

Engineering Weekly Report 12/30/2021 - 1/6/2022

Executive Council Notes

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Individual Activities

- Kevin Barnard
 - 200103 - Core CTD Data - MDUC
 - Caught up on QC flags up to Doc Ricketts 1411 and Ventana 4382
 - 500055 - VARS, M3/RS, DSG
 - Started a deep dive into learning Scala 3
 - 902005 - VARS Annotation Assistance
 - Implemented several track editing features in BoxJelly
 - Figured out CloudWatch log insights for visualizing logged time series data in the AWS console
- Francois Cazenave
- Danelle Cline
- Duane Edgington
 - 901602 - Data TAG
 - Kick off this week
 - 902004 - Planktivore
 - Kick off week of Jan 10
 - 902005 - VARS Annotation Assistance
 - Continuing work on VAA testing with Danelle and Kevin B.
 - Overhead
 - Continue review of selected AWS re:Invent conference sessions: SageMaker Canvas, new g5 instances, SageMaker Studio upgrades, etc.
- Jon Erickson
 - 701145 - Penguin Hotspots
 - All the gimbal parts have arrived. Need to order hardware for assembly.
 - 901217 - Chemical Sensor Program
 - Finished two more mod's to the ISUS Spectrometer assembly.
 - Assembling an ISUS-APEX Composite pressure case for Ballast testing.
 - 902004 - Planktivore
 - Remote Batt. Pack parts are ready for Fab.
- Ben Erwin
- Kevin Gomes
 - 300057 - Mooring Maintenance
 - Some quick troubleshooting and deleting of lock file post server patching
 - 300070 - DMO Support - Ventana
 - Helping with GSS upgrades/machine issues as best I can remotely
 - 901009 - CANON
 - Researching VueJS/Quasar/Vuetify/Slack logins for eventually ODSS upgrade/migration
 - 901602 - Data TAG
 - Kicking off Data TAG efforts by sketching out what technologies we want to explore this year with the group

- 902012 - Telepresence on MBARI Research Vessels
 - Researching VueJS/Quasar/Vuetify/Slack logins for app develop
- Overhead
 - Year kick off meetings
 - Budget and hours updates
 - Performance reviews
- Out of Office
 - Currently working from home, but did get one negative PCR test so one most negative and a note from my doc and should be back in the office (shooting for next week).
- Andy Hamilton
- Kent Headley
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Code review for Irauv cooperative navigation that Rich is implementing
 - Overhead
 - Review prep
 - SRSC : reviewing material for board meeting
 - Misc admin
 - Out of Office
 - Jan 11 (jury duty, tentative)
- Rich Henthorn
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - CoNav testing and data logging
 - 901618 - Pelagic-Benthic Coupling and the Carbon Cycle
 - Benthic Rover component tank testing prep for Feb deployment
 - Overhead
 - Meetings
 - Out of Office
 - Jan 24 - 28, vacation & WFH
 - Feb 1 - 4, Sta.M Cruise
 - Feb 14 - 18, vacation & WFH
 - Sep 21 - 30, Sta.M Cruise
- Brett Hobson
- Scott Jensen
- Brent Jones
- Chad Kegy
- Brian Kieft
 - 708168 - DHS/LRAUV Under-Ice
 - Met with team to discuss Stella bring up, Norness shipwreck mission Jan 20, USCG training Jan 25/26, and March USCG/NOAA oil spill demo.
 - 800139 - EyeRIS (Remote Imaging System)
 - Fixed an acomms issue prior to deployment in the mission. Pictures of fishes were finally transferred to shore via Waveglider
 - 901009 - CANON
 - Assisted with MBTS daphne deployment. Configured new GPCTD and adjusted some checklists for operators. Loaded master on daphne for this run.
 - 901618 - Pelagic-Benthic Coupling and the Carbon Cycle
 - Worked with Denis to establish acomms on the bench for BEDs FQT.
 - 902009 - AUV User Experience Design

- New PO invoice. Answering some basic questions and getting together a new group of interview candidates from our collaborators. Good feedback was received from the end of last year and the team is busy making changes.
- 902101 - LRAUV Technology Development and Fleet Operations
 - Tested DAT compass wiring fixes
 - Automated HE thruster configuration parameters
 - Working on HE component final fixes
- Denis Klimov
- Diana LaScala-Gruenewald
- Eric Martin
- Thom Maughan
 - 901009 - CANON
 - Worked right thru the meeting with Nate / JHU. Follow up meeting scheduled on Monday (with google calendar reminder on my phone).
 - 901805 - Coastal Biogeochemical Sensing Program
 - Met with Yui and Jacki to overview pHFETSOS usage, setup tests, and prep for bugfest on v4.
 - Brought OCR and MFET to my house to work on the driver for the Spray deployment..
 - 902004 - Planktivore
 - Where there's smoke, there's ... Larry Bird has been 'on fire', machining titanium for the compute node housings. Joy.
 - Last minute review on the endcap and connector placement. Ethernet connector moved to improve the 'meat'.
 - First rev of Camera Control boards sent out for fab on the 26th arrived on Jan 4 and parts kit and manufacturing request for a build of 2 sent to EE Techs
 - Parts are arriving from China just in time for the Camera Control build.
 - Jon E provided the 100m nb battery housing design prints and we had a doorway review. A couple minor tweaks and it will be submitted to the shop for fab (qty 2). First class job by Jon.
 - Overhead
 - Many thanks to Kent for another git coaching session.
 - Invited to High School tech advisory meeting Jan 12.. Looped in Brett Hobson also.
 - Out of Office
 - Vacation delayed
- Mike McCann
 - 901009 - CANON
 - Updated STOQS modules and attempting to get DockerHub CI working again
 - Reviewing LRAUV ESP Sample ID log info parsing logic with Katy
 - 901101 - Seafloor Mapping
 - Added 'restart: always' to docker .yml to start services following system reboot
 - Exploring ways to collect Compilation information from SeafloorMapping directories
 - 901602 - Data TAG
 - Thinking about potential topics to add to the document
 - Overhead
 - Increased to 3 digits the field with for NumFileSegments in Expd's TapeSummary table
 - Group meeting & Data TAG discussion
 - Out of Office
 - 27 December 2021 - 3 January 2022
- Rob McEwen
 - 708164 - Integrating efficient and dependable wave power generation
 - Working with Eric M. to read radar data into Matlab
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations, and Outreach

