

Engineering Weekly Report 7/29/2021 - 8/5/2021

Executive Council Notes

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Individual Activities

- Francois Cazenave
- Mark Chaffey
 - Out of Office
 - Will be OoF May 1 - 22 and unavailable.
- Danelle Cline
- Duane Edgington
 - 901618 - Pelagic-Benthic Coupling
 - Finished work on Jun 21, 2021 dive data. Released to Paul M. for review before we send it to Dan Davis for his analysis.
 - 902005 - VARS Annotation Assistance
 - Meeting with Danelle on architecture diagrams
 - Attempted to support Lonny on AWS IAM issue
 - Out of Office
 - Aug 6. Vacation
- Jon Erickson
 - 701145 - Penguin Hotspots
 - Finished the EK80 electronics chassis assembly, it's in the lab.
 - 901217 - Chemical Sensor Program
 - The second carbon fiber tube pressure test failed at 4,500 psi. Within 100 psi. Of the first test. One more to go.
 - 902010 - Mesopelagic LRAUV
 - Working on weight and balance incorporating the 1500m EyeRis Camera and Strobe.
 - The pressure tubes (Hulls) have arrived from Amalga. There's one in the LRAUV lab. Next step is strain gauges.
 - 902107 - Consequences of a Changing Ocean: Manipulative Microbiology Experiments at MARS
 - The heater experiment is running in the sea water lab. First results kinda match the thermal analysis.
- Kevin Gomes
 - Overhead
 - Proposal review and resource leveling
 - Hiring committee and meeting for SE hire
 - Meetings regarding web refresh RFP response
 - Met with Fugro
 - Met with Yui regarding Access/databases
 - Prep for meeting with AWS to start work on phase II proposal
 - Met with group to discuss proposals
 - Supporting ESP deployments for Eddie, Friday, Gordon and Waldo. Fix bug in database schema that was preventing ancillary data from being loaded into the web portal
 - Assist with AWS permissions stuff

- Worked with IS over the weekend to get the server elvis back up and running (don't think it survived some patching)
- Andy Hamilton
- Kent Headley
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Developing task list for maintenance work
 - Met w/ Rob and Steve re TRN internals question
 - Overhead
 - Proposal review, resource meetings
- Rich Henthorn
 - Out of Office
 - July 26 - Aug 9, mostly vacation, WFH a few days, network and phone access, definitely available for communication.
 - Sept 22 - Oct 1, vacation
- Brett Hobson
- Scott Jensen
 - Out of Office
 - July 27-August 3 vacation
- Brent Jones
 - 901112 - Monterey Bay Time Series
 - Prepped, deployed, and am flying LRAUV Daphne in support of MBTS run
 - 901502 - Passive Acoustic Sensing
 - Wrote a matched filter for signal processing hydrophone data. Detects DEIMOS echosounder clicks
 - 901800.98 - Bioacoustic Payload
 - Continued analysis of AOS sensor data
 - 901805 - Coastal Biogeochemical Sensing
 - Flying Spray 34 in support of Yui's experiments
 - 902101 - LRAUV Technology Development and Fleet Operations
 - Participated in LRAUV operator training for Lake Erie ops
- Chad Kacy
- Brian Kieft
 - Out of Office
 - Jun 28-30 (phoenix MST)
 - Jul 1-9 (vacation HST)
 - ~~Aug 5-6 (vacation)~~
 - Aug 1-11 (Great Lakes, Great LRAUVs EDT)
 - Aug 16-21 (Great Lakes, Great LRAUVs EDT)
 - Sep WHOI?
 - October 25-31 (PLOCAN glider school tentative GMT+1)
- Denis Klimov
 - 901809 - Deep Sea Bioinspiration
 - Updated DeepPIV handbooks for versions 3 and 4 for the upcoming Falcor cruise
 - Overhead
 - Preparation for IFCB deployment is on a finish line. We instrument is running in close to real sampling protocol, test fit to Power Buoy done this week, next is the subassembly to be completed together with filter intake.
- Diana LaScala-Gruenewald
 - Out of Office
 - July 19-23 - ESIP summer meeting (virtual)

1. Participated in a [pretty interesting workshop](#) on a new Python package for integrating a bunch of graph database related tools
 - Aug 3-6 - Oceanhackweek (virtual)
 - Aug. 30 & 31 - Backpacking, won't be reachable
- Eric Martin
 - Out of Office
 - July 19-Aug16 Pacific Northwest for Dorado support.
 - Thom Maughan
 - Out of Office
 - Dental appointment delayed. Seeking treatment for TMJ.
 - Vacation last week in Aug for memorial and family reunion. Exact dates tbd (likely 27 Aug to 3 Sep).
 - Mike McCann
 - 901101 - Seafloor Mapping
 - Reloaded just the Mission files that match yyyyymmdd naming to <https://smdb.shore.mbari.org>
 - Doing most editing and debugging now in VS Code! 😊
 - Creating unit tests using the Django REST framework to give good test coverage: [Issue 25](#)
 - Overhead
 - Reading proposals and preparing for interviews
 - Rob McEwen
 - 708167 - WEC Dynamics and Control
 - Converted the first wave-prediction function from Matlab to C code linked back into Matlab with their API.
 - Verified that it produces the correct results.
 - 902101 - LRAUV Technology Development and Fleet Operations
 - Improved the Simulink buoyancy simulator.
 - Developing a feedforward controller to further reduce the overshoot during the ballast-and-trim mission.
 - Out of Office
 - 26 Aug - 8 Sept
 - Paul McGill
 - 300070 - DMO Support Ventana
 - Working with Jose on ground fault isolator board
 - 701145 - Penguin Hotspots
 - Test fitted sonar Faraday shield into Jon's chassis and it all looks good. Moving ahead with more shield boxes.
 - 901618 - Pelagic-Benthic Coupling
 - Working with Duane E. on Laser Measure images from last deployment.
 - 901700 - Acoustical Ocean Ecology
 - Built current limiter to protect Vicor on MARS Echosounder. Not working yet but figuring it out.
 - 901803 - Carbon Wave Glider Development
 - Made labor estimates for different scenarios depending on what resources we're given this year and next.
 - Overhead
 - Replace swollen Li-ion battery in my laptop.
 - Ed Mellinger
 - Tom O'Reilly
 - Craig Okuda
 - 901007 - Benthic Biology and Ecology
 - New battery design

