
Golden Globe Race 2018: Race Report

by ij
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1 Goals and Methodology

Joining race like this running months and months is a huge commitment. The biggest gains, for others I mean, occur when you are not paying attention. Given that I don't have time to babysit the boat whole the time, top 20 seemed like possible to achieve considering that there likely are many tough competitors who have much more time available for racing so anything better than that seems to be a long-shot. Certainly, this is not a race for those who pay attention, possibly a lot, for the first week or two but then lose interest as the large number of boats wrecked on the coasts or stopped by the race boundary in leg 1 show.

I'll be using a router (qtVlm) to assist my route building. With long races like this, it is essential for me to lower the time required to handle the boat. As such, I'm not sailing as SOTP ("Seat of the pants" without assistance from tools/software besides what is offered by the SOL client's normal interface) unlike some others who have declared to do so in this race to mimic the challenges faced by the real competitors. But then, I also make many decision against what the router suggests.

2 The Race

2.1 Bay of Biscay

Initial departure winds were OK but it was expected to get much worse soon in the bay. At some point of time, boats were sailing to almost all possible directions in seek of better winds and due to Rustler 36 lacking ability to point high into the wind, a tack just nearly reverses your pre-tack course. Somebody noted that such chaotic fleet looks very funny. It took almost a week to clear the Bay due to low winds speeds and wind direction. We turned south still seeking for better winds.

2.2 On Trade Winds

Initially, there was quite little wind when heading south. A slightly better corridor appeared along a weather grid line and it was very obvious to head south exactly there. Some SOTP sailors were even accused to use outside help because many

had figured the same out but it was hardly surprise that boats end up sailing where the wind is.

Once we sailed more south, the trade winds picked up and carried us to our first WPs at Canary Islands. Good winds continued and we headed south once again. I was slowly losing some to the leading boats because of how wind gradients favored them but that did not bother me too much, given my goal. Doldrums did not present any obstacle this time because of a strong push from the trade winds from the north. I was around 25th in ranking around that time.

2.3 Atlantic Routing Southwards

I had strongly decided to follow the traditional wisdom inherit from the golden age of sail and head South instead of the more direct SE route that would mean long headwind battle against trade winds all the way to the Cape Good Hope. Long before reaching South Atlantic, I had spent time observing wind patterns at the Southern Atlantic. Based on the observations (and pilot charts), near Monrovia seemed the place to tack and head initially to SW to reach the more favorable wind angles later. Another good side for that route was that I end up reaching the subtropical ridge where it tends to be narrowest and at the northmost position. But it is of course quite volatile so it will depend much on luck too whether I get a good passage or not through the ridge. Once past the ridge, it will be Southern Ocean wind speeds and the generally favorableness for the indented direction of travel, thus it's better to catch it them as soon as possible.

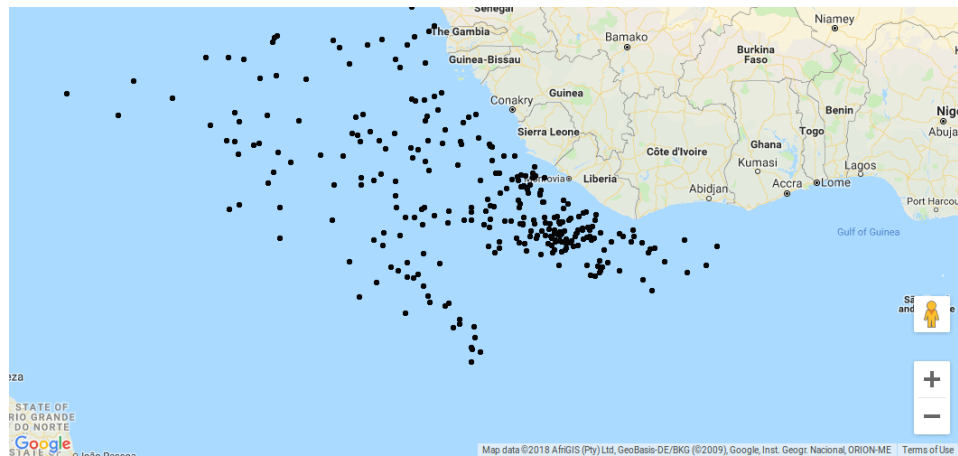


Figure 1: Different route decision leading to a major gap in the fleet (source: sollog)

