

Super Mac 2014 Race Report

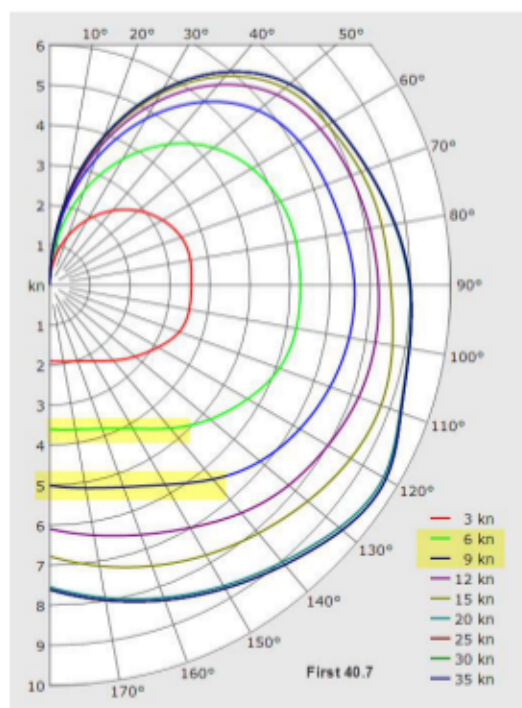
javakeda

The start:

The start, at 1500Z (0800 local), brought winds of 6.4kts @ 215°T. The forecast was for the wind to decrease to 5.5kts and back to 205°T. The rhumb line was 019° – or 16° to the left of DDW. All of this favored a start on the port gybe.

The routing software agreed. At the gun, javakeda started on a COG DC of 348°T. Given the conditions, I expected a lot of company along that route.

But instead, the fleet fanned out. I believe this was due to the shape of the polar.



As the graphic shows, at TWSs of 6 to 9kts, the polar is relatively flat between DDW and TWAs in the high 130s. That means, for purposes of getting down wind, one TWA is about as good as another. Those are perfect conditions for fanning out the fleet.

The key was the forecast for the wind ahead. A starboard gybe at TWD=205° [four hours after the start] is simply 10° closer to the rhumb line than a starboard gybe at the start.

Even better, starting on a COG of 348° gave javakeda an initial TWA of about -138°. As the wind backed, that TWA increased. But the flat polar kept the downwind VMG almost constant and no penalty accrued.

At the 1630Z WX, the routing software extended the time of the gybe from 1900Z to 2000Z, but otherwise kept this strategy in place.

GIGO:

Using routing software for a race like the Super Mac has issues. The land surrounding the lakes is a barrier to routing logic. Moreover, the land produces 'local' weather patterns that tend to change frequently. Software based issues include:

- “Chutes and Ladders” – routes that suggest going up or down wind at a TWA angle that implies constant tacking or gybing.
- Interpolation error – synching the precise TWS and TWD between the GRIB from Brainaids (as calculated by your routing software) and the game GRIB (GFS winds as calculated by SOL software).

With this in mind, I was delighted to find that routing analysis of the 2230Z WX confirmed that javakeda was on the right track. I entered the DCs and went down for a nap.

Just prior to the 0430Z WX, my head clearer after the nap, I could see that I was sailing well east of Tarass, kareoke, and Garagiste. Moreover, Tarass had gybed.

The problem, I found, was that the 2230Z routing used winds from the 1630Z WX. GIGO! (Garbage In, Garbage Out) No wonder the 1630Z route was confirmed. Doh!!

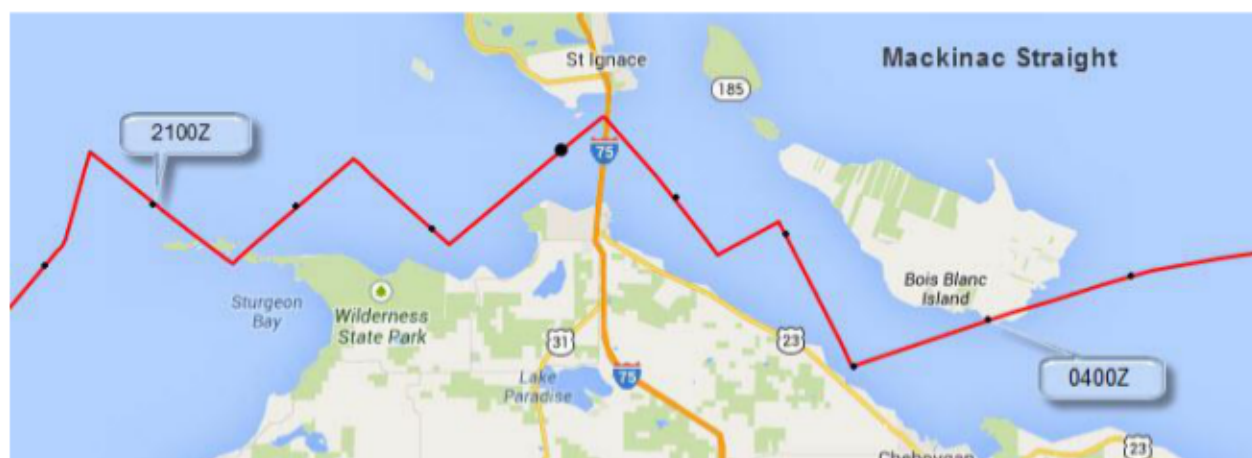
I made corrections – routing close aboard the Point Betsie mark and setting a fairly straight course to the Gray's Reef and New Shoals complex that formed the entrance to the Mackinac Strait.

But the damage was done. Tarass had a lead that he would keep to the finish. But I was extremely lucky that the 2230Z WX changed the forecast as little as it did. My hopes for a podium finish were still alive.



The Straight:

From entering the Mackinac Strait around 2100Z on 23AUG until 0400Z on 24AUG, when javakeda clears Bois Blanc Island, the wind clocked 29 degrees from 88°T to 117°T.



The effect of this shift is evident in the change in headings from successive port tack legs. This is a classic example of short-tacking along a coast to take advantage of a wind shift.

Some boats stayed on starboard after New Shoals Buoy rather than tacking toward Sturgeon Bay. In general, those that did so lost ground, despite making fewer tacks.

South to the Finish:

The leg to the finish at Port Huron involved a series of tacks, but was a beat all the way. Most notable on this leg was the need to adjust course as the TWA for maximum VMG varied with TWS.

True Wind Speeds varied on this leg from 5.7kts to 10.7kts.

The TWA for max VMG at 5.7kts of wind is 43.294.

The corresponding value at 10.7kts is 41.442.

The values change at different rates ... staying at one value over a range of wind speeds, and then changing rapidly to another plateau.

At one point, sailing near the layline to the finish, TarassBoulba was out of sync with the wind speed and pinching badly. He had said he would be in meetings that day and could not do a proper job of tending to the boat. Javakeda was gaining big time, needing only another hour like this to make the pass.

Minutes later Tarass changed course to a TWA appropriate to the wind speed. Guess the meeting was over and proper skippering had resumed.

Well sailed, TarassBoulba!

Here's to the next time we race!