- Reassemble chambers
 - Overhead
 - Misc succession planning
- Doug Pargett
 - 901205 - ESP SURF Center
 - Working on concepts for a mechanical pressure damper that might fit in the oil chamber of 3G ESP.
 - Overhead
 - Engineering meeting
 - Out of Office
 - Vacation
- Ben Raanan
 - Out of Office
 - June 8-22
- Mike Risi
 - 901101 - Seafloor Mapping
 - Starting cruise prep for PACNW
 - Working on user interface and new control system commands
 - 902001.99 - 4K ROV Camera Development
 - Finished up I2C interface
 - Completed navproc interface and and tested against simulator
 - Out of Office
 - April 26-30: Ocean Imaging Cruise
 - May 3-7: Vacation
 - June 4-11: Vacation
 - June 28-July 2: Vacation
 - August 30-September 14: Ocean Imaging Cruise
 - September 14-17: Vacation
 - Vacation on alternate Fridays
- Brent Roman
 - 708165 - NOAA-MERHAB
 - Helped APL's EE diagnose a cable wiring issue causing intermittent comms failures
 - 901205 - ESP SURF Center
 - Improved "Daily" mission framework to detect phases that run over time.
 - 901913 - Demonstrating high-speed communication with a submerged AUV
 - Configured LTE router to serve video on the public internet inside a Wireguard tunnel
 - DQ2025 - L. Erie HAB
 - Fixing bugs and config problems uncovered by the team prepping for deployment.
 - Out of Office
 - August 23 - September 10
- Carlos Rueda
 - 901009 - CANON
 - Trying to resume concrete work on MXM.
 - 901502 - Passive Acoustic Sensing
 - Initial [plots to visualize score results](#) obtained by using the Google Model for Humpback Whale song detection.
 - Group meeting.
 - 901513 - Targeted Sampling by AUVs
 - Code revision in progress.
 - 902005 - VARS Annotation Assistance

- Added a “Started” column to the main table in the SageMaker metrics [UI](#).
- 902101 - LRAUV Technology Development and Fleet Operations
 - Exchanges related with debugging of LRAUV-ESP test issues. It turned out to be an incompatibility issue with the loaded ESP software. Proposing [a SemVer approach](#) to help reduce the risk of this problem in the future.
 - Various documentation updates.
 - User assistance re Tmobile texts not reaching TethysDash (the problem is with the carrier).
 - Released version 2.0.3 of the [TethysL CLI](#) as well as of the [VSCode extension](#). It includes binary executables of the CLI for Linux, MacOS and Windows. Hoping to demonstrate all of this (probably along with related mission documentation improvements) in some upcoming LRAUV meeting.
- Overhead
 - Proposals
 - Attended part of the LRAUV Training. (Good show, Ben)
- Out of Office
 - Aug 5: Drs. appt. (mid morning).
- Karen Salamy
 - 704109 - NavDORISS
 - Spent most of the week and past weekend working on bringing up the NavDORISS system.
 - A Navy rep visited MBARI today to see the status of the NavDORISS thus far.
 - 901101 - Seafloor Mapping
 - Have been trying to schedule a meeting with Mike M. to discuss the SMDB project.
 - Overhead
 - Discussed 2021 project allocations with the SE group.
- Brian Schlining
 - 500055 - Video Annotation DM
 - Investigating a VARS bug on the Western Flyer.
 1. Dusting off some very crusty Objective-C skills to [update image capture code](#) to compile on Apple’s Big Sur.
 - Latest drop from Iron Mountain of 4294 video files representing 649 hours of ROV video has been cleaned up and registered in MBARI’s video asset manager.
 - Fixed a bug in recent versions of VARS and published a [new release](#). Latest internal build download is [here](#).
 - Created a page for the video lab to view a dive’s video and annotations on-line. (There’s a note about it on [slack](#)). Example page: <http://m3.shore.mbari.org/deepseaguide/#!/deployment/annotations/Doc%20Ricketts%200973>
 - 902002 - Fathomnet Detect and Classify
 - Published an [article on registering images in FathomNet](#)
 - Starting ramp down to FathomNet’s public release scheduled for September 30th.
 - Out of Office
 - ~~Jul 19 – 30 – Vacation~~



- Rich Schramm
 - Out of Office
 - 7/1 - 8/30 Vacation
 - 8/31 last day
- Alana Sherman
 - Out of Office
 - On vacation until Mon, Aug 2nd