When nearing the decision point, everyone ahead of me seemed to continue SE following **Kipper1258** who was leading together with a few very close by. Finally **Dingo** (SOTP) took the initiative when I was about one day from my indented tacking point and turned to SW. A few soon followed, including me. Initially the winds were weakening, however, which probably discouraged more from the coast of Africa to following us. Instead they kept sailing into better looking winds SE. In fact, I was among the last to depart from the coast and the rest on the traditional route sailed on a non-coastal route already from north. The fleet was now split into two with empty gap in between (see Figure 1).

The weakening winds also brought a wind shift such that the initial angle was quite far from good meaning we lost lots of distance compared with those heading SE. Except **Dingo** and a few other early diverging boats sailing close to him who were ahead and able to attain much better angle and sail almost directly to south. For our group, the following weeks required just minor tweaking of wind vane settings while we tried to push south as fast as possible. The router suggested occasionally a tack when wind angle turned enough but I ignored such advice and kept pushing south.

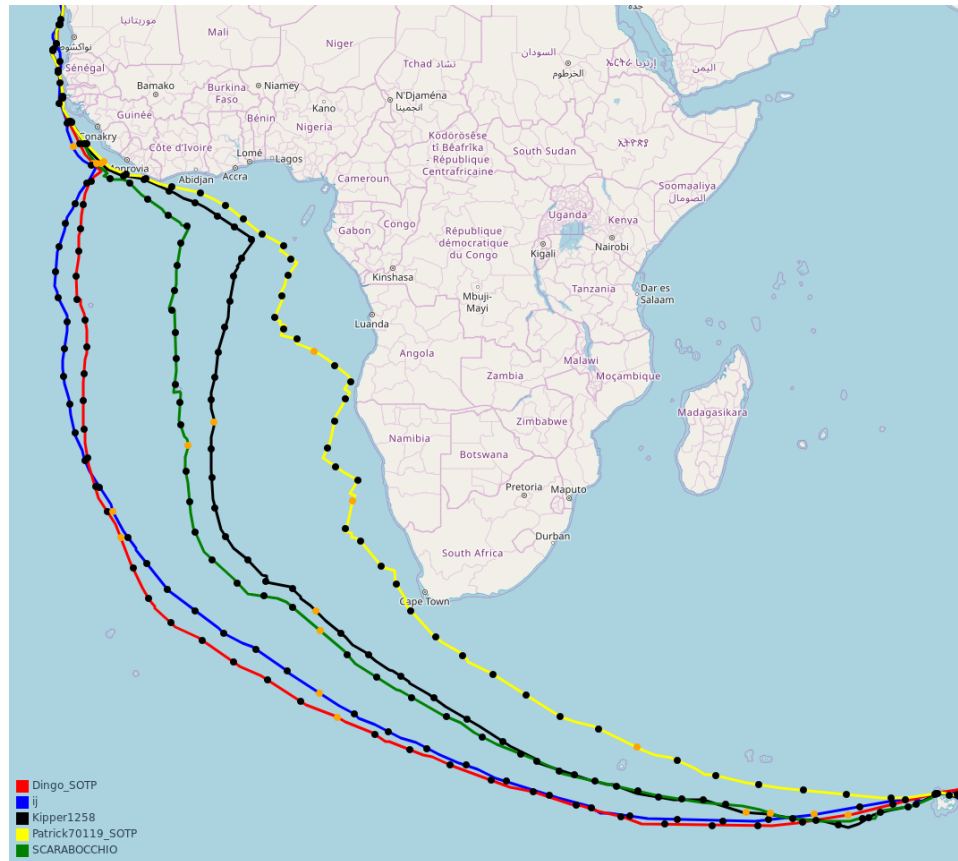


Figure 2: Route decisions at South Atlantic (data source: sollog, background map: Openstreetmap and contributors)

The fleet was very widely distributed on the Atlantic. The winds drove some boats all the way to the coast of Africa and there were also boats on a more western route than ours. This became a test for the old age wisdom on route selection versus a greedy strategy. As the initial progress of the SW route is very slow compared with the SE route, modern weather forecast based automated route calculator (a.k.a., router) naturally picks the greedy strategy because the forecasts are relatively short and the router is not able to see beyond horizon imposed by the end of the forecast. That is, the router can only see the negative sides on the traditional route and the greedy route in overly positive light.

