The Round North Island series got us to complete four legs which, when combined, rounded North Island to port. I understand there is a variant that changes the 2nd leg finish/3rd leg start to Stewart Island at South Island. A rather nice feature was that the IRL boats were featured on our race screen, so that we could directly compare our progress to theirs!

Some of my further zoomed-out screenshots track the paths taken by the IRL boats Coppelia, Kia Kaha and Wired. Their boat traces can differ considerably from what we in SOL sailed. This is largely due to a few differences between SOL and IRL sailing:

- Mangonui 1

 Auckland

 CRNI2 20

 Napier

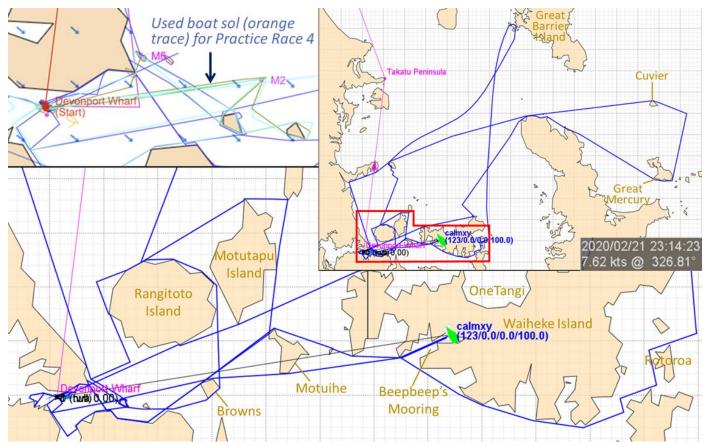
 Wellington
- Water currents have no effect on SOL boats, but they obviously affect the IRL ones
- SOL boats can only hit land and performance is unaffected by contact with other boats (sailing 1cm from certain headlands is perfectly normal for better rounding) but IRL ones must avoid rocks, shallow water and other boats etc.
- Due to the wind gribs, certain localised wind effects may not carry over to the SOL boats, for better or for worse
- All the SOL boats use Class 40, but IRL boats use a variety of permitted polars with a handicap adjustment (which is why IRL Wired didn't place particularly well in the time-corrected results)
- Full list of IRL rules here

To SOL competitively, one should be awake, at minimum, for the arrival of each new Wx so that commands (especially TWA ones) can be set accurately. While routing (e.g. QtVIm, Kipper's tool) can be helpful, it is important to note that certain nuances in the Grib and routers' limitations mean that manual adjustment is almost certainly required for the best results. For me, I also use information derived from suitable competitors' decisions i.e. their boat traces, as this can inform me to a different strategy which I may have missed.

Perhaps it is that last point that is why being able to sleep well and SOL well requires pretty good skill and luck. It's probably happened to me in other races too, but here it's rather prominent: start in the morning Singapore time, find little ways to incrementally gain a small lead over the others, only to lose it all (and then some) when I inevitably fall asleep later that night. In fact, I was in a sustainable podium position (sometimes even leading the race) at some point in every leg, but only two legs even finished in the top 10. Honestly, I wouldn't be surprised if a podium finisher's report made reference to me.

Since the IRL boats are manned by exactly two skippers each, and they (like SOL boats) are permitted to have autopilots installed, I wonder if some of them took turns to rest so one of them was always at the helm.

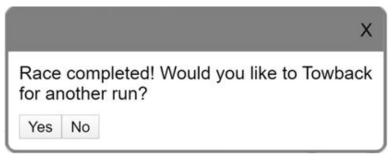
On the SOL side, the Auckland to Mangonui leg opened a few days early so we could practice with our Class 40 boat, which was last used in Regata Palermo Montecarlo in Dec 2019. Later legs would open much closer to race start, since these were determined by when the IRL boats finished the respective legs.



To me, practice sailing is like the open sandbox, with the race marks included so that you could choose to practice the actual course. The only constraint (assuming you aren't practicing the race course itself) is that the round trip from the SOL start-M1 line should not exceed 22 hours, as that's the minimum amount of time between Practice Races and I try not to miss any.

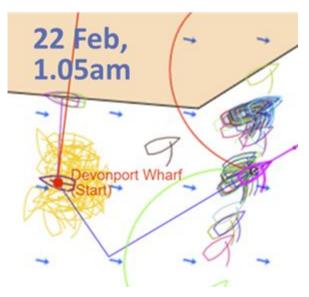
Auckland does have many islands and landmarks that make this "sandbox" fun to play with. There's always the fun question of which islands you can round within those 22 hours; good sailing technique will get you further. There's just one more feature that I wished could be

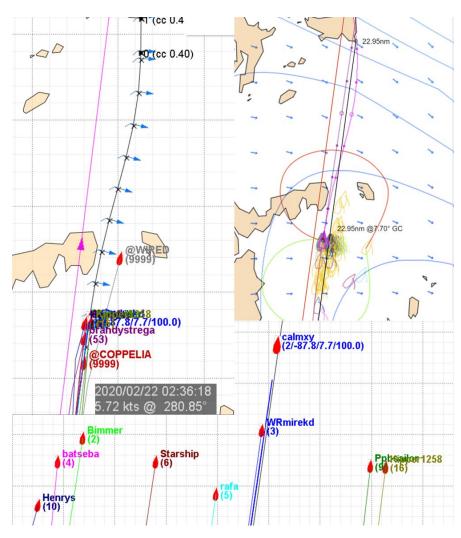
implemented for Practice Sailing (perhaps it could also be used in Timed Races for starting your next attempt?), then I can practice somewhat longer races without having to forgo the Practice Races.



