

Engineering Weekly Report 8/31/2023 - 9/7/2023

<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
 - 902002 - FathomNet
 - Provided D1376 video and bounding box annotations to University of Washington CS department for evaluation of VOCALExplore on VARS data
 - 902204 - Scalable Robotics
 - Completed investigation of visual loop closure issues
 - Straightened out branches in several GIM SLAM-related repositories
 - DQ2209 - Ocean AI 2
 - Described greenfield development tasks for FathomVerse Content Management System (CMS)
- Francois Cazenave
 - 901221 - Midwater Time Series
 - Brainstorming on new towing method
 - 901405 - PowerBuoy Development
 - Monitoring buoy
 - Ordering new cables
 - 902106 - Niobicon-Based AUV Docking Development
 - Preparing upcoming deployment
 - 902204 - Scalable Robotics
 - Assembling ROV sled
 - Checked stereo camera housing 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
 - Continued work on VARS-ML-SE-tasks action items, and testing
 - Team meeting Aug 30
 - 901103 - Biodiversity and Biooptics of Zooplankton
 - Preparation for training a model

- Testing scripts after code refactor
- 901502 - Passive Acoustic Sensing
 - Meet with Scott Viers of Orcasound, along with rest of 901502 team, Monday Sept 11
- 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
 - 901217 - Chemical Sensor Program
 - Rev. 4 circuit board changes for APEX-ISIS spectrometer.
 - 901805 - Coastal Biogeochemical Sensing Program
 - Parts for nanoFET 1000m housings
 - 902010 - Mesopelagic LRAUV
 - Waiting on the new thruster motor, driving the design for the Rear Dome Motor tube.
 - 902101 - LRAUV Technology Development and Fleet Operations
 - New radio bracket assembly for the new cradlepoint radio.
- Kevin Gomes
 - Out of Office
 - Aug 22-24: Monterey Data Conference, Monterey, CA
 - Aug 28-Sep 12: Vacation
- Andy Hamilton
- Kent Headley
 - 300078 - DMO Divisional Support - AUV
 - working on Dorado Linux port
 - QNX serial and USB drivers related to Iridium comms for Jan 2024 dorado tow-out missions
 - 500055 - VARS, M3/RS, DSG
 - meet w/ Brian Schliniing to test updates to BlackMagic video capture drivers
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Working with Rob to wrap up MB-System TRN in simulation loop
 - 901101 - Seafloor Mapping
 - Troubleshooting run-time errors in MB-System Docker images
 - Overhead
 - AOSE, EE-MiniROV interviews
 - SE-EAD application review
 - Phase 2 resource balancing meetings
 - Cawthron visit 9/11 week
- Rich Henthorn
 - 300078 - DMO Divisional Support - AUV
 - Porting various modules and drivers preparing for hardware testing
 - CTD instruments, dvl, adaptive sampler, LOPC, CARL
 - 902305 - Event Detection using the Sedimentation Event Sensor
 - Reviewing recent MARS data
 - Out of Office
 - Sept 5 - 7: Remote work, PDT
- Brett Hobson
- Irene Hu
 - Out of Office
 - Sept 4-8: vacation
- Scott Jensen
 - Out of Office
 - Vacation Aug 28- sept 1

- Brent Jones
 - 901502 - Passive Acoustic Sensing
 - Looking at clock skew between hydrophone and RBR logger
 - 902101 - LRAUV Technology Development and Fleet Operations
 - Processing navigation data trying to figure out why packets are being dropped
 - Out of Office
 - Sick leave
- Chad Keycy
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - 300082 - DMO Divisional Support - Wave Glider
 - Launched WG Hansen Friday and support blue whale observatory run on Paragon
 - 300083 - DMO Divisional Support - LRAUV
 - Supporting MBTS run this coming week
 - 901513 - Targeted Sampling by AUVs
 - Helping Yanwu with some build issues
 - Paper review
 - 902101 - LRAUV Technology Development and Fleet Operations
 - Diagnosing issues with acoustics data on Triton. Shutdown command, critical restarts, hwinfo logging, wireshark logging
 - Fixed logging messages and stop timing in backseat component
 - 706007 Great Lakes
 - Prepping for Triton/Makai launch
 - Lots of debug on Triton ibase bioacc computer
 - Overhead
 - Tech xfer questions for upcoming commercial release. Dev tools list, repos, etc.
 - Prep for Oceans with video lab, etc
 - Budget xfer for UX work
 - Out of Office
 - 09/18-09/21 (EDT)
 - 09/25 - 09/29 (EDT)
- Denis Klimov
- Eric Martin
 - 901101 - Seafloor Mapping
 - Kearfott, Paro and DVL Drivers
 - Helping Chad finish electronics tests
 - 901206 - Coastal Profiling Float
 - Finished sleep on anchor, Gene in data processing mode.
 - 901911 - ROVVR
 - Spinning up the Harvey Mudd Team
 - 902012 - Telepresence
 - Paper edits, due october
 - 902204 - Scalable Robotics
 - ASV payload
 - Mini Sled chassis
 - OSM Abstract Draft
 - Overhead
 - Interview last week for MIni
 - SEE-DA resume review