I quickly fell out of top 100. But the pay back time was coming. Those heading

to SE towards the coast of Africa can initially make good progress by not tacking. But the prevailing winds will make it increasingly difficult the longer one sails on. Then there will be just two options left and neither is a good one: sail into the coast or tack. The former is risky wind speedwise and progress will be badly blocked by the huge landmass of Africa; the latter incurs heavy losses because of the horrible angle Rustler sails into headwind.

Meanwhile, those sailing the SW route have now reached south enough to sail almost on the great circle towards the next WP on Southern Ocean clearing the Cape Good Hope WP with some distance. Therefore our group started to climb back at good pace. Eventually **Dingo** took the leading position and rest of our group settling to the subsequent positions. In the end, those trying to shortcut fell behind a lot (see Figure 2). In general, the losses correlated on how close one sailed to the coast of Africa.

The subtropical ridge gave an easy passage for the first boats coming from the SW route. Thus we'd now entered to Southern Ocean.

2.4 Hull Speed Boredom at Southern Ocean

"Dingo's dozen" was now sailing at Southern Ocean at the hull speed on a great circle course. The polar of this boats offers no way to catch those ahead under such conditions. The other boats had fallen clearly behind. Those trying the shortcut at Atlantic were now more than 100 NM behind and no hope to catch us any time soon. The situation seeded some poetry about the boredom it was without any possibility to catch "Dingo's dozen" when everyone is limited by the same hull speed. The dozen in the lead was composed of two groups, nine in the front one and three in the later group. I was leading the later group and **Leelu22** and **gronolive** were slightly more than 10 NM behind. Out of those nine boats, most were SOTP sailors.

There were two major blues both occurring near waypoints which prevented circumnavigating them, the first one mostly affected our group of three and those behind us. The second one at the Cap Aubert WP kept pushing the leading nine boats NE, whereas great circle heading was SE. While our group of three was quite much affected, our group of three was able to turn towards SE right almost after the mark and wind was picking up again. I expedited that turn as much as it was sensible to put some pressure to the leading nine boats. The threat from three of us chasing forced the leading group also to turn SE, perhaps prematurely, and also pass through the slower wind speed zones. Those among the nine boats that had not declared SOTP kept sailing NE clearly longer, probably following a router suggestion.

In general, there was very little action in this part of the race. I believe there actually should have been more blue blips but the granularity in SOL's weather simulation has multiple properties causing bias that overpowers them with the surrounding high speed winds (I'll spare you from the mathematical details). I was also quite bored at this point and was thinking of not continuing to the leg 2 to avoid another few months in a slow boat like this but in the end decided to race on.

2.5 Stopover at Storm Bay

When nearing the stopover point, there were somewhat surprising overshoots of the last turns which allowed me to get a freebie of tens of NM. The entry to the Storm Bay required a few tacks to reach for our group, whereas the first boats were able to sail directly to the finish line. After spending 90 minutes and 2 seconds waiting in the Bay, I set course for the leg 2.

Some boat jumped the gun for the leg 2 either not finishing the first leg before starting leg 2 or not sailing leg 1 at all but each of those will be disqualified. Initially there was some confusion from the boats entering to leg 2 because the extra boats were mixed into rankings but it pretty soon dawned at least to me that this issue will be short-term. The early starting boats seemed to lack the commitment needed to do well in a long-running race like this. And soon enough, the extra boats started to fall behind which is no surprise: If one has not completed the first leg with good standing, one is not very likely to do so in the follow up one (I sail passed the last one at South Atlantic). In the end, only one of such boat had managed to reach finish line without losing dramatically (but despite the efforts, will be disqualified as GGR is one race, not two).