Eventually, it was time to Towback to the new Start mark (Devonport Wharf) as requested by the organizers. I bet Dikkehenk wasn't impressed by that,

as was a couple of others who went north and almost immediately BBQ'd, as the previous start was in more open waters. But since this series was buddied, it only made sense as the race course should resemble what the IRL boats have to sail. Other than that, it was a matter of making that single gybe at the correct time to round North Head.

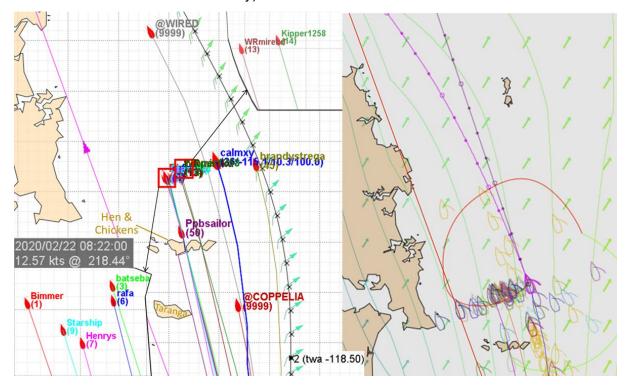




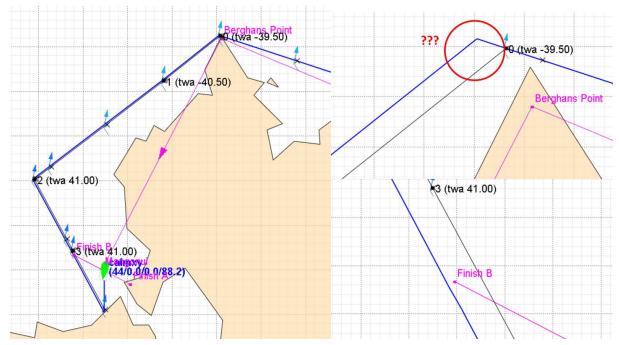
In Auckland to Russell Timed race and PIC Coastal, I remember simply setting the command of cc 7.7° to get from North Head to Kawau Island quickly. Perhaps that was because the winds were nice and strong, with the only wind gradient being that it got stronger as one headed NNE, so the geometric path worked. But in this RNI race, there were weaker winds closer to Motutapu Island, which affected the wind gradient. While some boats continued with the cc 7.7° route (easier to set), some others went with me on a "curvy" path that first went west, coming close to Whangaparaoa Peninsula before curving the other way and meeting at the southeast tip of Kawau Island. I came out of this in 1st place.

I then noticed that rafa, WRmirekd and a few others were not sailing the geometric route along Kawau Island's east coast. This baffled me, as I thought that the setup to Cape

Brett Light was to follow the geometric route and try to get to Takatu Peninsula first before starting what one decided was the "optimal curve". Or was it that the "optimal curve" really started with a command heading more east than cc 352°, hence the need to not follow the geometric path? It turned out that those were likely mistakes on their part (and which I didn't correctly interpret). Mistakes that bonknhoot didn't make, which was also likely how he held the lead at Cape Brett Light. I ended up taking too wide of an arc (wider than even the IRL boats, which can't sail between the Hen & Chicken Islands efficiently).



The correct path was through Hen & Chickens, rounding Whatupuke Island closely on either side (although rounding Coppermine Island to port would still have worked for a Top 10, if done very closely - Beliberda did this strategy). While I closed down the gap approaching Cape Brett Light, I was only 18th and 160 seconds behind race leader bonknhoot upon reaching it. But I knew that a low teens or even a 10th placing may be just about doable, as long as I chose the correct geometric course between the islands (specifically, south of Cavalli, south of Motuekaiti and south of Stephenson - this combination minimized distance travelled). As of rounding Stephenson Island to the south, I had climbed to 14th; I was aware that a couple more boats in front of me could fall behind as going further offshore for a bit more wind would result in a less favourable TWA going to Berghans Point. Meanwhile, the IRL fleet all kept further off the coast, but also largely followed the geometric route.



With the new Wx, and still 160 seconds behind bonknhoot, I went ahead to set some DCs for the finish. Frankly, this DC setup is as simple as it gets, given that this was also set using the correct Wx basis. Round Berghans Point, one tack and there, finished. If the DC fired early, it would only waste a few seconds as I would still finish, just further east than the ideal spot. This should have guaranteed me a finish around 11th place... or so I thought. Nope, the two tacking DCs decided to fire late instead, which caused me to just miss the finish line to the west and BBQ for a good 45 minutes. Suddenly, it made the Takatu-Cape Brett inefficiency seem like nothing. This caused me to finish 44th instead, thus destroying any chance of finishing on the overall RNI podium. Now at least I know, the "danger zone" of DC-setting in Kipper's tool extends both ways.

opened a few hours later. Due to how the start times for the IRL boats are determined, there wasn't much time to practice here. But nonetheless, there was just enough time for one practice race. Perhaps it's good for me to get more practice in that Class 40,

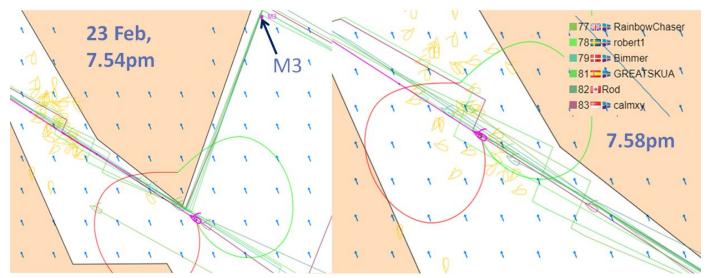
especially if I can somehow pull off what I did at the end of the first leg.