- Thom Maughan
 - 300083 - DMO Divisional Support - LRAUV
 - Working on port expander driver and charge termination
 - Tested charger response to low batteries.
 - 901009 - CANON
 - Meeting with ocean omics team to go over near term plans for server setup and to understand their concerns.
 - Working with IS on backups, permissions, security patches for the deepednas
 - MBON Master software install 'forensics'
 - Discussions
 - 901805 - Coastal Biogeochemical Sensing Program
 - Pressure calibration coefficient manual entry is complete and ready for review. The user can copy from excel and paste into Teraterm. Working on file import.
 - 902004 - Planktivore
 - Working on abstract for ocean sciences in Feb.
 - Bench test has been running for days. Plan is for housing to be closed this week and Planktivore V2 to be relocated to LRAUV lab.
 - Reviewing the deep brs battery design and battery safety checklist.
 - Out of Office
 - Vacation Sep 27 - Oct 2 Ohio.
 - Vacation Oct 12 - 18 Nevada Eclipse
- Mike McCann
 - 300078 - DMO Divisional Support - AUV
 - Updated auv-python code to use Python 3.11 on new computer
 - 300083 - DMO Divisional Support - LRAUV
 - Fixed loading of [stoqs_greatlakes2023](#)
 - Overhead
 - Revised Expd Modernization Requirements for capstone document based on group input
 - Met with CSUMB students about their Expd Modernization projects – they're excited about it!
 - Out of Office
 - 12-20 September: Vacation
 - 29 September: Vacation
 - 9-11 October: Web3D 2023 Conference
- Rob McEwen
- Paul McGill
 - Out of Office
 - On vacation until Sep 6
- Enoch Nicholson
 - 706008 - READI-net
 - Updated printed parts.
 - 902306 - SINKER
 - Housing A drawing package complete & submitted.
 - Overhead
 - Striver VTOL harness repair.
- 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
 - Assisting with minions camera development
 - 901904.99 - Corral Camera System
 - Planning for design review and lab system testing
 - 902004 - Planktivore
 - integration on LRAUV
 - 902204 - Scalable Robotics
 - PoE can pressure test
 - HSI concept modeling and OSM abstract
 - 902306 - SINKER
 - chassis modeling and optics mounts
 - Out of Office
 - Sept. 1 (China Peak CES)
- Brent Roman
 - Out of Office
 - Aug 21 - Sept 1 (Aug 24 - Sept 31 off the net in the Grand Canyon)
- Carlos Rueda
 - 901101 - Seafloor Mapping
 - Revisiting MB-system docker (looking into OpenGL related issues on macos)
 - 901513 - Targeted Sampling by AUVs
 - Possibly new tracking exercise by early October
 - 902101 - LRAUV Technology Development and Fleet Operations
 - TethysL is now [2.9.93](#). Since 2.9.0, significant release for users with no access to the lrauv-application codebase but still needing the latest information (from master or other relevant branch/git reference) for mission validation.
 - TethysDash system is now [4.53.0](#).
 - Overhead
 - Input to Mike M. re capstone student project / EXPD modernization proposal.
 - Postdoc review mtg.
 - LLM class, review of materials (potential application for MBARI projects).
 - Transfer of hours from project 300078 to 902204 confirmed (thanks Mandy).
 - Out of Office
 - Oct 2–4: [QCon](#) (tentative)
 - Nov 20–22: vacation
- Karen Salamy
 - 300057 - Mooring Maintenance
 - Weekly data download checks and maintenance
 - 901101 - Seafloor Mapping
 - Spoke with Mike M regarding the Capstone student project to aid in the new EXPD development.

I continue to work on fine-tuning various functionality of the LRAUV Dash5 UI for the team.
 - Overhead
 - Returning my old computer to IS today. Cleaning up various files and folders.
 - Out of Office
 - On-campus 3 days/week (**T, W, TH**).
 - On vacation Tuesday of this week.
- Brian Schlining
 - 500055 - VARS, M3/RS, DSG

- Still working through [embargo issues](#)
 - Iron Mountain video imports
- 902002 - FathomNet
 - [Upgraded back end from Micronaut 3 to 4.](#)
- Overhead
 - Phase 2 resource leveling
- Out of Office
 - Sep 20 - Oct 13 - Working remotely
- Alana Sherman
 - Out of Office
 - Working remotely weds
- George Stern