2.6 Huge Blue near New Zealand

When approach the New Zealand, there was a largish blue well forecasted. Because of close vicinity of the waypoints, it was impractical to consider large detours to South to avoid it. Some nearby me initially seemed to sail blue avoidance course with dramatic course adjustments (no doubt because of a router planning a circumnavigation) but eventually turned towards it like rest of us. We just had to try to sail through it and hope for the best. I tried to take advantage of the weather grid lines by setting course such that I'm in a position where from I can quickly sail to the other weather cell if a weather update changes where the best winds are.

Dingo managed to escape the blue with little harm. The others of the leading group were caught more or less. The boats around me were affected very badly allowing the chasers to gain significantly on us because the strong winds pushed in from east. At one point north side was forecasted to get some wind so I ditched the weather grid approach and headed there but once I got there it turned out false hope. In this blue **Leelu22** also managed to catch me and at the next mark we were basically tied.

2.7 Down to South Again

Despite trivial look, the leg from limit WP to Cape Horn is quite interesting one. The great circle route crossed the race boundary by quite a large amount. Thus, to sail optimal distance one has to sail a composite great circle. A router would handle this automatically but only if the route reaches far enough to consider the boundary effect, something SOL's default 7 days forecast does not do with this slow boat. Based on the initial course many seemed unaware and sailed according to the great circle track which goes more east than the composite great circle track that is shorter.

Sadly the knowledge did not help me as when we started to near the race boundary, the weather force me to sail a more southern direction than what com-

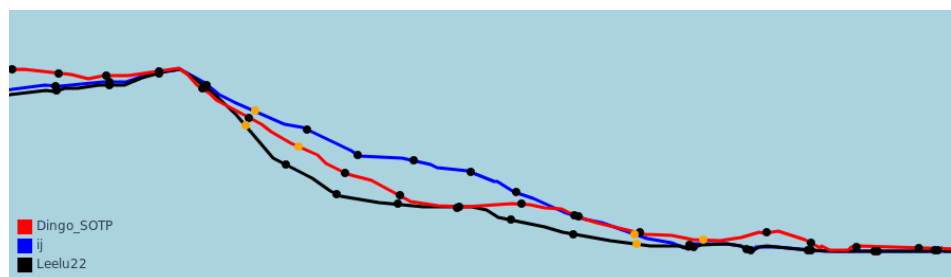


Figure 3: Heading to south race boundary (data source: sollog)

posite great circle would have called to. As **Leelu22** sailed already one a more southern route, he was able to get past me.

2.8 Bouncing and Hugging the Southern Race Boundary

When nearing the southern race boundary, there was weather, which imposed some angle limits so that we had to sail all the way into the boundary and tack there. This lead to some funny looking bounces off the boundary.

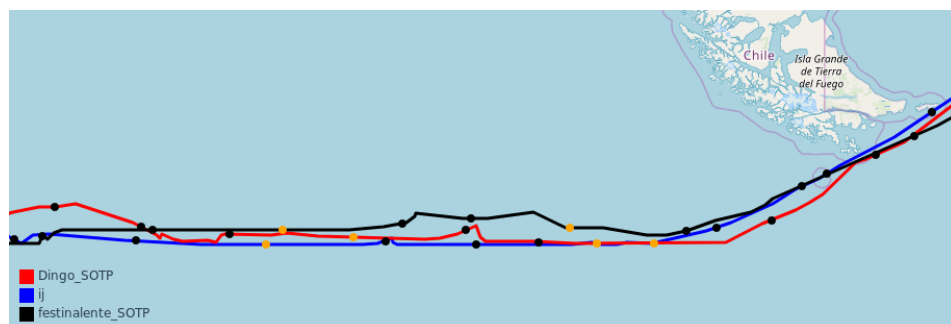


Figure 4: At the southern race boundary (data source: sollog, background map: Openstreetmap and contributors)

Throughout the most of the time we were close to the race boundary the winds were generally better the more south one was. Thus, it required getting as close as possible to the race boundary except when there was an wind angle limitation that temporarily forced use out from the boundary. Not all of the leading group seemed to have noticed this and were sailing far away from the boundary. The difference was huge and those of us who stayed at the boundary sailed past many others in the leading group (see a comparison in Figure 4). This was the first time when I realized that a podium might be realistically possible to achieve. But also those chasing us constantly had slightly better wind and were slowly killing the distance between us.