The second leg from Mangonui

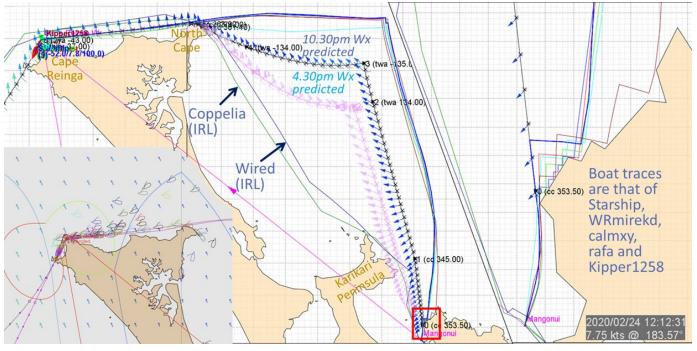
SSANZ RNI 2020
Practice Race 5
Sunday, 23 February 2020
TIME: 1900ute
DESIGNER:
RainbowChaser

M3

M4

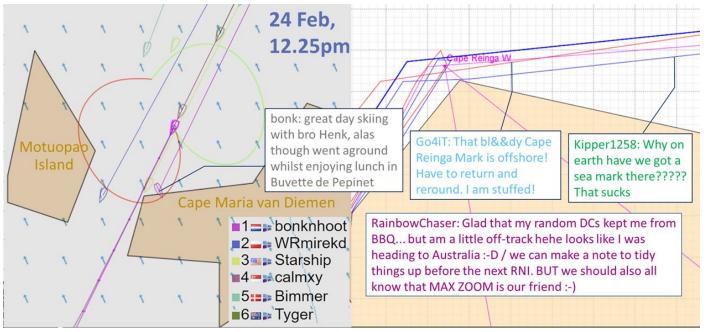


This Practice Race was almost like any other... except for one thing: what was not shown on the PR map was that between M2 and M3/M4, all the IRL boats were moored there. Hence, in completing this Practice Race, we barged through them twice... which luckily for them, probably did nothing beyond rocking their boats slightly (if anything) due to the nature of SOL boats. Well, what are you (IRL boats) doing there, you should be practicing your rounding skills! Oh wait, the rules and regulations mean that your practice has already likely done before you were eligible to participate. Oops.



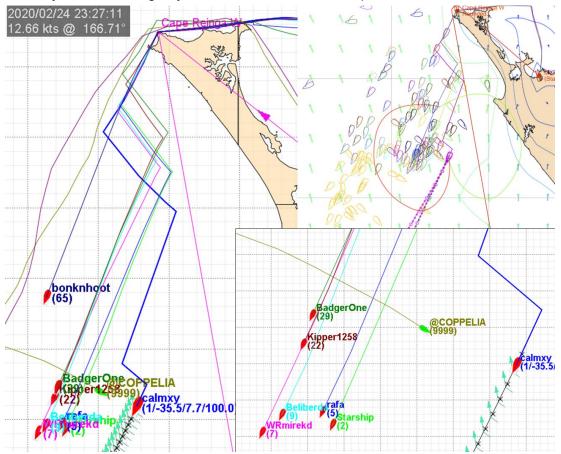
The second leg started with a windhole stretching in a north-south direction starting from Karikari Peninsula. Or at least it was for us SOLers, likely due to the two relevant model points of the NOAA grib both having weak winds, which then interpolated to give the windhole. The IRL boats who sailed between these Grib points enjoyed 15 knots of wind and built quite a lead over us as they took a near-geometric route to North Cape.

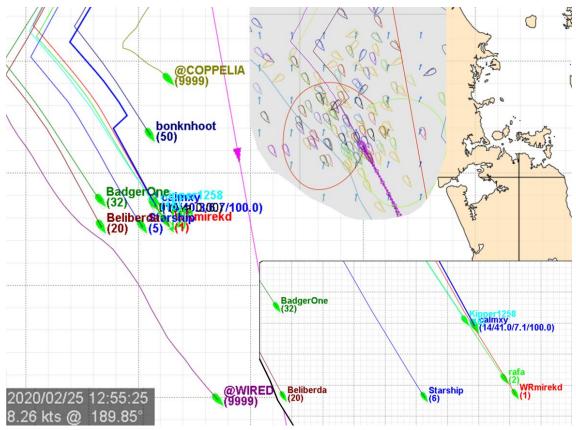
Due to the windhole, those who tried to replicate the IRL boats' paths did not fare as well. Instead, it was better to keep towards the east to clear the north end of the windhole then gybe. It took me by surprise when rafa and WRmirekd then starting tacking along the east coast of Doubtless Bay (in what was supposed to be primarily a downwind leg). Turns out that this was done to keep more distance from that windhole and get stronger winds which would more than offset the extra distance travelled.



