

Press Release 26 November 2020

PredictWind leads the way with a new Weather Routing Engine.

We are excited to announce the release of PredictWind's new weather routing algorithm with completely new code that offers unparalleled performance.

5 years of development have gone into the production of our new game-changing weather routing tool. Each route executes over a billion calculations on the PredictWind servers which gives superior results. Jon Bilger, PredictWind CEO stated, "We set out to make a better weather router than has ever been seen before, and we achieved that." Further to this, PredictWind wanted to prove this, Bilger continued "We didn't just want to be able to say the router is better, we wanted to prove it. We did an extensive study comparing other widely used weather routing tools, whereby all routes were back tested to be validated, and we were very impressed with the outcome for the new PredictWind weather router".

The Key Features of the New PredictWind Router are:

Fastest Routes - the new routing engine finds the fastest routes 70-90% of the time, compared to our competition. We tested the new PredictWind router against the competition, by using the same boat polar, the same wind field and then evaluated the optimal routes through a sailing simulator to actually see which routing engine sailed the boat fastest to the destination. The new PredictWind router was a clear winner! Check the [technical report](#) for details.

Routing Corridors - the new router shows "routing corridors" along with the optimal route. These corridors show an area where the boat can reach the destination within 0.1% of the fastest time. Routing a boat on the water is a very different situation to a GPS car navigation route. The boat route is only as accurate as the weather forecast, and the boat polar. The routing corridors show areas where it is imperative to be close to the optimal route, and other areas where you can deviate a long way from the optimal route. Overlapping areas between the four routes based on forecasts from four different sources gives you a high degree of confidence in the route to sail. This new concept will revolutionize how optimal routes are viewed.

Accurate Weather - Every PredictWind route is calculated using the highest resolution ECMWF/ Spire/ UKMO/ GFS/ PWG and PWE forecast data. ECMWF is proven to be the most accurate weather model from a national weather service but is being challenged by the new Spire model. The high resolution PredictWind models that are run at 1 km/8 km resolution are the highest resolution models available with proven accuracy in the short term. Getting 6 forecasts for every route gives you additional confidence in the forecast.

Speed & Ease - As the PredictWind router is run on cloud computing, it is not essential to download GRIB files to calculate a route, and in some circumstances, this will save you at least 50 MB of GRIB downloads. The PredictWind router has access to the highest resolution GRIB

data for wind, wave and current. To download this data on a mobile or satellite connection is very slow and expensive. With the click of a button, the forecasts for all 4 forecast models are quickly and easily displayed to help make informed decisions.

Long-Range Forecasts - We have added the ECMWF ensemble forecasts with an incredible long-range 4-week forecast. The ECMWF ensemble is unequivocally the leader in long-range forecasting, and will let you plan your trip well in advance, with better accuracy than traditional climate forecasts.

Reliable - The PredictWind router simply works. No failed routes, or issues with the router crossing the land, so you can concentrate on sailing the boat. Check the [technical report](#) for the reliability of the new PredictWind Router.

Detailed Feature List

- Weather routing with a grid-based, highly optimized algorithm.
- Fast execution time as 4 routes are calculated parallel.
- Considers wind, currents and waves.
- Uses the highest resolution GRIB data wherever available.
- Automatically covers the entire globe.
- Effective land avoidance.
- Considers all exclusion zones supplied.
- Provides both optimal weather routing and comfort routing.
- Advanced boat polar extrapolation.
- Allows a course to have both waypoints and roundings.
- Display of the overlap of such corridors to show passages where the ensemble of weather forecasts agree that it is optimal to pass.
- Numerous data available along the route: wind, currents, waves, speed, distances, angles, times, air pressure, temp, rain, CAPE index.
- Continuous interpolation of these data along the route.
- Presentation of motoring time in comfort routing.
- Choose the Ocean Current data source.
- Router finds a route when start & destination waypoints are on the land.
- Wave and Ocean data available along the coastline.
- Yacht tacking & gybe angles are accurately respected.
- ECMWF routes use the 9 km resolution wind data & 14 km wave data.