Dingo who had been lucky to pass an earlier system with much less effect than the others was ahead of us and got caught into another blue region very badly which reduced his lead to slightly more than 60 NM.

2.9 Post-Falklands Blue Waves

After rounding Cape Horn, we needed to decide which side to pass the Falkland Islands. The leading group all decided for the East side and even of the later boats (as long as I kept track of them), very few went to West as the forecast was not very good for that side.

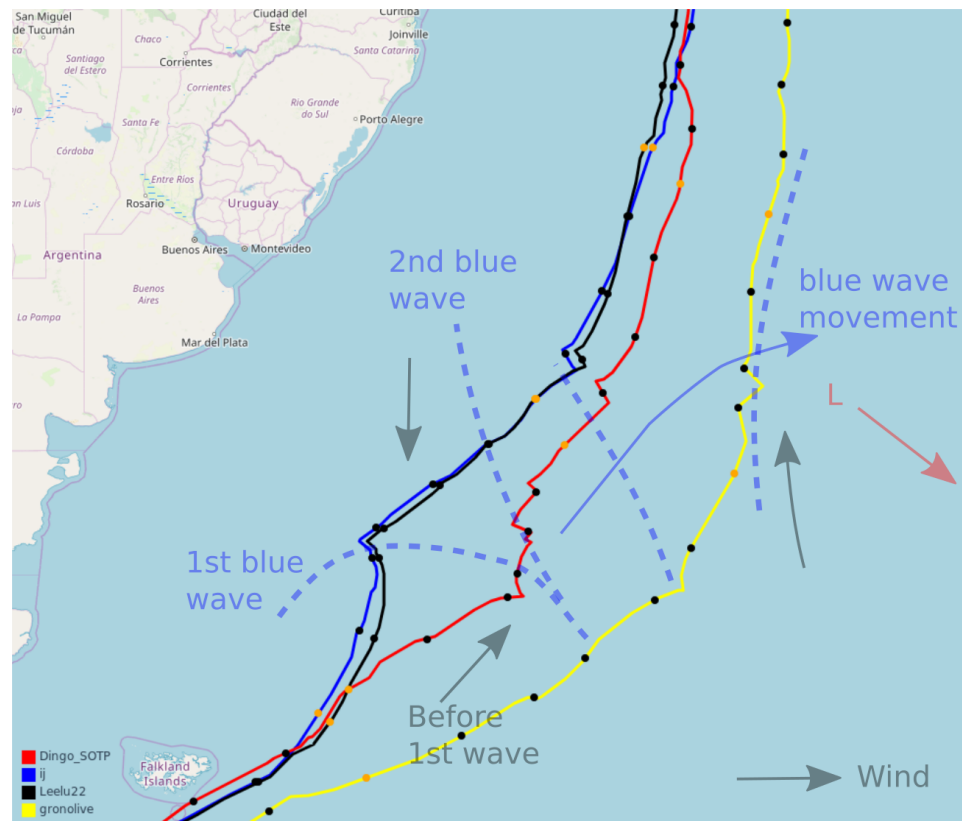


Figure 5: Blue waves and route decisions after Falkland Islands (data source: sollog, background map: Openstreetmap and contributors)

Past the islands we had reached a point that was to become the decisive point in this race. Sailing in good winds from SW quadrant we were approaching a curved blue zone (W-N-SE of us, see Figure 5). The zone was wide enough that there was no sensible way to go around it. The blue curve will then transform itself in second phase into a SE-NW diagonal zone that kept moving NE. There was no good way to sail through it either. My router occasionally found supposedly “a good way” through the first phase blue using some weather grid line with a slightly higher wind. But it all looked very fragile to realize many days from the current position (the best one of them never did like I guessed). But in general, the router was not of much use here as it suggested big detours around the blue, usually around from east side.