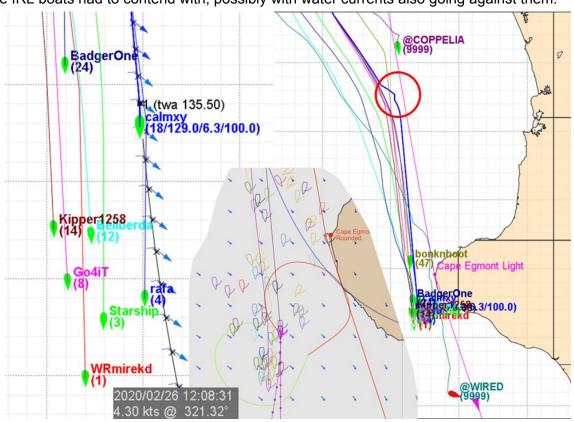
From North Cape, it was straightforward to get to Cape Reinga. But rounding Cape Reinga was a different matter. By right, the IRL boats do not have any specific marks to round; the only requirement is they travel around the North Island anticlockwise to complete their legs. For some reason, the SOL Cape Reinga was slightly offshore, thus bringing grief to quite a number of SOLers (batseba, Go4iT, Kipper1258, PreXise among others). Further down, bonknhoot somehow went bonk on Cape Maria van Diemen (possibly the DC fired too early, as it tends to do when you aren't there), thus relinquishing his lead. Hopefully that time spent with Dikkehenk was worth the BBQ:-)

All these meant that I had managed to climb to 3rd place. Ideally, I wanted to follow WRmirekd and Starship all the way to the finish. But that wasn't practical, especially when the next day was a working day, so I set some DCs and hoped for the best.





I woke up the next day to find that I was in 1st, but on a significantly different path from WRmirekd and others. This indicated that I probably made the wrong choice in DC-setting. It was a matter of deciding if I wanted to rejoin behind WRmirekd and cut losses (e.g. TWA of 45° to gradually rejoin) or keep my racing line. I chose the latter, and while it appeared to work initially, I then spent the next few hours in winds consistently 0.3-0.5 knots weaker than that of the others, thus losing lots of ground to WRmirekd. By the time I rejoined the group, I had fallen to 14th place. On the other hand, we SOLers had managed to catch up with the IRL boats at this point, as the NOAA grib effectively "moderated" the effect of a windhole that the IRL boats had to contend with, possibly with water currents also going against them.

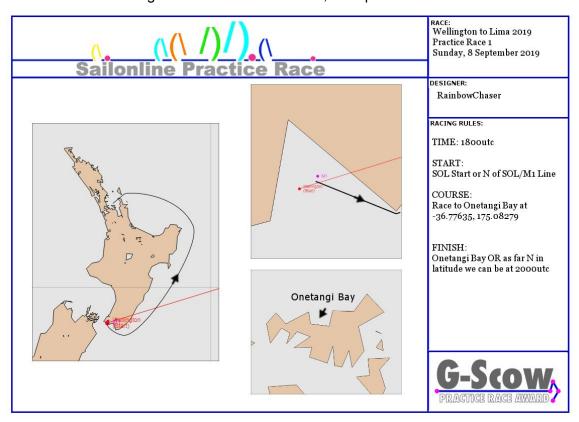


We still had to get through this patch of blue to get to Wellington. Yes, the Class 40 is one of the better blue goo-busters, but still. The ideal path was not to get as close to Cape Egmont as possible (though some did so anyway), but rather to go straight south where stronger winds awaited to bring us to Wellington. A few gybes off Arapawa Island remained before following the geometric route along Wellington's coast and to the finish. The gybe angle meant that although the Kakori Light mark was also offshore, it did not catch SOLers off guard the way Cape Reinga did. It also meant that I was unable to climb up any places from the 19th place that I was in then.

Special mention should go to bonknhoot, who tried hard and finished in 33rd despite the hours-long BBQ that ruined this leg.

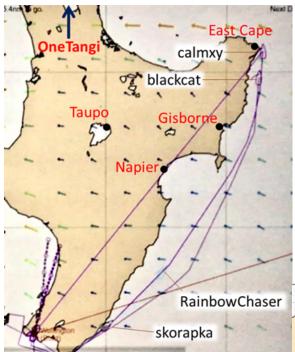
It would be some time before the IRL boats managed to escape the light winds/opposing water currents and get to the finish, so our attention was turned to the Black Gold race for the next couple of days.

Sometime on 1 March, the third leg to Napier opened. Now that we were at the southern end of North Island (Wellington), it was time to climb back north. Well, given my score of 44/19 at the time, I could certainly improve on it. It was then that I remember sailing around here on one occasion: the Wellington to Lima Practice Race, in September 2019.



Normally, Practice Races are kept to within 2 hours of length, effectively meaning that they would behave as Sprint Races. Well, they were meant to be kept short. They do also help in longer races where rounding multiple offshore marks and islands efficiently is required.

