

# Engineering Weekly Report 7/21/2022 - 7/28/2022

## Executive Council Notes

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## Individual Activities

- Michael Anderson
- Kevin Barnard
  - 200103 - Core CTD Data - MDUC
    - Caught up on Ventana and Doc Ricketts O2 QC
    - Investigated issue with Ventana 4401 missing CTD data on upcast
  - 902204 - Scalable Marine Robotics Foundations
    - Continued development of stereo camera calibration library
    - Implemented stereo motion estimator via point cloud registration of triangulated matched keypoints
    - Workshop with GIM re: Stella VSLAM + IMU integration
  - Out of Office
    - Marine Imaging workshop Oct 3 - 7 2022 CEST Brest, France (GMT+2)
- Francois Cazenave
- Danelle Cline
  - Out of Office
    - Marine Imaging workshop 3 - 7 Oct 2022 CEST Brest, France (GMT+2)
    - Vacation July 7-28th, back in August. 1st.
- Duane Edgington
  - 901502 - Soundscape Research and Education
    - Continued work on Alexa Skill
  - 902005 - VARS Annotation Assistance
    - Continued work with intern Manuel Gozzi. He is working on final report and presentation.
  - Out of Office
    - Alexa Live 2022 (virtual) July 20. PDT
    - Registered for Monterey Data Conference, Aug 29 - Sep 1 2022 PDT.
    - Vacation (international) Sept 12 - Oct 1 2022
    - Marine Imaging workshop Oct 3 - 7 2022 CEST Brest, France (GMT+2)
    - Vacation (international) Oct 9 - 19 2022
    - Vacation October 21-23 2022 (Southern California)
- Jon Erickson
  - 701145 - Penguin Hotspots
    - The foam finally arrived from Ideal Instruments. Perfect fit.
    - Had to grind on the shroud parts to make them fit. Cut the tolerances too close.
  - 901805 - Coastal Biogeochemical Sensing Program
    - Working on pico-pH case/chassis/flowcell integration.
  - 901809 - Deep Sea Bioinspiration
    - Working on the multicam case/chassis.
- Kevin Gomes
  - 300057 - Mooring Maintenance

- More troubleshooting mooring data for GPS
  - Jared replaced GPS and Metsys and we are back to normal operation
- 901915 - Improving the Impact of MBARI's Data
  - As I'm working through proposals, documenting data streams for information architecture docs and possible external web pages for new website.
- Overhead
  - Proposal review
- Out of Office
  - Several sick days (Th,F,M)
  - 8/1-8/5: Vacation
  - 10/3-10/6: Vacation
- Andy Hamilton
- Kent Headley
  - Out of Office
    - July 14-29 (vacation)
- Rich Henthorn
  - Out of Office
    - July 4 - 18, WFH and vacation, email/phone/zoom, mostly available so contact encouraged
    - Aug 30 - Sep 16, vacation in Germany, email only
    - Sep 22 - 29, Sta.M Cruise (final scheduled cruise of the Western Flyer)
- Brett Hobson
- Scott Jensen
  - Out of Office
    - July 25- 29 Vacation
- Brent Jones
- Chad Keczy
- Brian Kieft
  - 706007 - USGS Great Lakes Prey Fish Assessment
    - Packed up container and it shipped today. Flying Sunday.
  - 708168 - DHS/LRAUV Under-Ice
    - Deployed LRAUV Polaris up in the Chukchi Sea for a USCG demo with WHOI. This was a new ocean for LRAUV and the highest latitude yet (>71 deg)



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- Out of Office
  - 07/31 - 08/11 (EDT) USGS
  - 08/28 - 08/31 (EDT) USGS
  - 09/12 - 09/28 (GMT+2 - vacation)
- Denis Klimov
  - 300083 - DMO Support - LRAUV

