



GLOBCURRENT

2012

- **Main application : offshore and inshore racing for sailing boats**
- **Development of navigation Software**
Main function : Navigation, Tactical & strategic decision tool, routing, Polar calculation, boat configuration management
- **Leader in France on the racing market**
- **30% licences for Europe, US, Australia**
- **3 Range of product :**
 - **AdrenaFirst : Cruising and occassional racing**
 - **Adrena : Navigation and frequent racing**
 - **AdrenaPro : Navigation and intense racing**

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Our customers

Volvo Ocean Race



Vendee Globe



Jules Verne Trophy



America's Cup



French Olympic Team



Global Ocean Race



Figaro



Mini Transat



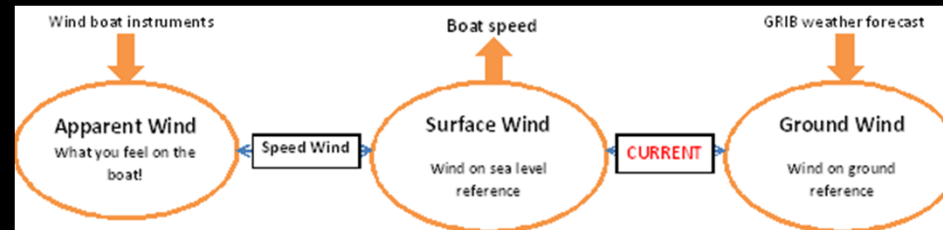
MOD 70



And more ...

How do we integrate the current ?

Our main indicator is the wind speed and direction



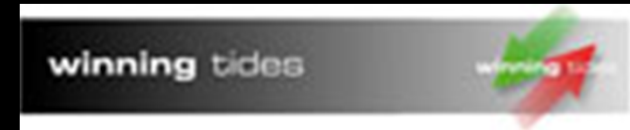
We have to integrate current information to modify the Wind forecast data which is Ground Wind. We apply this surface wind to the polar boat speed to predict the fastest route.

Several level of integration :

- Navigation : course, ground wind
- Performance : Best speed - Sails trim change due to current variation
- Routing : Best route
- Safety : current and waves information impact sea state

Sources and format

Atlas of current (Tidal): French Atlantic Coast, Channel, Ireland Sea, North Sea

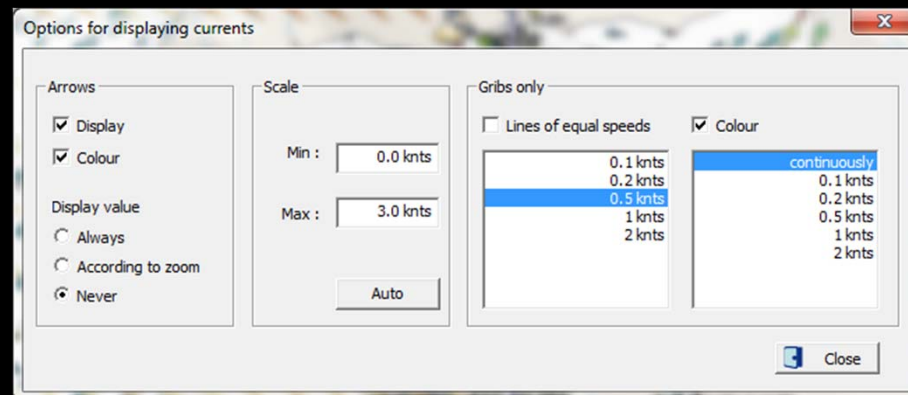


GRIB (Oceanic) : North, South, Tropical Atlantic; Gulf Stream; Indian Ocean; US West Coast



Adrena provide tools to display current information :

- Playing with coloration step to a better graphic information
- Playing timing step by step or continuous
- Shifting the timing to adjust local effect and/or observation
- Allow multiple current data source display

