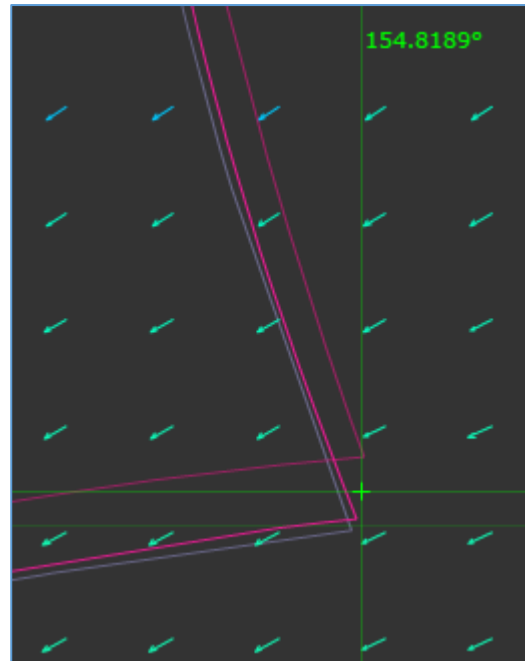
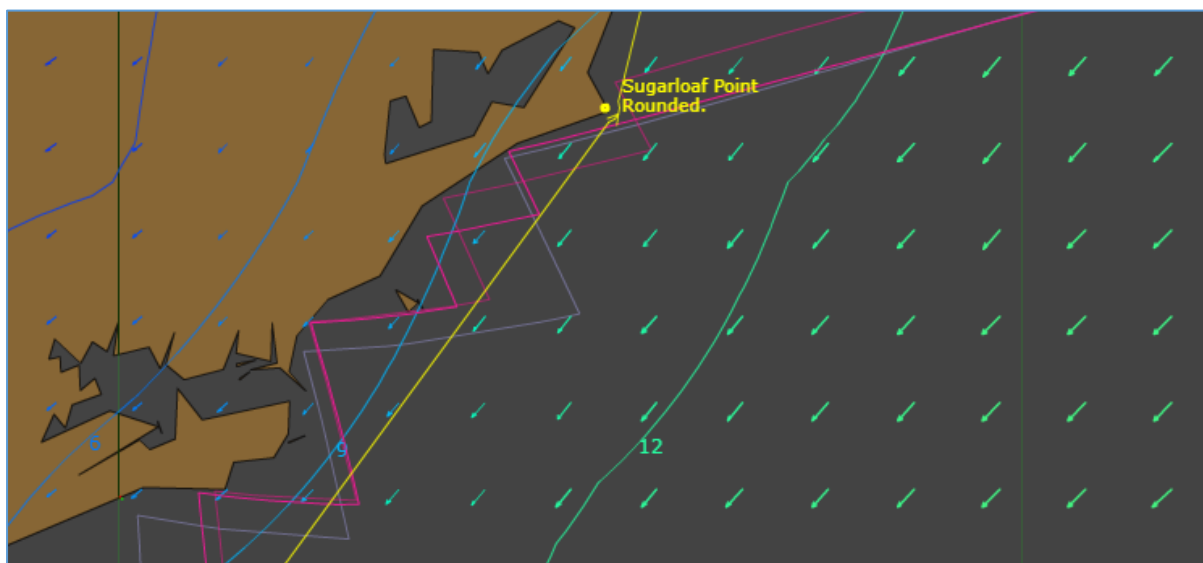


A quick one from memory. I remember tacking onto starboard for the long lay up to Mooloolaba in a steady breeze that was set to free us all the way in. The slightly brighter pink trace is bonknhoot's; the deep purple one underneath, Kipper1258's; and the fainter pink one, Dingo's. The leaders inshore were in lighter wind and were almost certainly going to get hauled in by our little group out to sea which included all the other usual suspects.

Kipper was crossing behind me, and Dingo, who had worked his way up the coast a little further than the two of us, duly crossed behind as well to tack a little further out to sea. Now IRL, if you're sailing one-designs, once you're in the lead and it's a reach all the way home, as long as you cover, only bad boat handling can lose you that lead. But on SOL, it is not like that!



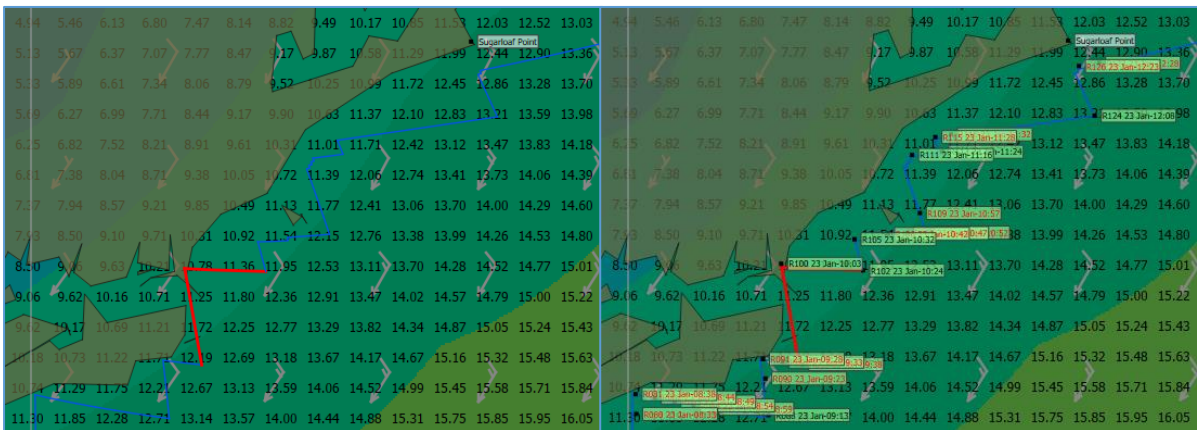
Dingo or Kipper might be able to shed more light on how they overtook me. Small variations in course hunting for angle and pressure; but how they knew how to find it – search me.



