Sep 27 - Oct 2 Ohio.
 - Vacation Oct 12 - 18 Nevada Eclipse
 - Jan 9 - 12 CES
 - Feb 18 - 23 OSM24
- Mike McCann
 - 300083 - DMO Divisional Support - LRAUV
 - Making progress on simulation animation in STOQS – plan to present at [Web3D Conference](#)
 - 901221 - Midwater Time Series
 - Verified that September's i2map mission was automatically processed into stoqs_all_i2map
 - Overhead
 - Mentored Expd Modernization project capstone teams
 - Provided feedback for Expd Modernization project alignment with strategic roadmap
 - Out of Office
 - 29 September: Vacation
 - 9-13 October: Web3D 2023 Conference
- Rob McEwen
- Paul McGill
 - 701147 - MARS O&M IV
 - Tested serial port splitter so we have two ways to control each module in system. There are problems with it which I'm trying to solve.
 - Arranging for review of UW's design for LVPS chassis
 - 901700 - Acoustical Ocean Ecology
 - Working on PCB for new AOS PIC24 sensor
 - 902304 - Piscivore Cam
 - Prepping for this week's deployment of two cameras on LRAUV
 - 902305 - Event Detection using the Sedimentation Event Sensor
 - Negotiated reasonable cost for NRE to modify Gen3 controller for remote triggering
 - Overhead
 - Reading resumes and interviewing candidates for electronics assembler position
- Enoch Nicholson
 - 706008 - READI-net
 - Continued sampler 1 & 2 build / test
- 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
 - Mini PoE integration
 - Optim camera software
 - 902204 - Scalable Robotics
 - Mini PoE integration
 - 902306 - SINKER
 - Sediment camera chassis and optics
- Brent Roman
 - 901205 - ESP SURF Center
 - Optimized PID gains for improved pressure control in the face of pump pulsations
 - 901913 - Wet Wifi
 - Successfully connected to LRAUV galene @30m depth from Paragon
 - Reconfigured router so it would work without an upstream internet connection
 - Added forwarding rules to access backseat computer more conveniently
 - Built cable to bypass modems for (dry) lab tests

Carlos Rueda

- 901502 - Passive Acoustic Sensing
 - Adjustments to [PBP](#) software
- 902101 - LRAUV Technology Development and Fleet Operations
 - [TethysL](#) significant updates (now [v3.0.3](#)). Very productive session with Yanwu, including a complete migration exercise going over the main steps in general. Thank you, Yanwu!
 - TethysDash/dash4 updates as usual. Trying to revisit the modernization goal and see what could be advanced this year.
 - Some assistance to Karen re Dash5.
- 902204 - Scalable Robotics
 - Set up CompasWebUi on Atuncita: pretty straightforward: just installed/config'ed apache, and launched the services with the usual docker-compose.
- Overhead
 - DEIA
 - Tentatively exploring Fathomnet tasks for possible effort dedication this year
 - Addressed vulnerabilities in two repos, reported by Dependabot
 - ACM TechTalk
 - IE mtg – one more cybersecurity (preliminary) discussion. Some input to “change” document.
- Out of Office
 - ~~Oct 23–27: GOTO Chicago~~ (event has been postponed!)
 - Nov 20–22: vacation
- Karen Salamy
 - 200103 - Core CTD Data - MDUC
 - Awaiting updates from Ed P.
 - 300057 - Mooring Maintenance
 - Still working with Francisco and his group to try and get OA1 back on line.

I continue to work on fine-tuning various functionality of the LRAUV Dash5 UI for the team. The use of the MBARI Google API Key in Dash5 to display Google Maps has initiated my editing the new code on TethysDash2 as the API key will NOT work on a localhost connection. Access to these maps is important as I am currently working on personal edits to a newly developed React Measuring Tool plugin for Dash5.
 - Overhead
 - Spending time working through online React 18+ tutorials.
 - Out of Office

- On-campus 3 days/week (**T, W, TH**).
 - I will be out this coming Monday (September 25) on personal leave.
 - I have been called for jury duty for the week of October 2-6 and will send a note should I be chosen to serve on a trial during that week.
- Brian Schlining
 - 500055 - VARS, M3/RS, DSG
 - Looking into dropping use of web frameworks for front end development of the DSG. Doing testing and research using web components, and straight javascript/html/css.
 - Iron Mountain video imports. We're almost done!!!! Except for a few problem tapes, all ROV video tapes have been converted to video files and registered in our video asset manager.
 - 901221 - Midwater Time Series
 - Added video resolutions in the video asset manager for i2MAP videos records that were missing those.
 - Ported some [midwater transect analysis apps](#) from the old VARS database to the current M3 db.
 - 902308 - M3/VARS for the Masses
 - The video asset manager, vampire-squid, is being updated to address some performance issues, remove outdated frameworks, and add openapi docs. The in-progress branch is [feature/vars4m](#).
 - DQ2209 - Ocean AI 2
 - Pushed VARS data to FathomNet; the most recent push was about 24,000 images.
 - Fix to a newly introduced bug that caused requests for data pages to drop the `totalCount` field.
 - Having discussions with NOAA about the proposed [data hosting pipeline](#) for FathomNet
 - Overhead
 - Attended NOAA's online machine learning workshop.
 - Out of Office
 - Sep 20 - Oct 13 - Working remotely
 - Bumped into Kurt Buck at the Port Angeles farmer's market.
- Alana Sherman
 - 902208 - MiniROV Support
 - Continuing testing and prep for upcoming Fulmar cruise
 - Overhead
 - Working on new hire details for miniROV position
 - Out of Office
 - Was out sick Friday and used a vacation day on Monday
- George Stern