What's special around this one is that there were two "races": one that finished at 8pm UTC, and another that was ranked at 5pm UTC the next day (just before Towback). The unusual parameters of this Practice Race meant that heading up the west coast of North Island would win the first race. However, heading up the east coast was essentially racing Legs 3 and 4 of Round North Island and was required to be ranked in the second race.



robert1 and sassy63 raced up the west coast in that Practice Race and stopped at 8pm UTC, without any further sailing until Towback. Leading the Practice Race heading up the east coast, I managed to pass Gisborne and just about made it to East Cape in the allotted 23 hours before the Towback pulled me through Napier and back to Wellington.

Replicating that in the "practice sailing" of the Wellington to Napier leg would be impossible. The Class 40 boats are slower than the VO70_v4 boats, there was less than 23 hours to practice and even if we somehow made it that far, the race boundary would prevent us from proceeding all the way to OneTangi.

The first part of the race required negotiation of the narrow channel between Breaker Bay and Pencarrow Head. Baring Head Light could be reached in 2 gybes if the first one was towards the southeast. However, most of us did 3 gybes instead to reach stronger winds outside the bay more quickly, and performed two of those gybes next to Breaker Bay.

From Baring Head Light, past Ngawi's bulldozers and Cape Palliser, to White Rock was mostly Breakery
Bay

Go4iT

WRmmeRd

Kipper1258

(8)

Beliberda
(16)

Calmxy
14/-150.0/9.9/100.0)

Pencarrow
Head

2020/03/02 02:54:36
14.75 kts @ 348.16°

Bad
(54)

WRmmeRd

Kipper1258

(8)

121a
(16)

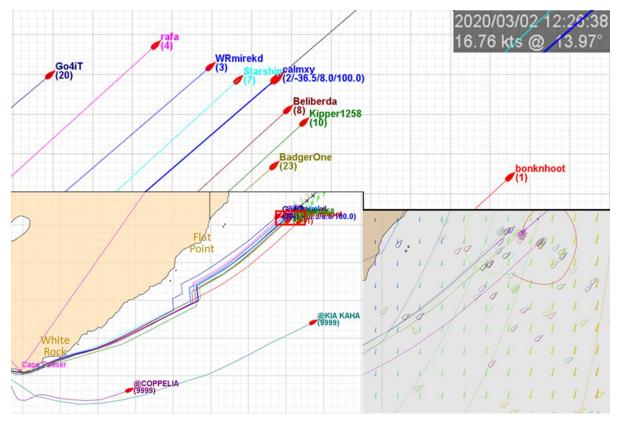
Calmxy
14/-150.0/9.9/100.0)

@COPPELIA
(9999)

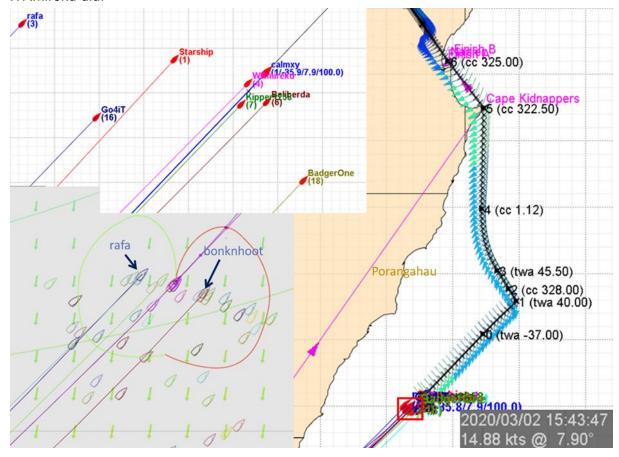
Baring
Head Light
1 (6c 129.00)

geometric. The long stretch in Palliser Bay saw some slight deviation from the geometric route. Similarly, some boats opted for a faster TWA angle near White Rock which would keep stronger winds around them.

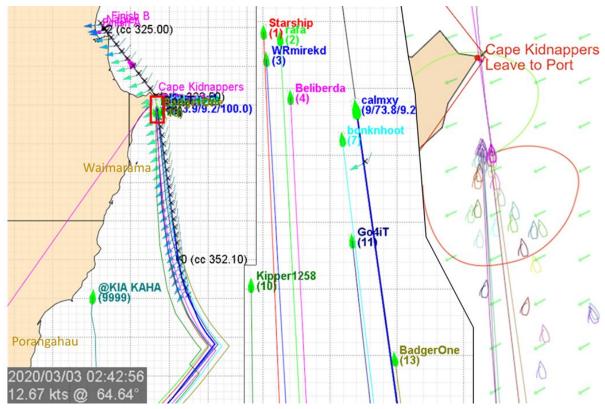
Many of us tacked north for a while when we were south of Flat Point before tacking back. bonknhoot and his little group kept heading in the same direction without tacking. Although the max upwind VMG took place at 19 knots of wind, there was relatively little difference in upwind VMG between 12-19 knots of wind. This, combined with subtle differences in wind direction, may have been why many made this pair of tacks. I aimed for the approximate midpoint between rafa and bonknhoot, so that I could cover both sides. At best, my path would be the winning one and at worst, I would only lose to the boats on either side (the winds were such that the scenario of "middle route is the worst" would not occur here). In any case, given the unpredictable winds ahead that could change with the next couple of Wx updates, the best choice was also down to luck.