But what lays ahead was even more significant. There was no good route onwards to north or NE because the blue zone kept moving into the same direction as our slow boats. Thus, it was very likely to overrun you even if one manages to

get through. So only sensible possibility would be to head NW at the west side of the blue (or after it has overrun you, if you want to chose that bad option). Therefore, I considered it a dangerous dead-end trap to sail NE or east with only bad options in between impassable blue or horrible angle towards NW.

Instead of continuing NE like most of our group, I sailed north when still in good winds from SW quadrant and kept looking for a small opening in the blue to get towards NW. That is, I decided to do the inevitable sail into blue where I had better outlook for what follows after the blue passage. This was slightly risky because I was to be the first to leave the zone with better winds and enter the blue, the forecast could always change. But the blue zone NE of us was driven by the boundary of a strong weather system on the other side and I considered it not very likely to change for the foreseeable future. The north route allows me to try to catch the winds of new systems coming west but the cost of the passage will be large unless I find a good gap and until the next strong system comes in, it will be headwind possibly all the way up to the trade winds zone. But it still looked the more bright choice considering the alternative.

Only me, **Leelu22**, and **Sebensa** (SOTP) of the leading group chose the northern route. Due to my early decision, I had the most western position of us. No good gaps opened despite the router occasionally finding slight better looking ones but in practice when I was near enough for the passage, there was no good gap. When the blue passage came, our progress towards the finish even turned slightly negative as we tried to cross the blue towards NW as quickly as possible (very slowly in practice :-)). But after the reacceleration, we could tack and start to again make good progress without immediate threats ahead of us.

As mentioned, the other boats of the leading group sailed directly into the between the blue and horrible angle trap following **Dingo** and the trap sprung to its full extent (**Dingo** has an excuse of distraction due to a festival tour but that does not explain why the others chose to follow). None of the boats from the leading group were able to cross the blue zone. **Dingo** had to retreat from the blue using a horrible angle and was soon 60 NM behind us having lost more than 100 NM in the ordeal.

gronolive had left our group earlier and chose a longer southern route. **gronolive** got barely past the blue wave and started an attempt to outrun it and was in the lead for a short period of time also. However, the boat was eventually overrun by the blue again as I had anticipated and was then a prey of the horrible angle like to others there had. Therefore our group of three (me, **Leelu22**, and **Sebensa**) took the leading positions.

2.10 Heading Northeast

The blue zone created an impassable obstacle also for us but as we were the northernmost boats we were able to sail longer in better winds and were also held much less because the zone had less depth where we were. All of our attempts, however, to break through it (promising according to the router) were in vain though. With hindsight, it would have been beneficial to tack to gain some additional distance to the slower wind speed zone but none of us three wanted to take the chance and leave the leading group (there were only some very short stretches when wind angle turned when we tacked but no clear attempt to sail towards NW for longer period of time). Chasers constantly had better wind due to wind gradient towards

the blue wave. They were getting nearer and sailing past the earlier leading group members still stuck in the dead-end.

After very long time, the new system finally arrived and we were able accelerate to a better direction. Me and **Leelu22** were lucky to pass into the trade winds zone quite easily. We were close to each other and I was able to get past **Leelu22** at some point of time but since we were only a few NM apart, the situation was close to a tie. We set course towards NE and I was planning to sail to 30W, east of which it seemed that the wind angle will cause rapidly diminishing returns.

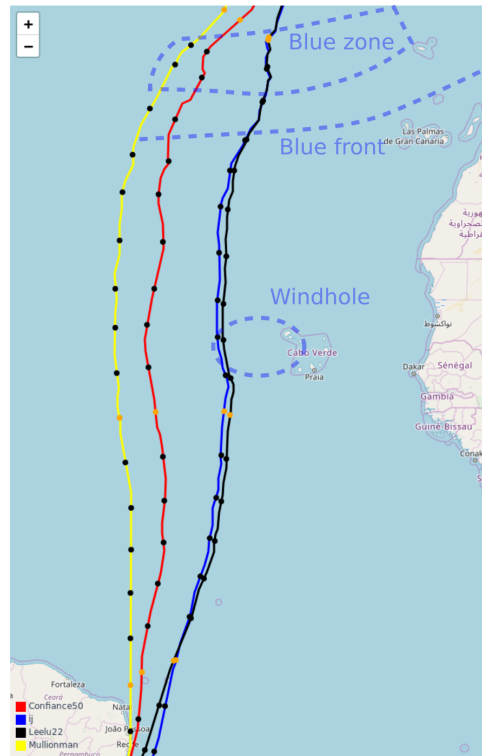


Figure 6: Routing decisions northwards (data source: sollog, background map: Openstreetmap and contributors)

