

902405 - Precision Control Technologies

Week 52

1. Kent Headley
 - a. TRN documentation

Week 51

1. Kent Headley
 - a. Working on TRN doc
2. Rich Henthorn
 - a. TRN tests on LRAUV
 - b. Testing offset and dead-reckoning correction logic
3. Brian Kieft
 - a. Lots of TRN work. Ingest of “good” TRN data is still causing the vehicle to drive off to disneyland for some reason. Continuing to test and investigate the issues.
 - b. Apart from TRN fixes on the backseat, we'll now fire up TRN only after arriving at depth. That test commences today.

Week 50

1. Kent Headley
 - a. TRN guide (documentation)
2. Brian Kieft
 - a. Lots of TRN work this week debugging ingest and reviewing data
 - b. Running more tests on Pontus. So far TNR is looking good.

Week 49

1. Kent Headley
 - a. Libtrnav build system maintenance and updates
2. Rich Henthorn
 - a. TRN on LRAUV
3. Brian Kieft
 - a. Deployed Pontus for revised TRN testing

Week 48

1. Kent Headley
 - a. updating gnu build files to better support homebrew builds on MacOS and simplify Makefiles

- b. documented dorado sim with MB-System TRN in the loop (and got the sim running)

Week 47

1. Rich Henthorn
 - a. Testing TRN on LRAUV and reviewing results with Rock
2. Brian Kieft
 - a. First TRN ingest deployment on an LRAUV occurred on Pontus. Met with Steve today to go over results which were generally favorable. Fine tuning various parameters and will run again soon.

Week 46

1. Kent Headley
 - a. Met with Steve Rock to get a better understanding of the Kalman Filters that form the basis of TRN
2. Rich Henthorn
 - a. Examining TRN results from LRAUV
3. Mike Risi
 - a. Cleaned up sonar simulator and added startup instructions for simulation.
 - b. Working on a simulation logger to generate matlab friendly output files.

Week 44

1. Kent Headley
 - a. Studying Steve's TRN notes and transcribing for documentation
2. Rich Henthorn
 - a. Double check TRN installation on pontus

Week 43

1. Rich Henthorn
 - a. TRN testing and install on pontus and tethys

Week 41

1. Rich Henthorn
 - a. TRN mission prep on pontus

Week 37

1. Kent Headley
 - a. Met with Dave and Steve re interpretation of terrain relative nav covariances.

Week 34

1. Kent Headley
 - a. quick meeting with Steve Rock re covariances, correlation, and multibeam filtering
2. Rich Henthorn
 - a. TRN and CoNav on LRAUV

Week 33

1. Kent Headley
 - a. converting axial TRN data sets to help Steve Rock evaluate it

Week 30

1. Mike Risi
 - a. Producing simulated Delta-t LCM data of Portuguese Ledge
 - b. Working on tool to process Delta-t sonar LCM data in real-time

Week 29

1. Rich Henthorn
 - a. Developing test utilities for TRN and CoNav that take data from Rock

Week 28

1. Rich Henthorn
 - a. Verifying simulation results
2. Mike Risi
 - a. First cut of simulated sonar working
 - b. Performed some simulated runs at constant depth using Portuguese Ledge octree map
 - c. Proposal input for 2025

Week 26

1. Rich Henthorn
 - a. TRN and CoNav test results
 - b. Proposal discussions

Week 24

1. Rich Henthorn
 - a. Simulation data acquisition for Rock
2. Mike Risi
 - a. Sorted out sonar mounting issue with Steve Rock
 - b. Working on process to simulate DeltaT data at Portuguese Ledge

Week 21

1. Rich Henthorn
 - a. TRN in LRAUV simulation

Week 20

1. Rich Henthorn
 - a. CoNav/TRN LCM
2. Mike Risi
 - a. Continuing work on sonar simulation for obstacle avoidance

Week 19

1. Kent Headley
 - a. Looking at role of sensor type and IO data structures in TRN code with an eye towards developing multi-input TRN and/or a sensor- and geometry- independent data structure
 - b. Working on documentation outline
 - c. Meeting with Steve to discuss these activities
2. Brian Kieft
 - a. On hold until after 5/14
 - b. Met with Steve/team last week to go over results from simulation
3. Mike Risi
 - a. Working on sonar simulation for obstacle avoidance

Week 18

1. Kent Headley
 - a. met with Steve to talk about doc outline, and potential TRN update tasks
2. Rich Henthorn
 - a. Refining LCM message handling

Week 17

1. Kent Headley
 - a. Developing TRN documentation outline
2. Rich Henthorn
 - a. Analyzing multi-vehicle TRN sim with DAT info transmission

Week 16

1. Rich Henthorn
 - a. TRN and CoNav LCM

Week 15

1. Rich Henthorn
 - a. Design of LCM handling in both TRN and CoNav

Week 14

1. Rich Henthorn
 - a. Shout out to Michael Anderson for 3-vehicle LRAUV sim with acoustic comms
2. Brian Kieft
 - a. Got Steve some initial data from the gazebo sim with TRN running.

Week 13

1. Michael Anderson
 - a. Enabled multi-vehicle sim to recreate Portuguese Ledge circling
 - i. 3 vehicles circling at 120 degrees apart
 - ii. Two vehicles pinging third with DAT and sending that ping data + TRN data to the third vehicle via acommms
2. Rich Henthorn
 - a. CoNav simulation on LRAUV

Week 12

1. Rich Henthorn
 - a. TRN and CoNav simulations
2. Brian Kieft
 - a. Dealing with various networking issues on the lab sim setup. Trying to get Steve a sim run with TRN Data Bridge in place.

Week 11

1. Rich Henthorn
 - a. Testing CoNav with local vehicle TRN onboard
2. Brian Kieft
 - a. Met with Steve/Rich/Michael to work on multi-vehicle (conav) simulation.

Week 10

1. Rich Henthorn
 - a. Vehicle TRN inputs integrated into CoNav computation

Week 9

1. Rich Henthorn
 - a. TRN - CoNav integration
2. Mike Risi

- a. Finalizing contractors agreement

Week 8

1. Rich Henthorn
 - a. Integrating vehicle TRN data into vehicle CoNav processing

Week 7

1. Michael Anderson
 - a. Finished writing TRN data bridge (put data from TRN backseat on LRAUV slate)
 - b. Meeting with Steve Rock for status and next steps (ingesting TRN and CoNav)
2. Rich Henthorn
 - a. Lrauv LCM decoder for CoNav channel
3. Mike Risi
 - a. Meeting with Steve and some administrative tasks

Week 6

1. Kent Headley
 - a. Working on outline for doc

Week 4

1. Rich Henthorn
 - a. TRN - LRAUV LCM comm software

Week 3

1. Rich Henthorn
 - a. Finishing up a CoNav/TRN LRAUV comms interface class
 - b. Encapsulates translation of LrauvLcmMessage TRN message for clients and servers
2. Brian Kieft
 - a. Met with team to test initial ingest of TRN data. Rich is making updates to publish lat/lon solution and we'll ingest and use it as a fix. I need to fix the sim to start over the test site at Portuguese ledge.

Week 2

1. Rich Henthorn
 - a. Planning meeting with Rock and LRAUV team
2. Brian Kieft
 - a. Met with team yesterday and today and have a plan to move forward with TRN solution ingest onboard the LRAUVs.
3. Mike Risi

- a. Meeting with Steve Rock for obstacle avoidance task