Rich Henthorn Sorted By Project

600034 - Precision Control Technologies for ROVs and AUVs

- Removing qnx-utils from Obs Avoidance repo (Week 2)
- Refactoring libtrnav modules (Week 3)
- TRN and OA tests on LRAUV (Week 7)
- Meeting with Rock Lab (Week 9)
- Prep lcm logs for OA and TRN playback (Week 10)
- Tested playback against OA and TRN (Week 10)
- Using logged message data to test TRN modifications (Week 11)
- Worked on TRN and OA issues with McEwen (Week 12)
- Debugging the TRN application program for LRAUV (Week 12)
- TRN and OA apps for LRAUV (Week 13)
- Multibeam Simulation meeting (Week 14)
- OA and TRN debugging (Week 14)
- Analyzing LRAUV TRN performance (Week 15)
- TRN (Week 16)
- TRN and OA work (Week 17)
- Merging Dorado code bases (Week 22)
- Proposal input (Week 26)
- TRN (Week 26)
- Dorado TRN interface updates (Week 28)
- TRN (Week 32)
- TRN meetings (Week 33)
- Proposal stuff (Week 34)
- TRN (Week 34)
- Getting to the bottom of a tricky TRN regression test issue (Week 36)
- Making progress on TRN for LRAUV (Week 36)
- Debugging TRN issue (Week 38)
- Problem solved (Week 38)
- Input data for TRN-LRAUV validated, ready for use (Week 38)
- Test analysis for TRN on LRAUV (Week 42)
- Corrected minor issues using logplayer (Week 42)
- Progressing towards real-time position updates (Week 42)
- Merging updates with master (Week 42)
- Merged TRN for LRAUV into TRN repo (Week 43)
- Terrain-Relative Co-Navigation application design and prototype (Week 45)
- CoNav test apparatus (Week 45)
- Developing Terrain-Relative Co-Navigation (Week 46)
- Cooperating vehicle message player completed (for bench-testing) (Week 46)
- Bench-test applications ready for use (Week 46)
- TRN Meeting (Week 46)
- CoNav logging (Week 48)
- CoNav computations (Week 48)
- CoNav computations and testing (Week 49)
- CoNav data logging (Week 49)
- libtrnav pull requests (Week 49)
- CoNav development and test (Week 50)

- Review CoNav design and implementation (Week 50)
- TRN pull-request reviews (Week 50)

708167 - WEC Dynamics and Control

- ROS 2 research (Week 6)
- Working thru issues while building ROS 2 on target system (Week 8)
- Target system is arm32 requiring us to build from source (Week 8)
- Installed dependencies now building ROS packages (Week 8)
- Bumpy ride building ROS 2 on 32-bit ARM controller (Week 9)
- Team decided that moving to a 64-bit Ubuntu RPi 4 controller was worth a try (Week 9)
- ROS 2 installed on RPi 4 and our WEC skeleton nodes built tested (Week 9)
- DOE grant work scheduled to heat-up in 3Q 2021 (Week 10)
- mainbuoycontroller ROS-ification kickoff (Week 41)

800139 - EyeRIS

- Moteino and platform.io (Week 1)
- Project kickoff meeting (Week 3)
- Weekly meeting (Week 5)
- Review reusable Moteino modules (Week 5)
- Weekly meeting (Week 6)
- Moetino platformio project code (Week 6)
- EyeRIS LRAUV Interface app (Week 6)
- Weekly meeting (Week 7)
- Created EyeRIS LRAUV Interface (ELI) for command and control of EyeRIS on LRAUV (Week 7)
- ELI will run on a Jetson TX2 backseat-computer specific to EyeRIS (Week 7)
- Weekly meeting (Week 8)
- Design docs for EyeRIS-LRAUV-Interface (ELI) (Week 9)
- Prototype state machine implementation for ELI (Week 9)
- Reviewed docs for camera focus motor control (Week 9)
- Weekly meeting (Week 9)
- ELI implementation basics (Week 10)
    - LCM message intake (Week 10)
    - Data logging (Week 10)
    - Load config file (Week 10)
    - Prepping target (Week 10)
- Weekly meeting (Week 10)
- Installed ELI on target TX2 CPU board (Week 11)
- Building up ELI functionality adding commands and logging (Week 11)
- Updating ELI application (Week 14)
- Weekly meeting (Week 15)
- EyeRIS LRAUV Interface app (Week 15)
- Weekly meeting (Week 16)
- ELI refinement (Week 16)
- Weekly meeting (Week 19)
- Weekly meeting (Week 20)
- Weekly meeting (Week 22)
- EyeRIS-LRAUV Interface (Week 22)
- Weekly meeting (Week 24)
- Making modifications in prep for LRAUV deployment (Week 36)
- Proceeding with EyeRIS LRAUV Interface (ELI) development (Week 38)