Some boats chose to sail directly north after clearing South America, these included **Confiance50** and **Mullionman** (see Figure 6). The more northern course provides a better wind angle during the passage through the trade winds and more likely allows access into favorable wind directions after exiting the trade winds. However, my rough estimate was that the north route would be 600 NM longer than a more direct course that requires sailing short stretch of headwind south of Azores (assuming there is the high pressure there at Azores). But that Azores region is very volatile making this route decision very challenging with high payouts for both options if the winds favor the picked route.

2.11 Cap Verdes Windhole

I had initially planned to stop pushing angle eastwards around 30W, however, the winds allowed me and **Leelu22** to push more east and the router seemed to find a promising route towards that direction. So I chose to match him instead of turning to a more northern course. But then a windhole west of Cap Verdes started to deepen and the east option seemed to close for good. As I was more west than **Leelu22**, I thought that the windhole posed no bad problem as I have more distance to the center of it than him. The wind was supposed to be better there but then the system wind gradient turned slightly so that the situation changed as I was not only more west but also some north. My more northern position meant that I, even with more distance to the center, sailed in less wind and worse wind angle for considerable time of the entry to the windhole area. This became my demise as I was quickly losing the lead. In addition, a glitch in the matrix ate 5 hours of sailing time when exiting from the windhole when I was supposed to win some of the losses back although not even close to what I lost (a race message had a bogus claim that boats kept sailing during the outage but that was not the case for real, the boats were kept in place for those hours).

2.12 Azores Blockade

I was still slightly more north than **Leelu22** and hoping to be able capitalize it as we headed towards Azores but he was now closer to the finish line. There was a huge blue formation lurking ahead. When we were more distant to it, it kept morphing on almost every weather update but now it just stood still without any good passage. There was no good way around it except for the westmost boats including **Confiance50**, **Mullionman** and two other boats. But even they had challenges after the passing the initial blue wave because the wind angle was not favorable for travelling towards the finish line and another huge blue zone that was to appear where they would be after a day or two.

Everyone in the middle just kept sailing north. I was hoping that a more windy gap would open. Since I was more west than **Leelu22** a gap slightly west of us would be more desirable because one needs to position the boat for good passing angle before entering the slowest wind speed. As I was unsure where the gap appears, if any will, I didn't want to make drastic changes into course. When closing in, a gap did appear but unfortunately for the east side which favored **Leelu22** who had the more eastern position. He had some margin to reach it, whereas I had to initially sail close hauled course to get to the gap. The close-hauled course also slowed my northward advance that was better timewise for the appearance of the gap but it also meant I was eating away many north advantage rapidly.

After all, the initial blue wave passage went quite smoothly. Me and **Leelu22**, who was now ahead, were able to accelerate away ahead of the blue wave that retreated towards where we were moving and some boats following us got caught much worse into it. There was to be yet another blue obstacle right before the next strong system winds arrive from west. I tried to take advantage of the weather grid points east of us that provided slightly better wind local to the grid point but due to expedited wind rotation. I couldn't reach the best part NE of us before there was a need to sail curvy course away from the best winds, initially towards NW because of limiting wind angle.

In the meantime, **Confiance50** and **Mullionman** had gotten to the new system winds and were advancing fast. The extra curves due to the earlier wind rotation were about 15 NM slower than an earlier, more direct course. This difference turned out to be enough to make the battle between us four quite tight.