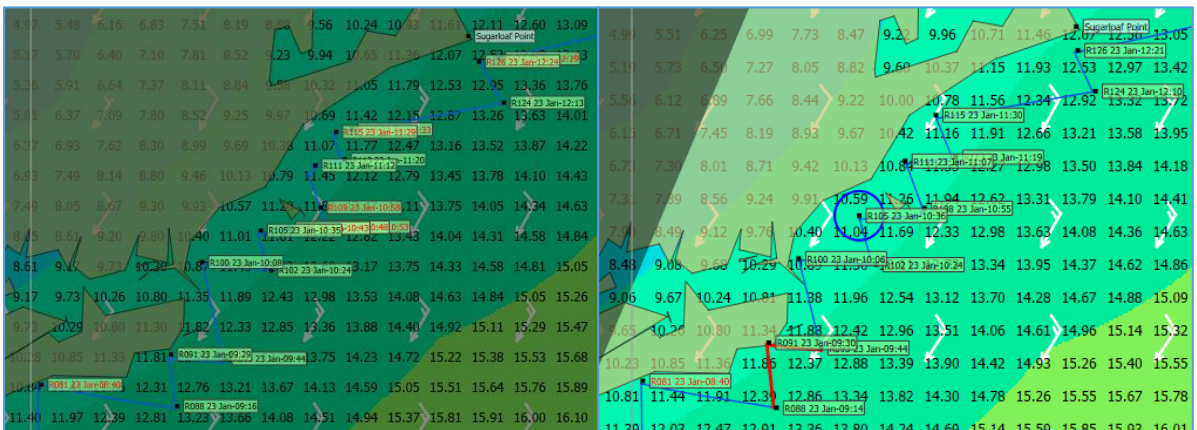
My upwind success though, I can explain. To get on the inside of the bend, the obvious strategy was to tack up along the shore. However, more pressure the further you got away from the shore suggested that hitting the beach before you tacked might not be the best you could do. Also, with our Tri60s clipping along at more than 14kns on TWAs of 50 deg plus, every tack was going to cost you quite a bit of performance; not 7% plus mind you which would be the result if you slammed her across, but nevertheless c 3% if instead you put her head-to-wind briefly to then bear off onto optimum angle.

With those thoughts in mind and setting performance at 87% for one crank (of 1 min) after every tack, I ran my router (QtVlm) at each WX. This gave me a solution with what looked like a sensible number of tacks. Close to shore, however, Qt sows loads of 'Not Simplifiable' (sic: French!) waypoints. These are waypoints that don't delete or get moved when Qt runs its simplification and optimisation routines. Thus BBQs are avoided, but thus sub-optimisation also results.

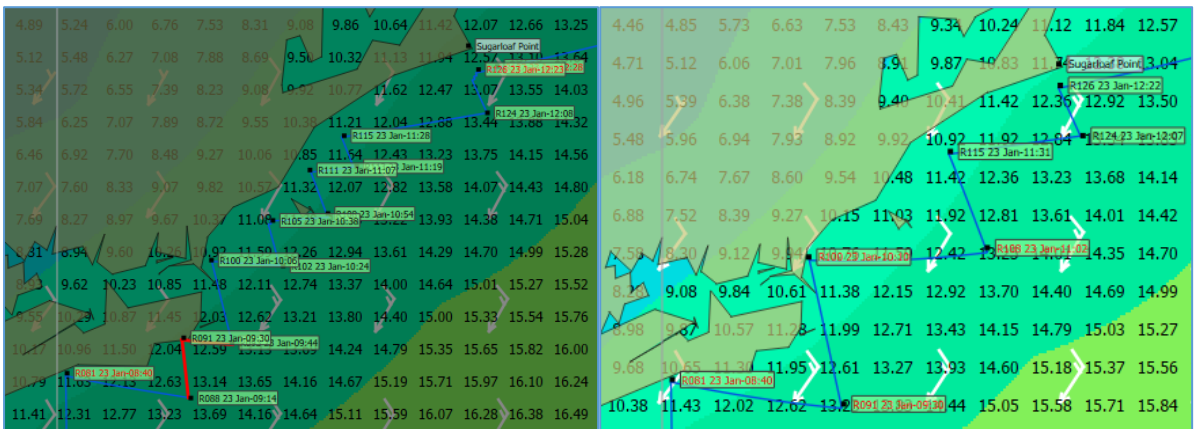
I therefore always make the waypoints visible (Routes, Edit Route, uncheck 'Hide intermediate POIs').



Next, I click on each red highlighted waypoint and uncheck 'Not Simplifiable' in batches, and then simplify and optimise again, step by step. Sometimes I keep a copy of a previous result, before I go on to a next step. Sometimes I move a waypoint a little or make it 'Not Simplifiable' again.



For this beat up the coast from Newcastle, below left is what I got. However, I reckoned (maths and guesswork) Qt was still giving me too many tacks, so I took a few of the tacks out, giving me the route below right, which is pretty much (re-constructed) what bonk sailed.



Note: The proposed route doesn't always go all the way into the beach, but rather straddles the 12kn 'iso-vent'. Also: the proposed route heads offshore from a point south of Sugarloaf Point (to hit the header far out to sea for the tack onto the lay to Mooloolaba).

Zoom in to view the images better.

bonknhoot / January 2018