- Working towards a deployment later this month (Week 38)
- Project meeting (Week 45)
- Moore Foundation EyeRIS project update (Week 47)

901101 - Seafloor Mapping

- Dorado Operations meeting - how best to support 2021 operations (Week 11)
- Merging software versions from mapping vehicles (Week 18)
- Merge and restore Dorado codebases (Week 19)
- Merging code from mapping vehicles into central repo (Week 20)
- Dorado code merge (Week 21)
- Merging Dorado code bases (Week 22)
- Dorado heading oscillation (Week 23)

901221 - Midwater Time Series

- Building a useable transecting tool from a 2020 prototype for the Midwater lab (Week 6)
- App walks through the syslog from a Dorado i2MAP mission extracting complete transect data including timing, vehicle depth, and average speed measured from the DVL (Week 6)

901405 - Wave-Energy Conversion for Oceanographic Applications

- ROS research (Week 1)
- ROS research (Week 2)
- CurrCom current commanding application (Week 2)
- ROS research (Week 3)
- Current profile scheduler (Week 3)
- Meeting with Hamilton and Sandia folks (Week 3)
- Winding current scheduler app ready to review and test (Week 4)
- ROS 2 research (Week 4)
- Completed 1st iteration of the Current Command application (Week 5)
- Making modifications as required (Week 5)
- Testing 2nd iteration of Current Command (Week 5)
- ROS 2 research (Week 5)
- Automated winding current command utility ready for use (minus the motor RPM monitoring) (Week 6)
- ROS 2 research (Week 7)
- Designs for ROS versions of existing software (Week 7)
- Experimental implementation (Week 7)
- Converting Power Controller data source to ROS (Week 8)
- Created mbari_wec_ros repo with instructions on how to build (Week 8)
- Installed PowerBuoy software on spare sbc (Week 10)
- Semi-weekly meeting (Week 10)
- Installed MBC software on spare TS-7970 stack (Week 11)
- Met with Andy and Ryan Coe to review the Current-Command app (Week 12)
- Updating CANbus packet structures (Week 16)
- Added checking for RPMs before executing the CurrCmd schedule (Week 17)
- Created more utility commands for sampling controller data (Week 17)
- Modifications and cleaning of command suite and logging (Week 20)
- Command and logging updates (Week 21)
- Testing updates on hardware (Week 21)
- Weekly meeting (Week 22)
- CANbus data logging (Week 22)
- ROS 2 (Week 23)

- Controller Logger work (Week 23)
- Weekly meeting (Week 24)
- Prep controller with setup in Bldg D (Week 24)
- Integrated CANBus timestamps into logging (Week 25)
- Adding Spring Controller data checks into current command application (Week 25)
- Addressing logging issues (Week 26)
- Building towards August deployment (Week 26)
- Connectivity monitoring app (Week 28)
- Preparing for deployment this month (Week 32)
- IFCB review (Week 32)
- Preparing for Friday deployment (Week 33)
- Getting spare main controller going after installed unit failed (Week 33)
- Deployment shore-support (Week 34)
- Monitoring instrumentation (Week 34)
- Testing and monitoring buoy deployment (Week 36)
- So far all is well (Week 36)
- WEC ROS2 software development (Week 42)
- WEC software refactoring (Week 43)
- Monitoring buoy activity (Week 45)
- Attempted to restart the CANbus network interface (Week 45)
- Buoy recovered, working on To-Do lists (Week 46)
- Plan updates for next go-around (Week 49)
- Reviewing tasks for updates post-deployment (Week 50)