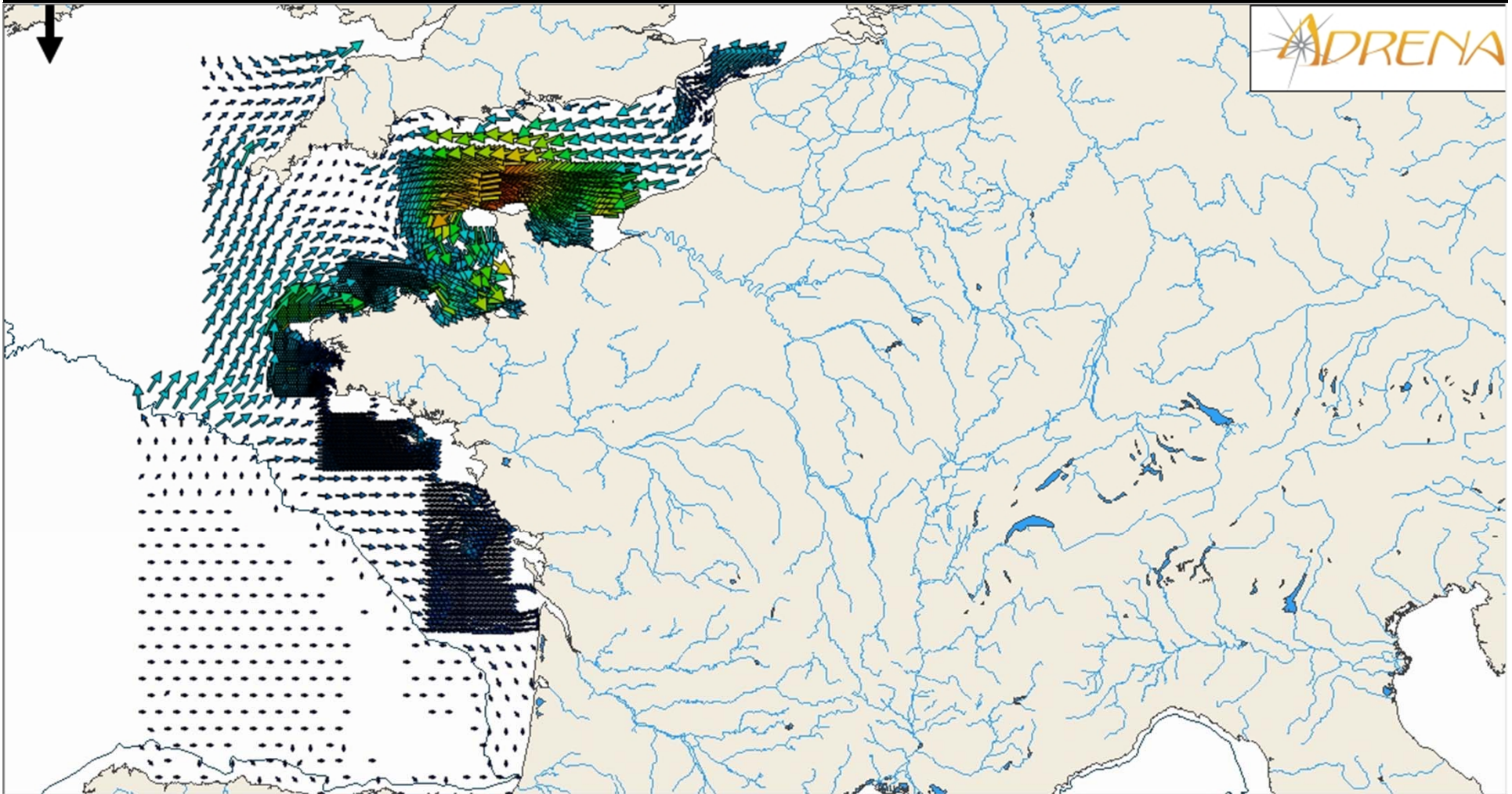


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Coverage SHOM Atlas

