

Passing the hours

The health crisis and associated lockdowns have stifled conventional racing for much of this year, but it's also given us the time to apply some out-of-the-box thinking. For big boat handicap racing the cancellation of the ORC/IRC Worlds in Newport, RI has regrettably kept teams from their normal cycle of ramping up for a contest that was scheduled as a season finale, but many are preparing anyway in the hope of some mid to late-season racing locally.

So in our stay-at-home laboratories we have been cooking up ideas on how to improve the game that were normally too time-consuming to pursue during a normal season. At ORC Andy Claughton's International Technical Committee has an active research agenda of items discussed in the June issue, and the ORC technical staff have finally had time to finish and publish their new ORC Race Management Guide, which aims to provide a definitive resource for those interested in how ORC races are organised and scored.



FRANCOIS VAN MALLEGHEM/DPPPI

For those searching for any type of silver lining as a result of you know what, we are expecting a permanent boost to the popularity of Corinthian shorthanded racing. All around the sailing world racing is taking place now on a much simplified basis, the majority of events currently restricted to two-handed teams. And many people are clearly enjoying this newfound experience, for the first time being engaged with every aspect of crewing and having to devise new solutions to get around the course without too much chaos on deck. The annual Transquadra (above) for sailors over 40, raced solo and two-handed, launched five years ago and has since become the pre-eminent event of its type – however, don't be surprised if more events like this pop up over the course of the next few years as a direct consequence of a surge in popularity that came about for all the wrong reasons

The ORC Multihull group has also made considerable progress in building a measurement framework as well as a VPP that should be close to functional by the time multihull racing resumes.

A key player in the Multihull group has been Larry Rosenfeld, technical director of the Sail Yacht Research Foundation (SYRF), who has also been working on an app that will help demystify ORC Performance Curve Scoring (PCS), arguably the most accurate (but also most complex!) scoring method for handicap racing. In theory nothing has changed since the method was pioneered in the IMS era, but what has changed is the availability of portable fast computing power to make it a viable tactical tool on the racecourse with real-time scoring. More to come on this soon.

In the meantime Larry has also been pursuing an idea promoted by SYRF chairman Stan Honey and Jim Teeters at ORR for using a boat's own polars to score them objectively in an offshore race. As with PCS used in inshore racing, the idea is simple: if a boat's performance is known by her polars and the weather she is sailing in is known, then the boat's actual performance can be compared

to the theoretical performance in a scoring scheme that measures efficiency (effectively the humans' efficiency, that is... lockdown did this to people – ed).

For inshore courses the wind direction is measured and course lengths are known so the PCS calculations are relatively easy. The challenge for offshore sailing is that there's no constant in the weather, so GRIB files are needed to model the breeze as it changes on the racecourse. Anyone using a weather routing program knows how to do this already, where the program explores routing options based on the boat's polars to optimise the route.

What's different and innovative is how Larry's work on this – called SYRF Offshore Scoring – will use the optimised route predicted by the routing software and compare that to the actual elapsed time the boat has taken to reach the finish. This approach allows many different variations to the standard Start-Race-Finish model

of racing: for example, in theory a single start is not needed and boats may have individual start times because how they sail the race will depend on the weather they have during the time they're on the course, and this is being monitored in the scoring scheme.

This somewhat eclectic concept is being put to the test in a hastily organised 'rally race' to Bermuda, scheduled for July, called the Spirit of Bermuda Charity Rally. Boats equipped with trackers start from two locations – south of Newport and west of the mouth of the Chesapeake – and race to Mills Buoy at the entrance to Town Cut in St George's. With Covid restrictions still in place in the US, starts were chosen to be without fanfare at offshore locations, where arguably GRIB files are also more accurate without local land bias.

'Every six hours we will get a new Nowcast of wind conditions worldwide,' said Rosenfeld, 'and we will use those time slices in hindsight to compute the optimum route and sailing time of each yacht and divide that into their recorded sailing time. That ratio is their score.'

'So it doesn't matter what course, what distance or what start time you sailed, we can compare how efficiently you used the capabilities of your boat and the weather to sail your race.'

Rosenfeld explains there's virtually no way to game this system intentionally because weather observations are fairly accurate and you would always sail your best with what you have. 'Unlike traditional ORC scoring methods, where ratings are derived from course models determined in advance that may or may not coincide with the actual weather on the course, the SYRF Offshore Scoring method uses the actual weather of that race experienced by that boat. We hope that this fixes the common complaint that "this year was a small (or big) boat race" due to the conditions,' he said.

Where ORC comes in to help with this approach is as a ready source of polars for any boat with an ORC certificate, since the VPP yields this output anyway to determine ratings. By generating an ORC Speed Guide a complete set of polars can be had for a mere €60 – not a bad deal in these tight times, and a useful tool not just for sailing targets but for scoring now too. Perhaps!

Dobbs Davis