In any case, a change in wind direction was expected as we approached Porangahau. I set the expected path to Cape Kidnappers early, intending to tack ESE of Porangahau, but that got invalidated as the weaker winds went further offshore than what the earlier Wx indicated. I then revised the tack to be east of Porangahau, which was around 5 min later than what WRmirekd did.

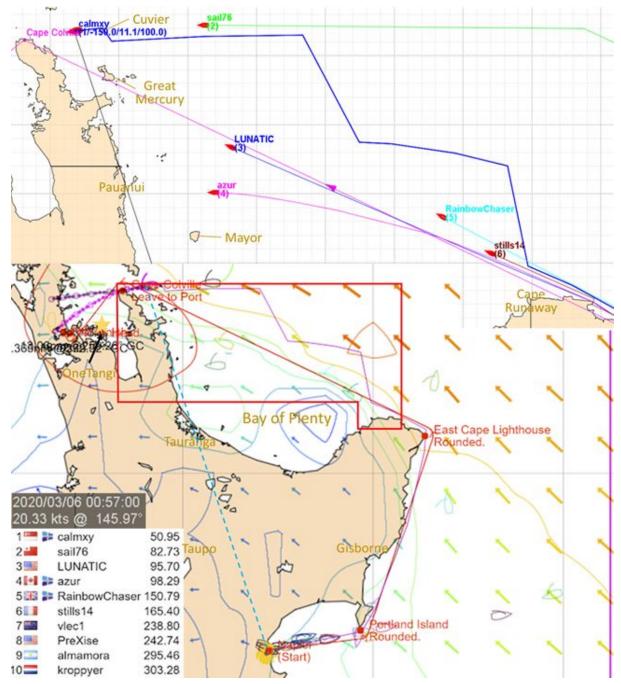


By this point, both rafa and Starship were around a minute ahead of WRmirekd, proving that it was better to have kept further west despite the weaker winds. But this tack did cost me around 45 seconds relative to WRmirekd, as I had failed to take into account that the winds were actually weaker towards the east for the first two hours after the tack. But by keeping my intended sailing path instead of rushing to join back, I did gain from stronger winds in a more favourable direction after that. Upon rounding Cape Kidnappers, I was tied with Beliberda and bonknhoot for 4th.



The last stretch to Napier could have been completed reasonably well with a single COG command, but noticing that the three boats ahead had all taken a slight curve, I decided to follow them even as Beliberda and bonknhoot kept with their single COG commands. It's hard to tell, but that may well have helped break the tie so that I could finish 4th (overtaking Beliberda at the last moment), which is my best RNI leg by rank.



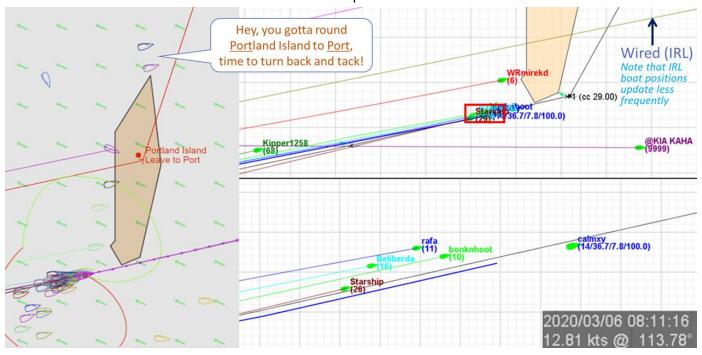


The final leg to Auckland opened 29 hours before race start, at the conclusion of the Puerto Vallarta Practice Race. This leg opened with a Practice Race which was to get to OneTangi (or as close as possible) with Portland Island rounded to port. This was quite a popular Practice Race, with 6 of us making it into the Bay of Plenty. Following mostly a geometric path to East Cape Lighthouse then gybing towards the north, I built quite a lead over the others. It was functionally identical to racing the actual course since the two would only reasonably diverge at Cape Colville. I got close, but ran out of time as I was a mere 36nm away from OneTangi when the Towback kicked in. Maybe WRmirekd or Starship could have gotten a couple nm closer if they attempted this Practice Race?

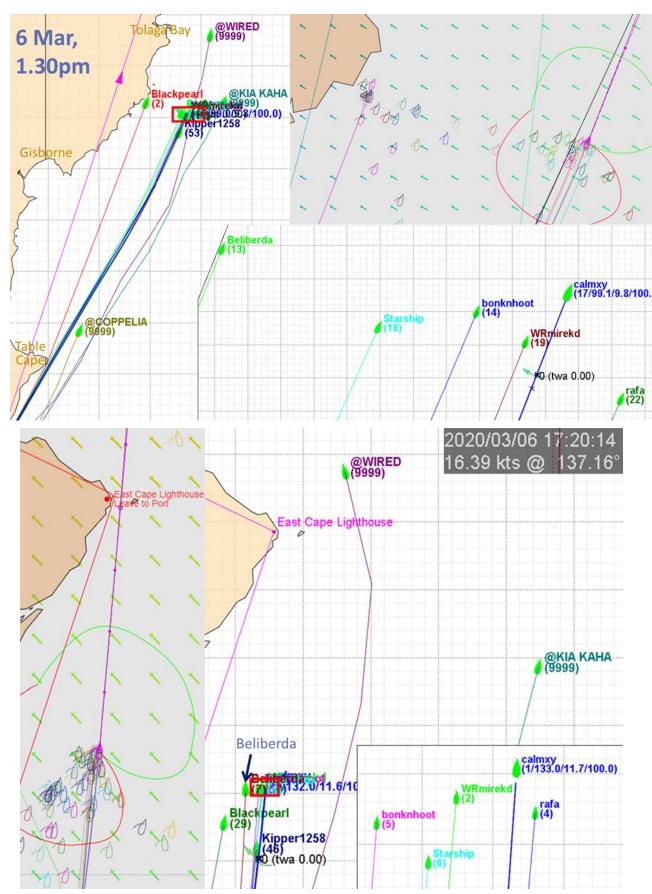
It always seems as if winds in the "Practice Sailing" time tend to be better than those in the actual race. Or at least I remember those instances more prominently.