901618 - Pelagic-Benthic Coupling

- Researching issue with ACM data logging (Week 1)
- ACM driver needs to do quality control on received packets before processing (Week 1)
- 2021 kickoff meeting (Week 1)
- Kick-off SES Obs Manager epic w/outline and discussion (Week 2)
- Weekly meeting (Week 2)
- (Week 3)
- Weekly meeting (Week 4)
- Weekly meeting (Week 5)
- Weekly meeting (Week 6)
- Weekly meeting (Week 7)
- Tested updated BLISS carousel hardware and motor assembly (Week 8)
- BLISS deployment at MARS planned for March 8 and 9 (Week 8)
- Prep for Larval Pump Sampler deployment next Mon and Tue on Carson (Week 9)
- Tested LPS in test tank (Week 9)
- Mob and deploy LPS Monday, recover Tuesday (Week 10)
- Weekly meeting (Week 10)
- Weekly meeting (Week 11)
- Assisted with WG acomms at Sta.M (Week 12)
- Benthic Rover paper (Week 13)
- Geolocating and communicating with Benthic Rover (Week 13)
- Weekly meeting (Week 13)
- Weekly meeting (Week 14)
- Weekly meeting (Week 15)
- Weekly meeting (Week 16)
- Weekly meeting (Week 17)
- Paper research (Week 17)

- Rover manuscript support (Week 18)
- Proposal support (Week 18)
- Preparing workstation for Station M development and operations (Week 19)
- Weekly meeting (Week 19)
- Creating Station-M workstation for dev and data processing for Rover and SES (Week 20)
- Weekly meeting (Week 20)
- Weekly meeting (Week 21)
- Station M workstation prep (Week 21)
- Weekly meeting (Week 22)
- Rover paper manuscript (Week 22)
- Weekly meeting (Week 23)
- Rover manuscript (Week 23)
- Weekly meeting (Week 24)
- Telepresence training (Week 24)
- Proposal input (Week 26)
- Weekly meeting (Week 28)
- Meetings (Week 33)
- Prepping for Sta.M cruise that begins in 4 weeks (Week 36)
- Telepresence shore support for Macro Camera deployment (Week 38)
- Loading Western Flyer for Sta.M cruise (Week 40)
- At Sta.M (Week 41)
    - Cruise cut short due to WF engine issues (Week 41)
- Benthic Rover issues (Week 41)
    - Propulsion motor controller comms (Week 41)
    - LF and MF modem (Week 41)
    - Oil comp hoses (Week 41)
- SES appears to have functioned well during the deployment (Week 41)
    - Awaiting redeployment cruise (Week 41)
- Camera Tripod recoveries and deployments (Week 41)
    - Solo camera deployment OK (Week 41)
    - Duo camera returned full load of images (Week 41)
- Transit back to Monterey Bay (Week 41)
    - WF returned to Monterey Bay Sunday evening to wait out the storm (Week 41)
- Sta.M cruise equipment and data unloading (Week 42)
- Lab meeting discussing plans for Sta.M instrumentation (Week 42)
- SES issues (Week 43)
- Rover issues (Week 43)
- Benthic Rover motor controller investigation (Week 45)
- Benthic Rover fluorometry image issue (Week 45)
- SES image detritus issue (Week 45)
- Testing starboard chamber rack motor trying to repeat deployment errors (Week 46)
- Weekly meeting (Week 46)
- Testing Rover components as the vehicle is reassembled in the High Bay (Week 49)
- Addressed issue with the port rack prematurely halting on insertion (Week 49)
- Weekly meeting (Week 50)
- Transferred Sta.M data onto new hard drives (Week 50)
- Testing reassembled Rover components (Week 50)

901904 - Deep-Sea Coral-Sponge Community Observatory

- Weekly meeting (Week 6)
- Weekly meeting (Week 16)

- Assist with camera controller software (Week 16)
- Weekly meeting (Week 20)
- Weekly meeting (Week 28)