- Some work on the LRAUV battery pack 'sticks' replacement; updating serial numbers without opening repaired packs
- 800139 - EyeRIS (Remote Imaging System)
  - Reviewing battery pack redesign requirements
- Overhead
  - As Power Buoy deployment is approaching, work on IFCB and battery pack replacement will need to be ramped up in about a week. Batteries for a Power Buoy battery pack are equalized, and would be retested in several days, to check for any weak or abnormal unit, then replacement as necessary, mounting control boards, and assembling a pack once the battery box is ready.
- Diana LaScala-Gruenewald
- Eric Martin
  - Out of Office
    - July 1-31
- Thom Maughan
  - 901009 - CANON
    - Setting up Xavier NX after office move.
    - Laptop setup
  - 901805 - Coastal Biogeochemical Sensing Program
    - Updated nanofet firmware, met with Scott. It looks like it's ready for analog testing.
    - pH sensor options to replace Honeywell ISFET
  - 902004 - Planktivore
    - Migrated board sleep power supply design from a personal project for use on Camera Controller. Designed, made review slides, layed out pcb for Wakestr, RTC + Vreg + Sleep and Wake signals.
  - Overhead
    - Office move, inventory filtering.
  - Out of Office
    - 2week Vacation postponed until sometime in August.
- Mike McCann
  - Out of Office
    - 27 June - 18 July: Vacation
    - 19-22 July: ESIP Summer Meeting, Pittsburg, PA
    - 25-29 July: Vacation
- Rob McEwen
- Paul McGill
  - Out of Office
    - Was on vacation last week.
- Tom O'Reilly
- Doug Pargett
  - 901205 - SURF Center
    - Transferring G3 ESP build knowledge
    - Some final design mods to the new handoff mechanism for G3
  - Overhead
    - Cleaning and packing up office
- Ben Raanan
- Mike Risi
  - Out of Office
    - May 5 - vacation
    - May 9-10 - vacation

- June 2-8 - OI cruise
  - June 10-14 - vacation
  - June 20-22 - vacation
  - July 19-20 - vacation
  - August 8-9 - out of office
- Paul Roberts
- Brent Roman
  - Out of Office
    - July 26 through roughly August 26
- Carlos Rueda
  - 300083 - DMO Support - LRAUV
    - Took a Daphne watchstand shift.
  - 901101 - Seafloor Mapping
    - [Succeeded](#) in running the MB-System Docker on a Windows 11 laptop, including use of the graphical utilities. Dave notified the German users about this.
  - 901502 - Soundscape Research and Education
    - More data preprocessing toward applying BLED for sperm whale click detection.
  - 901513 - Targeted Sampling by Autonomous Underwater Vehicles
    - Advancing preparations for data access and commanding on the SMC-2, including tests for the former, still pending for the latter. Working on alerts and a main program.
  - 902009 - AUV User Experience Design
    - API documentation additions; exchanges with Jim J. Seems like a next discussion with the team regarding requirement clarification and next steps will be soon needed.
  - 902101 - LRAUV Technology Development and Fleet Operations
    - [New repo to create mbari/lrauv-unserialize](#), a docker image only containing the LRAUV 'unserialize' executable, which is the only piece from the LRAUV needed by TethysDash.
    - Dash system is now [4.12.0](#), with docker image now using such mbari/lrauv-unserialize base.
    - Many thanks to Tim Player for bringing up to our attention the need to improve the creation of docker images given the close nature of the source code behind lrauv-application. I already merged adjustments he has made as part of this purpose in [mbari/lrauv-docker](#). (Note that [the corresponding repo](#) at DockerHub has always been private.) I also removed \*all\* previous versions of such image at DockerHub. There's still a pending discussion to make a decision about how to handle the runtime access to some required information, including lrauv-config and lrauv-mission. One option is via volume mappings to such spaces, which would have to be provided by the user.
  - 902102 - Multi-LRAUV Simulation Environment
    - I haven't been involved in this project for a long time. In any case, I was surprised to learn that the [mbari/lrauv-ignition-sim](#) repo at DockerHub was public. Per various exchanges on [slack](#), I made it private and someone else removed all images. Thanks again Tim P. for the heads-up.
  - Overhead
    - DEI AC meeting
    - As preparation for 2023 work, I created a new [repo](#) where I'll be working on modernizing the TethysDash backend. I've selected [Quarkus](#) as the new "backbone."
- Karen Salamy
  - Out of Office
    - Vacation: August 4-5; family visiting from out of town.
- Brian Schlining
  - Out of Office
    - Jul 19 - out of office
    - Jul 25-28 Vacation

- Alana Sherman
  - Out of Office
    - On vacation 7/21-30