Portland Island was just close enough to Napier that with our Class 40 boats, the predictor line would just about reach there. A bit of risk-free playing with the steering during Towback (since your boat doesn't move or even lose performance) indicated that the max VMG upwind (TWA +39° for starting winds) would take a little over 6 hours to round that island. That wouldn't have performed too badly. Reducing the TWA even further (+37-38° shortly after the start) would enable reaching stronger winds faster, then a COG command before changing back to TWA enabled me to get into the lead. WRmirekd had an interesting strategy (likely setting a faster TWA) which saw him in front of me, but the two additional tacks next to Portland Island caused sufficient performance loss to fall behind.

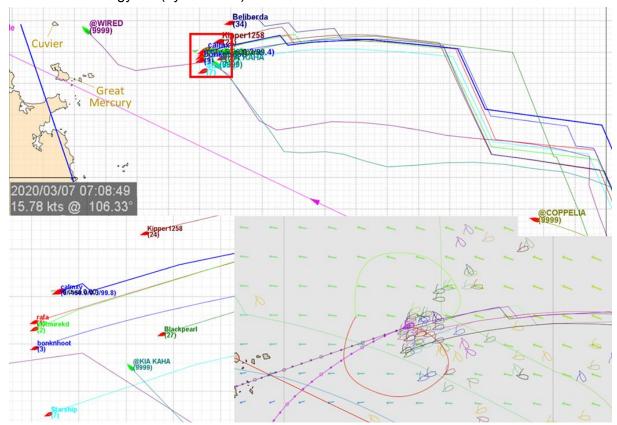


My next command upon rounding Portland Island was COG 29°. I had contemplated the geometric route by keeping closer to the coasts, but had concern over BBQing in following too closely to the coastline as I was expected to be busy that afternoon. Checking back around an hour after rounding Portland Island, it seemed like while that geometric coastal route was taken by some, WRmirekd and others took a path similar to mine, diverging from the coast by an additional degree or so. Those who took the geometric coastal route initially appeared to be in the lead, but better winds (both in speed and direction) meant that they fell behind by the time we passed Tolaga Bay. Following the max speed TWA for a bit then sailing a straight line to East Cape Lighthouse let me maintain my #1 rank and even increase that lead slightly further while being able to sneak in an hour's sleep. The same could not be said for Beliberda, who BBQ'd there for a bit.



I found that although I was #1 in the race, I had 30 seconds of lead here as compared to 30 nm of lead at this point in the Practice Race. One slip (as it would inevitably happen) and I would probably lose the #1 rank. That hour of sleep earlier wasn't enough; while on a COG command to get into better winds north (slightly off the max downwind TWA), I fell asleep again; having last checked those DCs on the previous Wx didn't really help either, I ended up sailing too much into the tailwind and gybed nearly an hour late, thus losing around 6 minutes to WRmirekd.

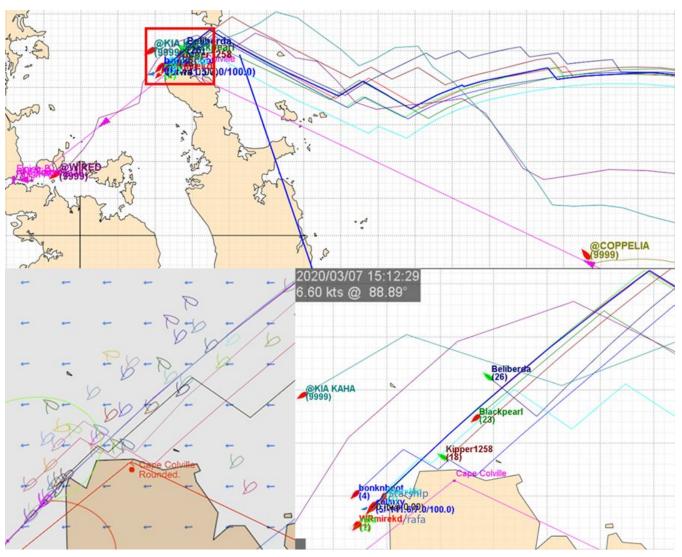
The Bay of Plenty gave plenty of opportunities to overtake... and by definition, also to lose places. The tricky part was when to make your gybes. Although the winds were weaker than that in the Practice Race, there was still a fair amount of wind north of the rhumb line. South of the rhumb line was to be avoided, as the winds were all but gone there. The rhumb line, however, was only a low-level estimation of where not to cross, as the wind direction allowed more favourable gybes (by direction) as one headed south.