902101 - LRAUV Technology Development and Fleet Operations

- Replacing qnx-utils in Obs Avoidance with reference to libtrnav version (Week 2)
- Working towards testing the Delta T on Pontus (Week 4)
- Tested the OA application on Pontus (Week 5)
- Demonstrated that OA receives the data to perform calculations from correct LCM channels (Week 5)
- Prep pontus for Obstacle Avoidance and TRN test deployment (Week 6)
- Checking OA and TRN data - some mods were necessary (Week 6)
- TRN and OA tests on LRAUV (Week 7)
- Prepping vehicle for SubC zoom camera tests (Week 11)
- Analyzing TRN performance (Week 15)
- OA (Week 16)
- TRN and OA work (Week 17)
- TRN (Week 22)
- TRN (Week 26)
- Running captured LCM logs through TRN (Week 36)
- TRN dev (Week 38)
- TRN updates on LRAUV Pontus for deployment (Week 41)
- Pontus returned useful data logs (Week 41)
- TRN on LRAUV (Week 42)
- TRN for LRAUV testing (Week 43)
- CoNav app and test (Week 45)
- Developing Terrain-Relative Co-Navigation test apps (Week 46)
- Message paths validated (Week 46)
- Creating lcm-logs from an LRAUV deployment using new utility developed by Ben Raanan (Week 46)
- CoNav application (Week 48)
- CoNav computations (Week 48)
- CoNav computations and testing (Week 49)
- CoNav review (Week 49)
- Pilot training (Week 50)
- CoNav development and test (Week 50)

Out of Office

- Vacation day Jan 12
- Vacation day Jan 14
- Upcoming vacation days Jan Mon 25, Wed 27, Fri 29.
- Upcoming vacation days Feb Mon 8, Wed 10, Fri 12, Mon 22, Wed 24, Fri 26
- Vacation days Jan 25
- Upcoming vacation days Jan Wed 27, Fri 29.
- Vacation days Jan Wed 27, Fri 29.
- Upcoming vacation days Feb Mon 22, Wed 24, Fri 26
- Upcoming vacation days Mon Feb 22, Wed 24, Fri 26
- Upcoming vacation days Mar 22 - Apr 2, most days
- Vacation days this Mon Feb 22, Wed 24, Fri 26
- Upcoming vacation days Mar 22 - Apr 2
- Vacation days last Wed 24 and Fri 26
- Upcoming vacation days Mar 22 - Apr 2 (starts next week!)

    - Email and phone connectivity
    - Mountain Daylight Time
- Vacation days Mar 22 - Apr 2 (this week!)
- Vacation days Mar 22 - Apr 2 (last week)
- July 7 - 9, vacation
- July 26 - Aug 9, mostly vacation, network and phone access
- Sept 22 - Oct 1, vacation
- July 1 - 9, vacation - starts this Thursday (tomorrow!), back on July 12, network, email, phone access, no problem responding
- July 26 - Aug 9, mostly vacation, WFH a few days, network and phone access, definitely available to assist and GTD
- July 26 - Aug 9, mostly vacation, WFH a few days, network and phone access, definitely available for communication.
- Sept 24 - Oct 1, vacation
- Sept 9, out tomorrow, on the road with email.
- Oct 6 - Oct 15, Sta.M cruise
- Oct 6 - Oct 11, Sta.M cruise
- Dec 17 - 30, Holidays and vacation
- Nov 11 vacation, local, communication OK
- Nov 12 WFH
- Dec 17 - 31, Holidays and vacation
- Dec 17 - 31, Holidays and vacation. Happy New Year!
- Jan 24 - 28, vacation, WFH combo
- Feb 1 - 4, Sta.M Cruise
- Feb 14 - 18, vacation, WFH combo
- Sep 21 - 30, Sta.M Cruise

Overhead

- Engineering Meeting (Week 1)
- Review preparation (Week 1)
- Picture a Scientist (Week 2)
- Eval materials (Week 2)
- Eval prep and meeting (Week 3)
- Prep for Sea Lion Bowl (Week 5)
- Engineering meeting (Week 5)
- 2021 Sea Lion Bowl Sat Feb 6, carried out very well with Zoom and Remo (Week 6)
- Engineering meeting (Week 7)
- AUV seminars (Week 8)
- COVID test at ARCPoint for Carson cruise (Week 9)
- Director’s Dialog and Safety Meeting (Week 10)
- Troni Seminar (Week 10)
- Engineering meeting (Week 11)
- Proposal kickoff (Week 18)
- Updating Windows machines (Week 18)
- Engineering meeting (Week 19)
- Division meeting (Week 21)
- DOEST (Week 23)
- New proposals (Week 26)
- Proposal work (Week 28)
- Eng Meeting (Week 40)
- ROS Community Seminar (Week 42)

- Michael Anderson interview (Week 43)
- Director’s dialog (Week 46)
- EE candidate interview (Week 47)
- Booster Clinic (Week 49)