

Engineering Weekly Report 9/30/2021 - 10/7/2021

Executive Council Notes

-

Individual Activities

- Francois Cazenave
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Monitoring buoy
 - 901700 - Acoustical Ocean Ecology
 - Supervising frame fabrication
 - 902106 - Niobicon-Based AUV Docking Development
 - Designing buoy, electronics housing
 - Overhead
 - Replace port and o-ring on BOSS camera
- Mark Chaffey
- Danelle Cline
- Duane Edgington
 - 902004 - Planktivore
 - Brief discussion with PM on goals and timeline
 - 902005 - VARS Annotation Assistance
 - Monday - Friday Sprint on model inference and integration of model output with VARS
- Jon Erickson
 - 701145 - Penguin Hotspots
 - The EK80 electronics pressure cases are in. Q.C'd them, will leave them assembled in the lab.
 - The EK80 gimbal parts are in. I'll Q.C. them then assemble when I get back.
 - 800139 - EyeRIS
 - Bits and pieces for the EyeRis nose assembly for LRAUV.
 - 901217 - Chemical Sensor Program
 - ISUS-APEX: The pressure case parts necessary for buoyancy testing are in the shop queue.
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - 902107 - Consequences of a Changing Ocean: Manipulative Microbiology Experiments at MARS
 - Working on a thermister array design for vertical measurements.
- Ben Erwin
- Kevin Gomes
 - Overhead
 - SE Hiring Process
 - Assisted with testing new Ubuntu based Greensea servers that are scheduled to replace the current Ventana control system machines.
 - Working on upgrades to various software systems to support 4K camera deployment.
 - Out of Office
 - 10/4-10/6: Vacation
- Andy Hamilton
- Kent Headley
 - 600034 - Precision Control Technologies for ROVs and AUVs

- Implementing feature for TRN resets with location and bounds, bug fixes; in test
- Overhead
 - Hiring activities
 - Informal tech consults (internal)
- Out of Office
 - Oct 14-15 (personal)
- Rich Henthorn
 - 901618 - Pelagic-Benthic Coupling
 - Loading Western Flyer for Sta.M cruise
 - Overhead
 - Eng Meeting
 - Out of Office
 - Oct 6 - Oct 15, Sta.M cruise
- Brett Hobson
- Scott Jensen
 - 901805 - Coastal Biogeochemical Sensing
 - Settling in on a unipolar bias scheme for the ISFET
 - 902106 - Niobicon-Based AUV Docking Development
 - Located an IM for our IT system
 - Overhead
 - Solidworks training
- Brent Jones
 - 901009 - CANON
 - Monitoring Wire Walker deployment.
 - Sent RBR Cervello back to Canada for leak diagnosis
 - Beginning build of 3ea SIPPERS. Need to modify electronics to run the peristaltic pump
 - 901112 - Monterey Bay Time Series
 - Prepped, deployed, flew, and recovered Daphne
 - 901800.98 - Bioacoustic Payload
 - Prepped, deployed, flew, and recovered Triton
 - Real-time data returns from Triton indicate gimbal mechanism is working better (baby steps!)
 - Still experiencing brown-outs of bioac computer. Found a way to keep caps charged while on the surface
 - 901805 - Coastal Biogeochemical Sensing
 - Flying spray 34 in support of Yui's experiments
- Chad Keczy
- Brian Kieft
 - Out of Office
 - 9/20-9/22 (phoenix)
 - 9/29-10/1 (phoenix tbd)
 - 10/4-10/5 (phoenix)
 - March/April TBD LRAUV ops
- Denis Klimov
- Diana LaScala-Gruenewald
 - 500055 - Video Annotation DM
 - LTO tapes
 - 901915 - Improving MBARI Data Impact
 - Worked through adding database tables, views, and tables/views with lat, lon, time, depth to ERDDAP
 - Put together some documentation on BitBucket

- Overhead
 - Weekly meeting(s)
- Eric Martin
 - Out of Office
 - October 11-15th
- Thom Maughan
 - 901805 - Coastal Biogeochemical Sensing
 - Found the Eclipse Egit tutorial and sent that to Irene. She is now functional using Code Composer Studio Egit, though we still have a ways to go on git setup and usage.
 - 901713 - Nearshore FOCE
 - James Mc is providing mphox firmware programming support, QA Box is a success.
 - Sent email weekly status
 - 902004 - Planktivore
 - Working towards a Feb. 15, 2022 at sea test on the Spray Glider.
 - Met with Jon E. on best use of his limited time for 2021. We'll be targeting the waveglider towbody as a test platform to tow behind the Paragon or other small boat. He needs a draft of Planktivore housing design files in 902004 project library before proceeding.
 - Met with Brent Jones, mostly on glider availability and integration. He indicated one of the gliders was done due to pinhole leak in buoyancy bag. Heard from Yui that a replacement is coming from Scripps.
 - Met with Duane on 2021 availability and task list.
 - Met with Denis on 2021 availability and task list.
 - Not yet able to meet with Larry yet or get email response about when he is able to start as he's been busy on other projects.
 - DeepRip setup by IS has been requested. On a side note, Andy asked questions about crypto mining on HiPP rigs and I sent a note to Todd Ruston to see if there are tools to detect.
 - Started on board bullets and other m-team requests for project status.
 - Overhead
 - Office and lab cleaning, organizing.
 - Out of Office
 - Working from home on every other Wednesday
 - Nov. 10,11,12 Vacation in Dallas, TX
- Mike McCann
 - 901101 - Seafloor Mapping
 - Got [navigation track \(instead of grid bounds\) display working](#), and it's not too slow
 - Built rudimentary Expedition and Mission List and Detail views with links between them
 - Transcribed work items from the Requirements_UseCases.docx to GitHub Issues
 - Beginning to work on time bounds to query for Missions on overview home page
 - 901111 - AUV Infrastructure Support
 - Processed Dorado Gulper mission 2021.278.00
 - Overhead
 - Open position meetings
- Rob McEwen
 - Out of Office
 - Nov22-24
- Paul McGill
 - 901618 - Pelagic-Benthic Coupling
 - Pressure tested Squirry pump
 - Finished wiring Squirry pumps and controllers
 - Did final edits on Rover paper

