Most wind animations falsely give the illusion that as you zoom in, the satellite forecast has more and more detail. But GRIB maps for the marine weather forecast come from satellite imaging from 500 to 22,000 miles up in space. That distance means weather cells are huge. GRIB weather maps have low resolution, typically 1/4 degree. That means the wind is supposed to be the same for the next 7.5 nautical miles. But a cell 7.5 nautical miles square is larger than entire harbours. Too coarse for harbor entrances and coastal navigation.

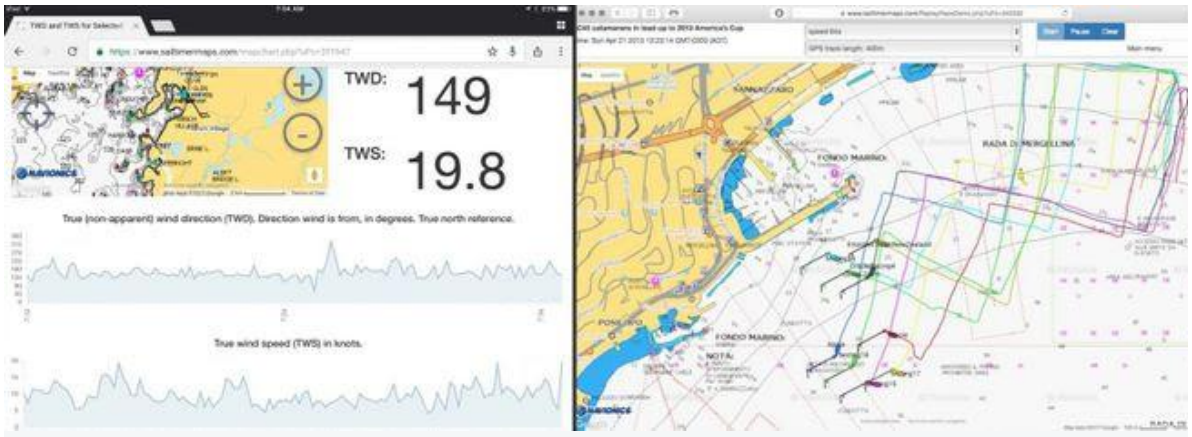
GRIB is the name of the format for GRIdded Binary weather map data. (Tutorial here from Cruising World magazine.) Even with supercomputers, there is so much processing for the worldwide GRIB forecast that it only comes out 4 times a day. But that means that you may be using a forecast for late this afternoon made 5 hours ago.

Crowdsourced wind maps solve these problems. If you zoom in you can see crowdsourced data based on actual measurements with 20-meter resolution.

- **White Lines:** The worldwide GRIB satellite weather forecast. When you zoom in, the white lines get farther apart, like pixellating.
- **Pink Lines:** High-resolution weather cells, based on actual crowdsourced measurements. When you zoom in, there is more and more data.

We archive the crowdsourced wind measurements, to model how wind flows in coastal areas. So even if there is no live data, the pink lines will show you more accurate wind maps than the coarse satellite forecast.

You can check it out with the 2-minute demo above in Youtube (horizontal), or YouTube Shorts (vertical for phones/tablets) or TikTok. Or see the real thing in the free SailTimer chartplotter app.



Our early interfaces showed crowdsourced data points, not wind zones for route-planning.

Citizen Science

These crowdsourced wind map animations are the culmination of many years of advanced R&D. Starting back in 2015 and then in 2019, there were predictions in the Australian sailing news and in some of our newsletters, about the possibility of crowdsourcing from the wireless SailTimer Wind Instrument™. Our Air Link™ can also crowdsource your wind data from any type or brand of wind sensor on NMEA wiring.

Over the past decade we experimented with multiple interfaces for the crowdsourced data, like the ones above. But it became clear that the best way to show wind zones to navigate through is with wind map animations.

Other apps and weather services all use the same low-res, inaccurate GRIB data. They may have a different interface or make different marketing claims, but they all use the same few sources including NOAA (USA) and ECMWF (Europe). More about this in SailTimer.boats, our website about crowdsourced wind maps.

Our wind maps are based on over over 110-million crowdsourced data points from boaters around the world. As shown in the YouTube demo above, we now have coverage all the way down the ICW from Charleston to Key West. You can contribute data yourself, and build up accurate wind maps in your own location.

In the free SailTimer™ app on Android and iOS, the subscription to the Crowdsourced Wind Maps is only $3 a month (and a discount of about 50% for the year). Plus, it has a **7-day free trial**.