



WRSC data

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1 pièce jointe



wrsc2013_minty2.zip

Hi Fabrice,

Attached is my data from the WRSC.

Once again thanks for organising the event and I hope to see you at next year's WRSC.

Colin.

Downwind and Accuracy task from Wednesday

I already sent the logfiles but have included the sonar data here.

downwind_accuracy.png - sonar data taken during the downwind and accuracy tasks

downwind and accuracy task sonar data.kmz - same data but imported into google earth and using a geotagged geotiff file. Note that the alignment of the image in google earth isn't quite perfect due to the way google earth imports images.

Long distance race

At the start of the race there seemed to be some confusion about the location of the start line and I think it had moved a little to the south east from the location we were originally given. I was also given a false start signal and had to stop the boat after a short time. I then modified the waypoint live. If you look through the logfile there are some lines from the radio modem showing this and the wplat= and wplon= lines do change while wpnum stays the same. In my KML file i've indicated the position of the modified start position. If you look through the logfile longdist1.log any line with autom=0 is manual control, autom=2 is heading hold mode which I used to help avoid some other boats and autom=1 is full autonomous. There are also a couple of times that I had to use manual control to avoid other boats near the start. Near the end of the first logfile (longdist1.log) I accidentally pressed the wrong key on my keyboard and this skipped a waypoint. I then removed the first waypoint (that i'd already passed) from the waypoint list and restarted the control system, this is shown in longdist2.log

Near the end of the race the fuse to my left motor went and you can see that the boat turns off course and in the graphs the motor current drops to zero while the input signal does not.

longdist1.log - log file from the first part of the long distance

race until I accidentally skipped a waypoint.
longdist2.log - the rest of the long distance race
longdist1.pdf and longdist2.pdf - graph of boat data including
battery and motor currents
longdist1.kml - the log file in google earth KML format with waypoints
longdist2.kml - the log file in google earth KML format with waypoints
longdist1.gpx - the log file in GPX format with timestamps
longdist2.gpx - the log file in GPX format with timestamps
longdist_depthmap.png - the sonar depth map. The sonar requests you
put in the maximum depth and I had chosen 25 metres, it turns out the
water was deeper than this, which is why some of the area isn't filled in.
long distance sonar.kmz - the sonar depth map overlayed in google
earth. Note that the alignment of the image in google earth isn't quite
perfect due to the way google earth imports images.
longdist-passingboat.png - I saw this boat shaped object on the
sonar and thought i'd found a ship wreck. Unfortunately I realised it
was just another boat driving past me.
longdist_roll_pitch_heave.pdf - a graph showing the roll/pitch
angle and the heave measurement (wave height) during the long distance
race. The roll/pitch are generated by an inertial measurement unit, the
heave is a combination of the IMU and a phase based GPS receiver.

Station keeping

My boat had some problems with this task as it was too windy for
the boat. I thought it had started trying to do the station keeping when
it was actually still trying to reach the waypoint but struggling
because it kept getting blown away from its line. The chase boat driver
kept getting me wet by driving too fast into waves and got my laptop wet
so I had to stop the attempt because my laptop stopped communicating
with the boat properly.

stationkeeping.log - the logfile
stationkeeping.gpx - timestamped GPX file
stationkeeping.kml - google earth file