

Engineering Weekly Report 8/29/2024 - 9/5/2024

Engineering Weekly Report

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

Executive Council Notes

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Individual Activities

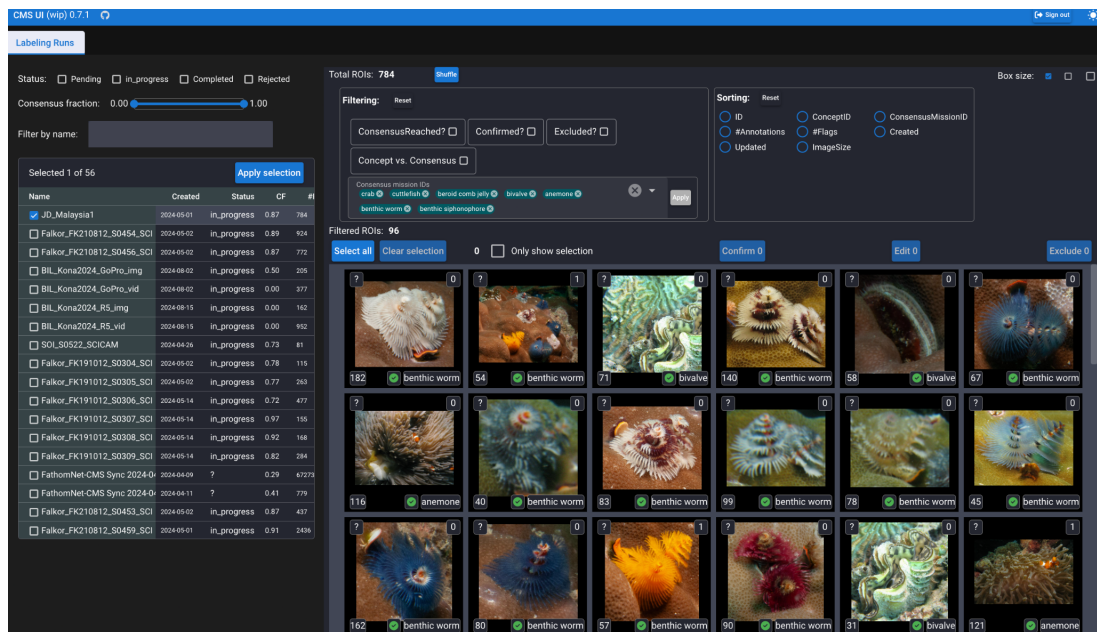
- Michael Anderson
- Kevin Barnard
 - Out of Office
 - MBARI Open House comp day Jul 19, 2024
- Francois Cazenave
 - 902106 - Niobicon-Based AUV Docking Development
 - Power transfer device assembly
 - Project management
 - 902204 - Scalable Robotics
 - ROV sled assembly
- Danelle Cline
 - Out of Office
 - September 24/25 NOAA SoundCoop workshop Boulder, CO
 - Oct 7-10 - 5th Marine Imaging Workshop in Monterey
- Duane Edgington
 - 500055 - VARS, M3/RS, DSG
 - Researching literature on MOT tracking metrics (especially underwater/drone applications), as tasked by the team
 - 901502 - Ocean Soundscape
 - Looking at Orcasound code base (training pytorch models)
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Working session on UAVS next steps
 - 902111 - Carbon Flux Ecology
 - Working session on aidata tool
 - Out of Office
 - Oct 21 - Nov 8, 2024. Vacation UTC+1
 - Dec 8 - Dec 17, 2024. [Neurips](#) Conference. Vancouver, BC.
- Jon Erickson
- Kevin Gomes
 - 200105 - Core Navigation - MDUC
 - More work on InfluxDB
 - Working with DMO to spec terminal servers
 - Bi-weekly network meeting
 - 706008 - READI-Net

