

Engineering Weekly Report 7/27/2023 - 8/3/2023

<https://docs.mbari.org/internal/projects/Engineering/Weeklies/2023/>

Executive Council Notes

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Individual Activities

- Michael Anderson
- Kevin Barnard
 - 500055 - VARS, M3/RS, DSG
 - Released VARS GridView changes
 - Query on bounding box association JSON fields
 - Sort on multiple fields
 - 902204 - Scalable Robotics
 - Investigated loop closure issues on May 2023 LASS datasets
 - Out of Office
 - Vacation August 7-11
- Francois Cazenave
 - 901221 - Midwater Time Series
 - When out of paragon to observe dorado towing
 - 901405 - PowerBuoy Development
 - Monitoring buoy
 - 902106 - Niobicon-Based AUV Docking Development
 - Making improvements to latch design
 - Design release for stuck arm
 - Preparing mooring for deployment
 - 902204 - Scalable Robotics
 - Designing ROV sled
- Danelle Cline
 - Out of Office
 - July 31-Aug 4th
- Duane Edgington
 - 901103 - Biodiversity and Biooptics of Zooplankton
 - Trained YOLOv5/StrongSORT i2MAP model with 70 classes, 11,201 images, and 80,156 localizations as curated by Danelle. Evaluating now. Ran inference on several videos (i2MAP dives and a Ventana dive) to review performance. Also trained "ROI" model where the 70 classes were collapsed to one class (region of interest) to compare with intern Tarun's Megadetector, and to compare with the 70 class model.
 - Out of Office
 - July 23-July 29 2023. ICML (virtual). HST (UTC-10) Semi-supervised learning representations tutorial.
 - AWS summit July 26 (virtual)
 - Oct 16-18 2023. Pytorch conference. SFO (in person). PDT (UTC-7)
- Jon Erickson

- Kevin Gomes
 - 200105 - Core Navigation Data - MDUC
 - Cranking away at logger for single LCM type
 - Overhead
 - Looking at MiniROV dive log replacement application (Broke on clients who upgraded to Mac OS X Ventura, something to do with ODBC).
 - Working with IS to get a prototype of Duo SSO (linked with Azure AD) and will attempt to use it on the Qt and web versions of the MiniROV divelog apps.
 - Proposal review meetings
 - Out of Office
 - Aug 28-Sep 12: Vacation
- Andy Hamilton
- Kent Headley
 - 500055 - VARS, M3/RS, DSG
 - Attempting linux build
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Looking at GRD/binary octree map conversion utility
 - Replacing debug output library with new mframe module. Used in libtrnav/MB-System
 - 902204 - Scalable Robotics
 - Fixed bug in mb12x: file list arguments counted twice
 - Investigating apparent network buffer errors
 - Overhead
 - Proposal review
 - Hiring (SE-EAD, AOSE)
 - OASIS support for Cawthron
- Rich Henthorn
 - 300078 - DMO Divisional Support - AUV
 - Working towards running simulations on dorado dev VM
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Reviewed CoNav and TRN comms and status
 - Met with LRAUV SW dev team and Rock about TRN and CoNav work
 - Agreed on short term work plan involving simulations and comms
 - 902305 - Event Detection using the Sedimentation Event Sensor
 - SES and shore-side processing working well
 - Processing adapted to the recent Atlas storage space issue
 - Updating repo with newest software and scripts
 - Out of Office
 - July 31 - Aug 4: WFH: available on all, PDT timezone
- Brett Hobson
- Irene Hu
 - 901805 - Coastal Biogeochemical Sensing Program
 - Compiled knowledge/understanding of ISFET chemistry and circuitry
 - 901904 - Deep-Sea Coral Community Observatory
 - Designed cradle for multispec, sent out for 3D printing
 - Ordered parts to set up calibration / testing jig
 - 902305 - Event Detection using the Sedimentation Event Sensor
 - Planning meeting
- Scott Jensen
 - 706008 - READI-net
 - Received prototype copy 2 from contractor and begin check out