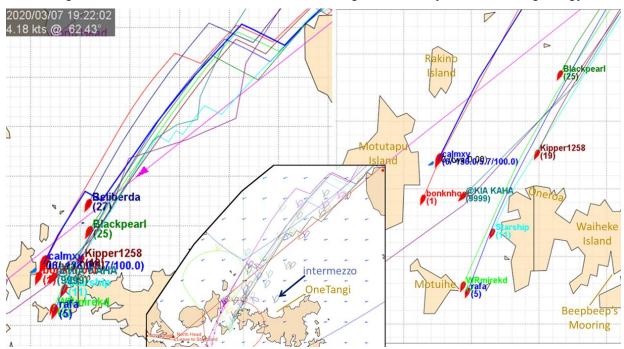
A fair variety of tracks were made for the gybes in the east and in the west; most, however, kept near the 36.5°S latitude line in the middle, as winds were actually weaker north of that line. Interestingly, all the IRL boats kept south of where we were; perhaps this was due to a more favourable water current? I lost a couple more minutes to the leaders; however, I did overtake Starship, who kept noticeably further south.

We passed between Cuvier and Great Mercury Islands in steadily decreasing winds; by around 12.30pm UTC, I made my closest approach to where I was immediately before the Towback, at around 1.1nm north of that point (similar to the other leading boats). I intended to cross at exactly that point, but the winds were significantly weaker there and I feared that doing so would cost me too much more time to remain in the top 10. Some, like Bimmer, Blackpearl and Starship passed to the south of the Towback point. As I had sailed around here in the first leg's "Practice Sailing", I had come full circle around North Island. All that remained was to cross the Hauraki Gulf NE to SW to finish the RNI series.

The winds in Hauraki Gulf were around 4 knots in the south to 6 knots in the northern and centre parts. After rounding Cape Coville, a gybe was made to keep in the better winds. Presumably the second gybe was meant so that we could sail between Motuihe and Motutapu Islands, or perhaps between Motuihe and Waiheke Islands.



Given the placement of the different islands and the winds, it wasn't optimal to reach the finish by passing between any other islands. Many of us chose to leave Motuihe to port, but the Wx change meant that Motuihe would be left to starboard if sailing too much into the tailwind was to be avoided. Alternatively, another pair of gybes would enable a better rounding of Motuihe to port, but it only really worked if done shortly after the Wx change. As I took too long before making that change, it cost me a further few minutes and I fell behind Garagiste into 6th (although it wasn't apparent until the two paths converged). I didn't reach OneTangi, but intermezzo did the honours of heading into that bay before making the gybe.



Thanks intermezzo!

I also did the countdown for the Puerto Vallarta race which started around 85 minutes before we finished here. It was a good thing too, as it did help keep me awake for long enough to make the final gybe towards the finish; at the rather specific angle of TWA +135.2° in the right place, it would enable all remaining islands to be cleared. Any other angle or doing so at the wrong place and it would require additional commands or else result in a BBQ. The only remaining command was to take advantage of the wind angle after Devonport; Go4iT probably overtook somewhere in this time but at least I made it to the finish without BBQing first.

Overall, the last two legs went much better than the first two, but those first two legs prevented me from achieving an overall top 10 (even if measured by time). Congrats to rafa for 4 podiums and WRmirekd for being the only other one to get 4 top 10s!

The points that I have seen in certain 2018 reports are certainly true:

- 1. Always question QtVml (not that I used it much, but certain obvious and more obscure improvements could usually be found)
- 2. Trust QtVml only if you question your instincts
- 3. Override VMG is an avoid performance loss
- 4. rafa, WRmirekd, bonknhoot, Starship and Kipper1258 are all not invincible (although, evidently, neither is calmxy)
- 5. Floss your teeth
- 6. Relax your feet
- 7. Feed your significant other well you'll never know what happens next
- 8. Run a logbook you may feel compelled to write a report, especially if you win

Summary of RNI results (Top 10, Starship, Jawz and calmxy)

Boat name	Leg 1	Leg 2	Leg 3	Leg 4
rafa	3	3	1	2
WRmirekd	5	1	3	1
batatabh	9	4	8	11
Kipper1258	2	9	10	18
Jawz	17	13	7	4
Go4iT	20	7	9	6
bonknhoot	1	33	6	3
Henrys	4	18	15	9
Beliberda	8	8	5	26
CelemansRKN	13	6	26	8
Sebensa	7	14	21	14
calmxy	44	19	4	7
Starship	109	2	2	10

Total points		
9		
10		
32		
39		
41 (169)		
42		
43		
46		
47		
53		
56		
74		
123		

Full RNI results by SOL points (174 boats)

- Official results (only includes SYC members; 81 boats)
- Grey scores are non-SYC finishes
- The last column is adjustment for SYC membership, if applicable

Full RNI results by corrected time (69 SOL boats, 33 IRL boats)

- This is the basis used for awarding prizes in the actual competition
- Arranged by total "corrected time" (by "Line time", IRL Wired is the winner)
- Assumed that the PHRF of SOL's Class 40 boat is exactly one
- Only boats that have finished all legs are ranked (in the actual competition, a DNF in any leg effectively means unranked in these results)
- Blue highlighted rows are the IRL boats