- Working through Terraform documentation to familiarize myself with it so I can document the software stack created by Big Bad Wolf.
 - 902403 - Expedition DB Modern
 - Meeting
 - Digging into source code locations to compile list of all client software
 - Overhead
 - Proposal review process and feedback
 - Back and forth with NVIDIA
 - Back and forth with AWS
 - Back and forth with Oracle
 - Out of Office
 - Sep 16: Vacation
 - Oct 7-11: Vacation
- Andy Hamilton
- Kent Headley
 - 901101 - Seafloor Mapping
 - There may be an opportunity to use multibeam data from the LASS cruise for TRN
 - 902204 - Scalable Robotics
 - Tested Oculus Sonar GUI and driver during LASS cruise. Found/fixed a few issues, and continue to add features.
 - Collected several data sets using both the Oculus ViewPoint and MBARI drivers that will be used to evaluate sonar performance and compare to Tritech Gemini
 - Overhead
 - McEwen exit summary review and office clean out
 - Staffing
 - Misc admin
 - Out of Office
 - 10/10-17 Vacation
- Rich Henthorn
 - Out of Office
 - Sick leave, WFH Aug 14 - 22
 - Aug 26 - Sep 11: Vacation
- Akshay Hinduja
 - 902204 - Scalable Robotics
 - Go through initial process familiarity with Eric
 - Get requirements for Norbit driver after discussion with Giancarlo
 - Work on initial architecture design for driver
 - 902101 - LRAUV Technology Development
 - Received desktop from IS to retry docker as laptop GPU gave compatibility issues.
 - Out of Office
 - WFH 9/4/2024
- Brett Hobson
- Irene Hu
 - 901217 - Chemical Sensors
 - Aadu's visit from UW
 - MSC3 design review and ensuing changes to baseboard and Tiva module - now in layout
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - System testing as it gets built
 - Out of Office

- Sept 4-?: out sick
 - Sept 16, 18: planned Carson day
 - Sept 23-Oct 2: potential OCEANS
- Scott Jensen
 - 300078 - DMO Support - AUV
 - Working on transformer for logic power of the drive
 - Located core
 - 706008 - READI-Net
 - Checked out latest instrument build
 - Updated clamp function with a calibrate mode
 - 901205 - ESP SURF Center
 - Troubleshooting a faulty pressure sensor
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Trip planning to battery show
 - Out of Office
 - September 16-20
 - October 7-9
- Brent Jones
- Chad Key
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - Out of Office
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- Denis Klimov
 - 902004 - Planktivore
 - Ordered and received the Subconn components for the battery pack modification for the upcoming Planktivore deployment, including 8-pin bulkhead and straight 8-pin cables, for the cross-compatibility with other Planktivore hardware and wiring. Figuring out the pack state and re-wiring for a new configuration.
 - 902401 - Geo-Sense
 - We are trying to figure out configuration for test cable(s) for the DAS system; including possibly using thin test cable to do some in-situ measurements at the beach or the slough. The issue for now is to get the optical fiber in the tight buffer with same specs as the fiber in the cable assembly which is on order from Winchester Interconnect.
- Eric Martin
 - 901101 - Seafloor Mapping
 - Offshore last week went well, a few minor items to improve on.
 - 901911 - ROVVR
 - Another offshore use day on the Carson 9/4. Installation and reliability were greatly improved from the day I took offshore a week ago.
 - 902204 - Scalable Robotics
 - Offshore with LASS last week.
 - Out of Office
 - Vacation this week.
- Thom Maughan
 - 300083 - DMO Support - LRAUV
 - Working with Varsha
 - 901009 - CANON
 - Attended planning meeting

- 901217 - Chemical Sensors
 - Inrush measurements, finalizing revA board bringup
 - Inputs to MSC3 revB hardware. Attended Irene's design review
 - Meetings with Aadu from UW. Setup and running of float test suite, etc.
 - Line termination config for cr vs cr-lf
 - Pushing to get ISUS driver running on RevA. Ran out of code space and ram in debug build config which had been identified as a risk using tm4c123g processor. Tm4c129 code compatible variant strongly suggested.
- 902004 - Planktivore
 - Plankton Proxies deployment. Minimal involvement
 - Working with Denis on Barry lab Planktivore v1 deployment. Date changed from Sep 16 to first week on Oct.
- Out of Office
 - Auto accident, sick day Aug 27.
 - Oct/Nov two to three weeks vacation Colorado.
- Mike McCann
 - 902403 - Expedition DB Modern
 - Continuing to work on Postcruise process in the expd-django project
 - Struggling a bit with replacing "normal" ORM create functionality with a legacy stored procedure
 - Overhead
 - Inbox flooded again with thousands of 2022 rcsn logr file datatransfer failed messages
 - Out of Office
 - 25-27 September 2024: Web3D Conference
 - 30 September - 3 October 2024: Vacation
- Rob McEwen
- Paul McGill
 - Out of Office
 - Took vacation day Fri
- Enoch Nicholson
 - 706008 - READI-Net
 - FIDO Beta Builds
 - 901007 - Benthic Biology & Ecology
 - Tap water testing
 - 902306 - SINKER
 - Frame detail drawings
 - Maxon Motor job submission
 - 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 4-5 Vacation
 - September 19-24 Vacation (Available via Slack & Email)
- Tom O'Reilly
- Mike Risi
 - 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
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - System assembly and testing for Sept. 16 deployment
 - 902001 - Ventana 4k Camera
 - System assembly and testing
 - 902004 - Planktivore
 - Deployment support
 - Data access for RIMS
 - 902306 - SINKER
 - Assembly of shadowgraph system
 - Out of Office
 - Aug. 30 2024 - CES China Peak
- Brent Roman
 - 708165 - NOAA-MERHAB-UW
 - Investigating improved JPEG-XL image compression as a means of reducing satcoms costs in Iridium deployments
 - 901205 - ESP SURF Center
 - Working with Nadia to understand why sampling pump pressure sensor is sometimes failing to tare
- Carlos Rueda
 - 701165 - OVAI P2
 - CMS UI is now [0.7.2](#). Giovanna is starting to get familiar with the revamped version, which now uses the actual CMS API.