- Submitted abstract for Ocean Sciences Meeting
 - Loaded Flyer for cruise leaving Wed
- 901700 - Acoustical Ocean Ecology
 - Finished wiring of MARS connector interface
- 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Deployed Coral Macro Cam from Carson, will get picked up this week
- Ed Mellinger
- Tom O'Reilly
- Craig Okuda
 - 901007 - Benthic Biology and Ecology
 - Assemble valve actuators
 - Out of Office
 - Vacation days
 - Overhead
 - Office clean out
 - Lab clean out
 - Clean up files
- Doug Pargett
 - 881135 - 3G ESP Cartridge Redesign
 - Developing a push and pull valve pin grabber
 - 901205 - ESP SURF Center
 - Cleaning up, Organizing ESP lab
 - Rebuilt oil dome on Honu
 - Replaced a few TV valve seals on Honu
 - Overhead
 - Meeting
 - Out of Office
 - Leave
- Ben Raanan
 - Out of Office
 - June 8-22
- Mike Risi
 - 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
 - 901205 - ESP SURF Center
 - Helped Preston prepare ESPmv3 for deployment on this week's Ken Smith cruise
 - Updated portable ESP configurations to support an optional Plunge Valve
 - 901913 - Demonstrating high-speed communication with a submerged AUV
 - Preparing board bullets
 - Overhead
 - Configured new router at home to support IT's change from PPTP to IPSEC L2TP VPN

- Carlos Rueda
 - 901502 - Passive Acoustic Sensing
 - Completed the application of the NOAA/Google humpback whale song presence scoring model on our whole set of recordings (2015–2021). Incorporation of scoring in regular workflow TBD.
 - 901513 - Targeted Sampling by AUVs
 - More and more revision, modularization, mypy-typing, and documentation to the front detection/tracking code - <https://github.com/mbari-org/wgfronttracking>, intended to be used as an installable package (via pip). All in pretty good shape for when we can start implementing the wave glider interface against the actual hardware.
 - 902101 - LRAUV Technology Development and Fleet Operations
 - Updated base images and built TethysDash system [v4.6.8](#). Along with some minor UI fixes, this new version includes the most recent LRAUV code and the latest Tomcat 8 version (8.5.71), as well as a minor adjustment related with the command XML file generated by the LRAUV codebase. So, a significant release in terms of the underlying dependencies. (Btw, the image builds were failing upon update of the docker engine; the fix was to give docker more memory.)
 - Overhead
 - Engineering meeting
 - ESIP COR meeting
 - TAMU Corpus Christi has indicated they may not be able to continue hosting mmisw.org.
 - Out of Office
 - Oct 1, 4: vacation
 - Oct 28-29: Scale by the Bay
- Karen Salamy
 - 300057 - Mooring Maintenance
 - Weekly checks and maintenance
 - 704109 - NavDORISS
 - Finalizing the last of my work on the project. Assigned information on 2 SSD drive purchases with accounting today.
 - 901101 - Seafloor Mapping
 - Began new downloads and testing of the SMDB code.
- Brian Schlining
 - 500055 - Video Annotation DM
 - Updated image archiving service on the Rachel Carson to fix a bug in how image paths were written.
 - Ingesting the latest round of LTO tapes full of video files from Iron Mountain.
 - 902002 - Fathomnet Detect and Classify
 - [FathomNet](#) went live last week. Release announcement on Twitter is [here](#) and Medium is [here](#).
 - Addressing questions and feedback from external users.
 - Fixed issue with embargoed info for all types of Ctenophores.
 - Fixed issue with attribution for each image in its thumbnail preview
 - Edits and feedback to Kevin Barnards' [article](#) on his FathomNet Python API.
 - FathomNet community feedback is setup on GitHub at <https://github.com/fathomnet/community-feedback>
 - 902005 - VARS Annotation Assistance
 - Working with the team on an end-to-end sprint of a video processing pipeline.
 - Overhead
 - Coordinating with University of Hawaii's Deep-Sea Animal Research Center (DARC) on making changes to their VARS system to better accommodate remote work.
 - For IS, Investigating converting the video labs [lto-manager tool](#) to a general purpose file recall tool for any file on titan. Tracking this [here](#).

- Out of Office
 - Oct 15th - Vacation
 - Oct 25-27 - Vacation, backpacking the Lost Coast so no WiFi :-)
- Rich Schramm
- Alana Sherman
 - 300080 - DMO Support Mini ROV
 - Working on the schematics for the Benthic E-Pod
 - 901618 - Pelagic-Benthic Coupling
 - Spent most of the week prepping for the Flyer cruise to Sta. M. Everything is on the ship and there were less things to search for than I feared.
 - Prepped the SOLO camera for deployment. This was not as easy due to a number of small issues and also the obsolete software requires an obsolete operating system so it became a multi-laptop endeavor to full test. I finally got it tested and ready to go.
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - We deployed the Macro camera last week. The Deepsea connect worked amazingly well, thanks to the efforts of Paul McGill, Paul Coenen, and Aaron Schnittiger who pulled it off! The system is being deployed for 6 days taking images every 5 minutes of a coral. We will
 - Overhead
 - Conducted first meeting for the new EE hiring committee to set up a procedure, etc