
Stockholm to Saint Petersburg 2019: Race Report

by ij
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After an excruciating defeat :-)) the previous day in Raja Muda Selangor race to my friendly archrival **WRmirekd**, it is time for the main event, SYC championship race from Stockholm to Saint Petersburg. In the previous race he had boasted about his “software” (navigational? I presume) and the improvements he had been making into it during the previous races but with drastic changes in the WX, it was hard to evaluate whether his software did any meaningful thing to his performance. So I was excited and trembling he'd finally found the way to force victory ;-)).

Then about the oncoming race. The first leg is to feature a windshift which are always a bit precarious as minor changes in the weather can allow somebody to capitalize advantages they have bought before the wind shift. The winds looked decent throughout the race and polar is quite round so the first leg performance is going to have a large impact on the final order. Can **WRmirekd** pull ahead or not?

With strong winds and no pressure centers nearby, I tend to assume stable forecast and thus head for the optimal route according to the current weather. With wind shifts, it may take a few tries to find the right parameters but I'm happy with the route. The usual fleet fan out takes place, where I'm close to the middle (counting the top boats such as **WRmirekd**, **bonknhoot**, **DIKKEHENK**, **rafa**, and **Alexandria**), which usually promises good result, others further away are trading advantages in less balanced ways. **WRmirekd** sails for height, **rafa** and **Alexandria** sail for speed (and height after the tack due to the wind shift), and **bonknhoot** and **DIKKEHENK** remain close in the center but sail slightly lower than me before the windshift.

The last weather update takes place about one hour before the tack time, changing the exit angle quite much but it is hard to see who will benefit if any so need to wait until closing in to the mark. After tack I note **blackcat** tailing close in my wake and **Wolff** in an advanced beyond “the line” position upwind from my height. As we approach the first mark, the usual arrow formation starts to form my boat leading the way.

The second leg of the race course is blocked by Estonian islands. I initially assumed the slightly better winds out on the seaside would favor the outer route. However, after some testing the innermost route is equidistance with the outer one and an evaluation before the mark (and on previous WX) clearly favors the innermost route. The current WX finds the innermost route slowest, however, the passage between Hiiumaa and Vormsi is still better than the outer route by 5 minutes despite being longer. In the leading position, I decide head for the inner route but also to take note on where the others in the leading group are heading to allow

bailing out into the outer route if all top boats head that way. Other than that, it's pretty much guesswork which route fares the best in the end.

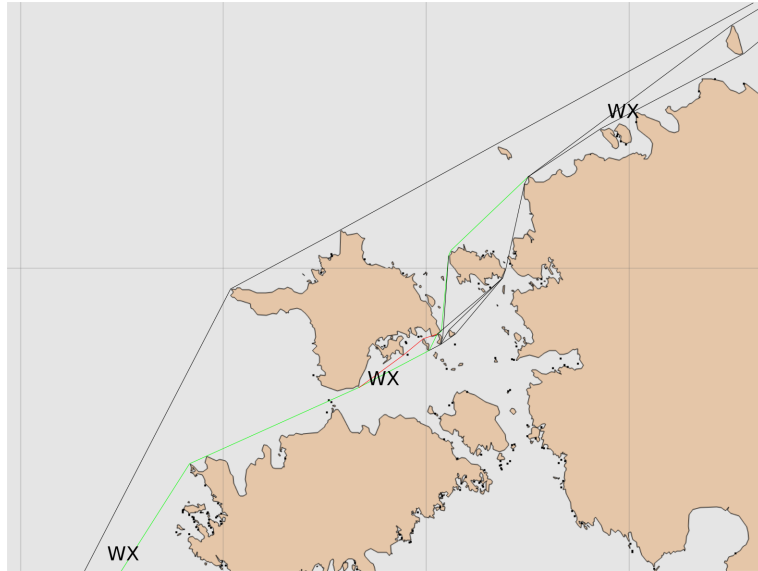


Figure 1: Various route options

Obviously, the fleet ends up splitting at the mark. Me, **blackcat**, **bonkhoot**, **Alexandria**, and a few others heading for the inner route, whereas most boats seem to prefer the outer route. After some distance sailed, **blackcat** who is very close to my position chickens out from the inner route and bears away heading for the outer route. With four weather updates until we are converging near Suursaari (for some mysterious reason the mark is called "Hoglandet" on our maps instead of its Finnish or Russian name), people start to throw their estimates into the chat on what will occur, all based on calculations from the routing software.