- 901502 - Ocean Soundscape
 - PBP work. Merged contributed PRs. [mbari-pbp](#) now 1.4.4.
- 902204 - Scalable Robotics
 - Resuming Dial work.
 - Discussions with Kevin B. to start integrating notifications from his “control server” into Dial.
- Overhead
 - GO-BGC/SOCCOM database kickoff mtg.
 - Addressed dependabot alerts in various code repositories.

- IE group mtg. (thanks Mike for the brown-bag on django crispy)
 - Out of Office
 - TBD a week or so in Sept: vacation
- Karen Salamy
 - 200103 - Core CTD Data - MDUC
 - Awaiting updates from Rob Sherlock since Ed Peltzer's retirement.
 - 300057 - Mooring Maintenance
 - Weekly check on data downloads
 - 902101 - LRAUV Technology Development
 - Worked this week to continue various code upgrades for the LRAUV Dash5 UI
 - Overhead
 - Caught up on tons of email from while I was on vacation.
 - Out of Office
 - Returned from a long week of personal vacation with family.
 - US React Summit Conference: November 19-24, 2024, NYC.
 - On-campus 3 days/week (**T, W, TH**).
- Brian Schlining
 - 902403 - Expedition DB Modern
 - Starting work on a refactored/modernized/simplified database schema.
 - 902404 - 5th Marine Imaging Workshop
 - Lots of behind the scenes for the workshop.
 - Out of Office
 - Sep 5-9 - Vacation
 - Oct 7-10 - 5th Marine Imaging Workshop in Monterey
- Alana Sherman
 - 902208 - Mini ROV Operations
 - Trying to get ship scheduling finalized with the Fulmar, now that they are back online. I am waiting to hear from the Aquarium
 - 902401 - Geo-Sense
 - Trying to resolve our budgetary issues
 - Discussed alternate deployment on Rachel Carson with the team
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 - 901205 - ESP/Readinet
 - Reviewed layout with Scott and James
 - Making a few small changes and caught a couple issues
 - Overhead
 - The Engr group leads finished the second meeting for Phase 1 proposals, there was a lot to untangle between ship time and labor but there seems a viable path forward
- George Stern
 - 902204 - Scalable Robotics
 - Completed cable and housing wiring schematics
 - Light bar assembly and housing/cabling build support
 - Began laser fixturing design
- Justin Tucker
 - Overhead
 - Build out of ASME minimum nonlinear material models for 316 stainless steel.
 - Finishing up Ricketts lifting assembly analysis and suggestions
- Johann Voigtlander
 - 902204 - Scalable Robotics
 - Purchased and built up WBMS cable for Norbit -> Bluetrail bulkhead

- Installed 24V power supply
- Installed and configured 24V relay
- 902208 - Mini ROV Operations
 - Swapped Mink10 short to Mink10 long on benthic serial can
 - Rewired benthic can to support 24V input
 - Installed ethernet switch in benthic can
 - Rewired all fiber connections in the control van
 - Replaced broken switch in manipulator joystick
 - Started RMA process for winch level wind motor which had broken pins on delivery
 - Tested new DSP&L HD Multi SeaCam
- 902402 - CSEM
 - Wrote up SWAN deployment and recovery procedure for permit
 - Organized line replacement of frayed rope
 - Ongoing communications with R.V. Fulmar, R.V. Shana Rae, and R.V. John Martin for CSEM cruise later this year.
- Out of Office
 - April 16th - May 7th Germany CSEM
 - May 8th - May 12th Vacation