2.13 The Last (Thousand) Mile(s)

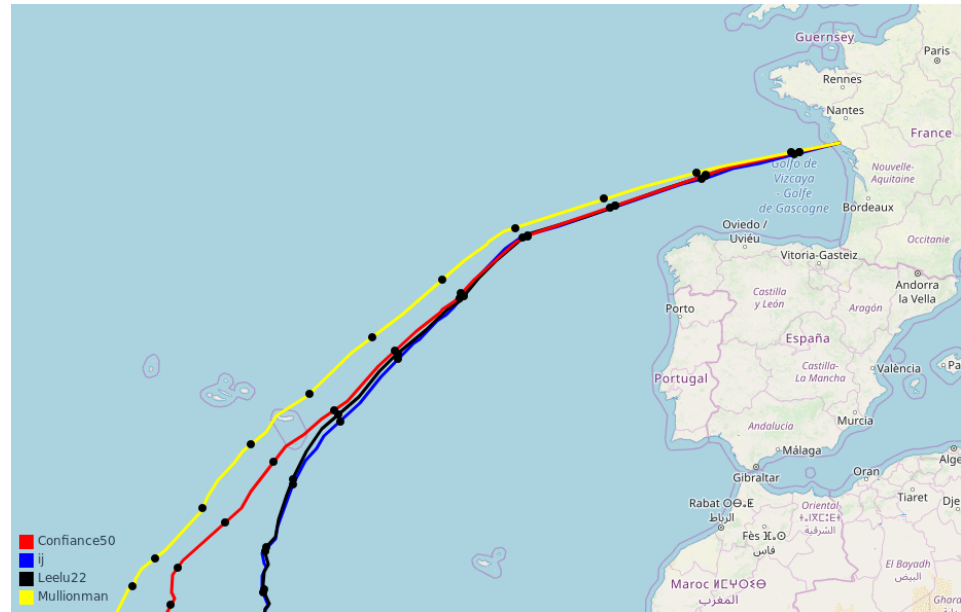


Figure 7: Last mile of Golden Globe Race — sailing to the finish line (data source: sollog, background map: Openstreetmap and contributors)

Once me and **Leelu22** reached the good winds of the new system, the progress towards finish looked quite straightforward. The only challenge was in deciding how deeply to sail into the new system as sailing towards the finish meant staying close to the edge of the system with some uncertainty about the wind speeds. With **Confiance50** and **Mullionman** deep in the system, I had to risk a little and stay close to edge but it soon became apparent that at least **Confiance50** is going to get clearly ahead. Thus my attention mostly turned on **Mullionman** in an attempt to secure the third place.

Just past Azores, a little 5 hours cyan blip appeared into the route **Mullionman** was sailing and he had to sail through. That meant a loss of roughly 1 NM per hour which was a small relief for me. But after that, he was constantly gaining and I kept sailing on the edge of the system. He was able to narrow down the gap between us (in DTF) to 5 NM but then I reached 20 knots polar optimality for considerable amount of time and was able to stop his advance and gain some extra compared with him.

With about 16 hours to go, at Dec 8th 19:29 UTC I plotted the final course to somewhere near the upper mark of the finish line and set my heading. That was to be my last steering in this race. With no hope of catching either **Leelu22**

nor **Confiance50**, **Mullionman** having no chance of catching me from more than 6 NM behind and weather looking quite stable, I slept the last night well without caring to check the weather updates. No significant changes occurred overnight, so we finished on the next day in the expected order, **Leelu22** first at 10:04 closely followed by **Confiance50**, then me at 11:20 and **Mullionman** slightly less than one hour later. My very big congratulations to three of you.

In retrospect, that surprise cyan near Azores turned out very significant as it would have gotten very tight battle for the third place with **Mullionman** otherwise. Both **Confiance50** and **Mullionman** sailed almost directly north from South America, whereas **Leelu22** and me tried more direct route but had to backtrack towards NW due to the windhole near Cap Verdes. The appearance of the windhole was somewhat lucky for us though since the boats clearly east of us got badly stuck into the blue we managed to pass through the short-timed gap (at one point the blue extended from Portugal all the way to Caribbean). I had estimated that the direct route north from South America would be almost 600 NM longer, and therefore opted not to try it but this time it seems it would have still paid off.