There's little point in turning back now (well, after the first weather a bailout could still be sailed but with no realistic hopes for a top position) and the weather roulette starts to roll. After the first WX, the overall time to make into Suursaari is increased for the inner route, spurring some good luck wishes from the outer going skippers. However, their calculations probably fail to take note of the fact that the part of the route covered by the first two weathers *improves*. But then it's followed some hypothetical troubles ahead.

The next WX update will occur soon after clearing the southern tip of Hiiu. There are a number of route options from that point on to navigate past Hiiu and Vormsi Island and a number of small islets as shown in Figure 1. My plan is to turn after first islet heading for the passage between Hiiu and Vormsi (the green line). However, too late on that leg, I notice that **bonkhoot**, since some time, is heading to a different opening (the red line) that I had completely disregarded earlier as I assumed it will be longer than the other options. Is that faster? To further confusion he has a little step in his trace towards my current route selection, has he hesitated there between the routes? A quick measurement shows the inner route sure is clearly shorter than my current route. Time to scratch the current plan then, hoping I still can manage to salvage some from the better angle. **Bonkhoot**

later confessed that “the step” was caused by just a steering fumble.

Reworking the DCs ahead until the two routes converge confirms that the new route is still clearly faster than the older one by almost a minute. It turns out that my lead to **bonkhoot** has shrunk from 0.08nm or so down to the same tick (I'm likely still 0.02-0.03nm ahead though given how server jumps vary). He's annoyingly close now. We clear Hiiumaa and head towards the tip of Vormsi near the max boat speed TWA but the angle is a bit over the optimal now. This leg was even better earlier with slightly higher wind speed and ability to sail at the max speed angle. This part is likely the reason why this longer route fares so well in the comparison.

After clearing Vormsi and the NW tip of Estonian mainland, the most optimal route towards Suursaari would unfortunately cut through Naissaar. Also, the next WX update is about one hour away so it is too late to make a decision. The inner side of Naissaar has lower wind speeds but retains height to maintain better angle when needed later on. So that's where I'll be aiming to. At this point the northern fleet has managed to catch our southern fleet in distance towards the next mark but despite better winds struggle to gain more due to more adverse angle they have to sail to. The northern fleet has quite high fan out with **Wolff** sailing high and **blackcat** aiming quite low, the rest are somewhere in between.

After Naissaar our fleets start to slowly converge and the southern fleet begins to climb in ranking little-by-little. It looks at least me and **bonkhoot** are going to take over the entire northern fleet. **Alexandria**, on the other hand, will have bigger challenge as the angle turns more favorable near Suursaari and the wind is not high enough to fully take advantage of the positive hill this polar has for broad reach but likely can still make it. The distance between me and **bonkhoot** has remained pretty much the same although I'm sailing on a slightly higher route than him so he has temporarily advanced a bit. It looks that **Wolff** from the northern fleet will likely round the next before **WRmirekd**.

After completing the DC setup for the last WX before the Suursaari mark, I need to go away after for a while and also need to round the mark on DCs. With only around one tick to play with, **bonkhoot** could get significant benefit from my inability to take the tightest possible rounding. Before returning to see the current situation, I plan to crack some joke about the expected red-FREE podium ;-). However, it turns out that while me and **bonkhoot** have made the turn fine and have retained the internal difference almost the same, **Alexandria** has not turned and is instead drifting toward Viipuri, so much for the red-FREE podium :-).

Again, some island are on the way of the optimal route towards the finish line as the wind shifts some during the last leg of the race. I plan for the middle route cutting close to the both limiting islands. **Bonkhoot** seems to sail lower, probably opportunistically. I realize at this point that some buffer for the first limiting island may have been useful to leave to be able to sail higher if needed but don't bother to adjust the route. The next WX, indeed, would allow somewhat higher course but I'm limited by the island.

Nearing our destination, we then curve when wind allows it to pass Kronstad on the southern side. For some reason Kronstad does not feature the ring road dam on our maps which would be a serious obstacle at this end of the Gulf. After clearing Kronstad, it is simple aim to the lower mark business to finish as first. **Bonkhoot** takes the second place and **WRmirekd** who was able to pull ahead the rest of the northern fleet takes the third place on the podium.

Congratulations all.