- Built development environment
- 901205 - ESP SURF Center
 - Supported filtering experiment data collection
- 901405 - PowerBuoy Development
 - Prepared old bridge controller for shipment as a working model to UofW
- Out of Office
 - Vacation Aug 28- sept 1
- Brent Jones
- Chad Keczy
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - Out of Office
 - 08/02 - 08/06 (EDT)
 - 08/06 - 08/09 (PDT)
 - 08/14 - 08/18 (PDT)
 - 08/16 - 08/19 (EDT) alternate
 - 09/26 - 10/04 (EDT)
- Denis Klimov
- Eric Martin
 - Out of Office
 - on vacation 8/1-8/6
- Thom Maughan
 - 300083 - DMO Divisional Support - LRAUV
 - Smbus functions implemented and tested for run time monitoring of the lrauv battery packs
 - Met with Quinn to discuss protocol for multidrop rs232. In progress on implementation but hitting the end of flash (again).
 - Processor swap to upgrade to a 32KB part.
 - Starting on the charging board bringup and firmware.
 - 901009 - CANON
 - Per Kobun, working on deep-edna1 setup following mbon-edna. Looking into VMWare and Docker options
 - Meeting with bio-informatics users next wed/thurs to get requirements.
 - Peter in IS helped get the software install history off mbon-edna
 - 901805 - Coastal Biogeochemical Sensing Program
 - Verified nanoFET build, getting ready for Irenes updated version and collab with Scripps.
 - 902004 - Planktivore
 - Opened housing and removed Xavier and optics benches, Aaron prep'd planktivore V1 and V2 for pressure test planned Aug 8.
 - Working with Brett on clamshell nose cone for Ahi. Schedule from Elkhorn has been slipping and have worked with Stan on next delivery date. Aliming for Planktivore v2 on Ahi in mid-Sep.
 - Open house prep. Many thanks to Paul for the excellent posters and for Lael, Jonah Gomes, Paul and Denis for staffing the booth and tear down.
 - Out of Office
 - Vacation Sep 24 - Oct 2 Ohio
 - Vacation Oct 12 - 16 Nevada Eclipse
- Mike McCann
 - 300083 - DMO Divisional Support - LRAUV
 - Making good progress on 3D oil spill simulation data visualization in STOQS
 - 901910 - Plankton Taxonomic Groups from AUVs

- Finished load of stoqs_all_dorado_t, still comparing Matlab with auv-processed data
- Overhead
 - Setting up new computer
 - Preparing for SIGGRAPH next week
- Out of Office
 - 31 July: Sick day
 - 7-11 August: SIGGRAPH in LA
 - 12-20 September: Vacation
 - 9-11 October: Web3D 2023 Conference
- Rob McEwen
 - Out of Office
 - First two weeks of August.
- Paul McGill
 - 300070 - DMO Divisional Support - Ventana
 - Continuing circuit analysis for ground-fault detection system to account for errors
 - 902304 - Piscivore Cam
 - Discovered another bug in the latest code release but I fixed it.
 - Getting another camera controller I/O board built
 - Preparing for two-camera deployment next Tue
 - 902305 - Event Detection using the Sedimentation Event Sensor
 - Working with McLane engineer to determine method for remotely triggering sediment traps
 - Overhead
 - Attended MARS team meeting to solve budget problems
 - Helping to troubleshoot power supply overheating issue on MARS mini-node
- Enoch Nicholson
- Tom O'Reilly
 - Overhead
 - Hosted UAV project booth at Open House with help from team - lots of interest from all ages of the public
- Mike Risi
 - Out of Office
 - Out of office on Fridays
 - May 30 - June 6
- Paul Roberts
 - 901809 - Deep Sea Bioinspiration
 - EyeRIS computer troubleshooting
 - 901904.99 - Corral Camera System
 - planning for calibration and tank testing
 - 902001 - Ventata 4k camera
 - planning for second camera assembly
 - 902204 - Scalable Robotics
 - PoE can drawings, thermal simulation, and sourcing parts
 - 902306 - SINKER
 - Mechanical design
- Brent Roman
 - Out of Office
 - May 26 - June 6
- Carlos Rueda
 - Out of Office
 - July 21: sick

- August 8–28: vacation (out of the country)
- Karen Salamy
 - Out of Office
 - On-campus 3 days/week (**M, T, Th**).
- Brian Schlining
 - Out of Office
 - Jul 28 - Aug 6 - Vacation
 - Aug 14 - 17 - Vacation
 - Aug 21 - 22 - Vacation
- Alana Sherman
 - Overhead
 - Proposal review all week.
- George Stern