- Preparing to switch from Believer 3 build to repairing Believer 2
- Paul McGill
 - 300079 - DMO Support - Rachel Carson
 - Interviewed candidate for ROV pilot position.
 - 901618 - Pelagic-Benthic Coupling and the Carbon Cycle
 - Finished collating camera calibration data from last Laser Measure dive and will pass it on to Dan Davis for further analysis.
 - Worked with Alana and John F. to correct vignetting in Dual Camera Tripod Near-Field camera.
 - 901700 - Acoustical Ocean Ecology
 - Added a section to a failure analysis report for the Deimos cable on MARS.
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Worked with Alana to see if the new Canon R6 camera will fit into the Coral Macro Camera housing. We think it will but some mods will be required.
 - Out of Office
 - On vacation last week.
- Tom O'Reilly
 - 300082 - DMO Support - Wave Glider
 - Implemented automatic relay of messages between shore and LRAUV, via cell and acoustic modems; successfully relayed images from camera on LRAUV 'galene' to shore in support of EyeRIS project.
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations, and Outreach
 - Held project kickoff meeting with team to review goals, milestones and schedule. Renewed commercial UAV license.
- Craig Okuda
- Doug Pargett
 - 901205 - SURF Center
 - Disassembled the bad toroid valve ring and delivered it to the shop as a test article for machining the new one.
 - Working (from home) on the design for the new toroid valve actuator to fit in the reduced space but still use the same motor and similar mechanism.
 - Overhead
 - Meetings
 - Out of Office
 - Some vacation time last week.
 - Working from home until testing clears the latest school exposure notices.
- Ben Raanan
- Mike Risi
 - 300062 - DMO Support - Doc Ricketts
 - Working on some documentation in support of telemetry upgrade
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Looking into blob tracker configuration for Molly Z. at ARL.
 - 902204 - Scalable Marine Robotics Foundations
 - Working on development plan for boxfish test platform with GT.
 - Out of Office
 - Vacation on alternate Fridays
- Paul Roberts
- Brent Roman
- Carlos Rueda

- 901502 - Soundscape Research and Education
 - Group meeting to kickoff the year
- 901602 - Data TAG
 - IE meeting
- 902101 - LRAUV Technology Development and Fleet Operations
 - Inspection on TethysDash service upon being called by users because of issues, which turned out to be network related (likely associated with what Todd emailed to all-hands).
- Overhead
 - Engineering meeting.
 - Opportunistically starting to modernize Gpdviz application to gain experience with various underlying frameworks (Vue3/Typescript/Quasar2) so as to more effectively do likewise to other applications (Dash, TethysL, etc).
- Karen Salamy
 - Out of Office
 - Vacation: December 22, 2021 - January 4, 2022. May extend this to spend some more vacation time with my daughter.
- Brian Schlining
 - 500055 - VARS, M3/RS, DSG
 - There's a new release of VARS Annotation:
 1. Integrated with [raziel](#), which allows VARS to be easily configured for it's deployment location. Notes on setting it up are at <https://docs.mbari.org/vars-annotation/setup/>
 2. This release is integrated with [Cthulhu](#) allowing staff to localize annotations directly on video.
 3. Integration with Kent's [libbmagic](#) for ship framecapture.
 4. Support for [adding notes about dives and videos](#).
 5. Improved startup time. (Optimized the calls to load a user's preferences from the database)
 - Created a project to allow labs to easily spin up the entire M3/VARS software stack at <https://github.com/mbari-media-management/m3-quickstart>. This stack includes a proxy/video server, database server, as well as [support scripts](#) for managing the docker life-cycle, initializing the knowledgebase, registering media with VARS, and building supporting applications.
 - Worked through the backlog of master (ProRes/MOV) video files that needed to be registered, which has been a challenge due to space constraints on titan. The current setup runs daily and will process up to 10TB of files. Once the new files are registered they are migrated off of spinning disk to LTO.
 - Out of Office
 - Jan 31 - Feb 11 - Brian will be a visiting scientist at [DARC](#) to upgrade their video annotation system.
- Alana Sherman
 - 901618 - Pelagic-Benthic Coupling and the Carbon Cycle
 - Testing Dualie camera tripod for Feb cruise
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Trying to interface the Canon EOS R6
 - 902208 - MiniROV Operations
 - Tried a new modbus library for Labview with control code
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 - Overhead
 - Began process for annual performance reviews.