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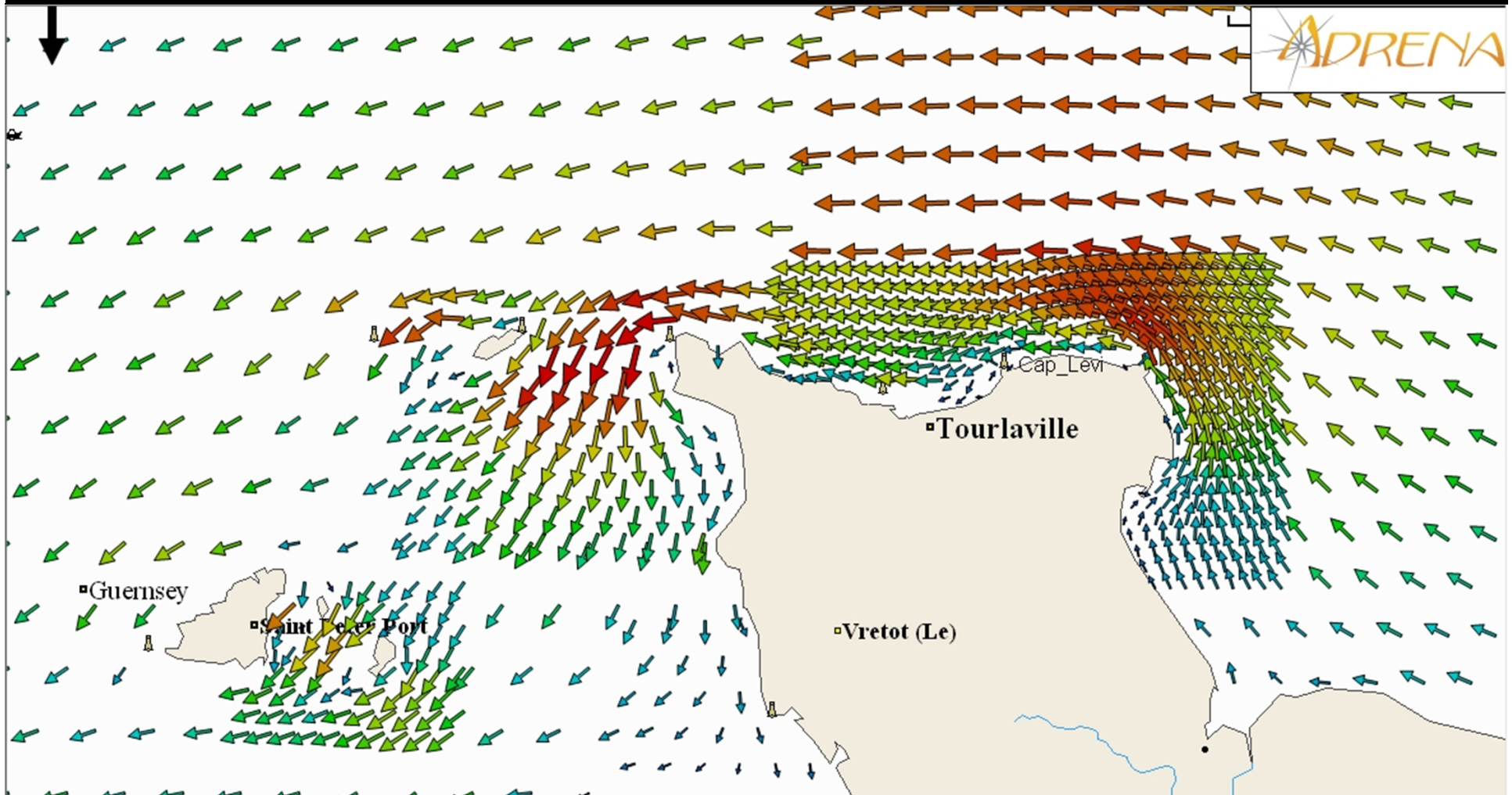


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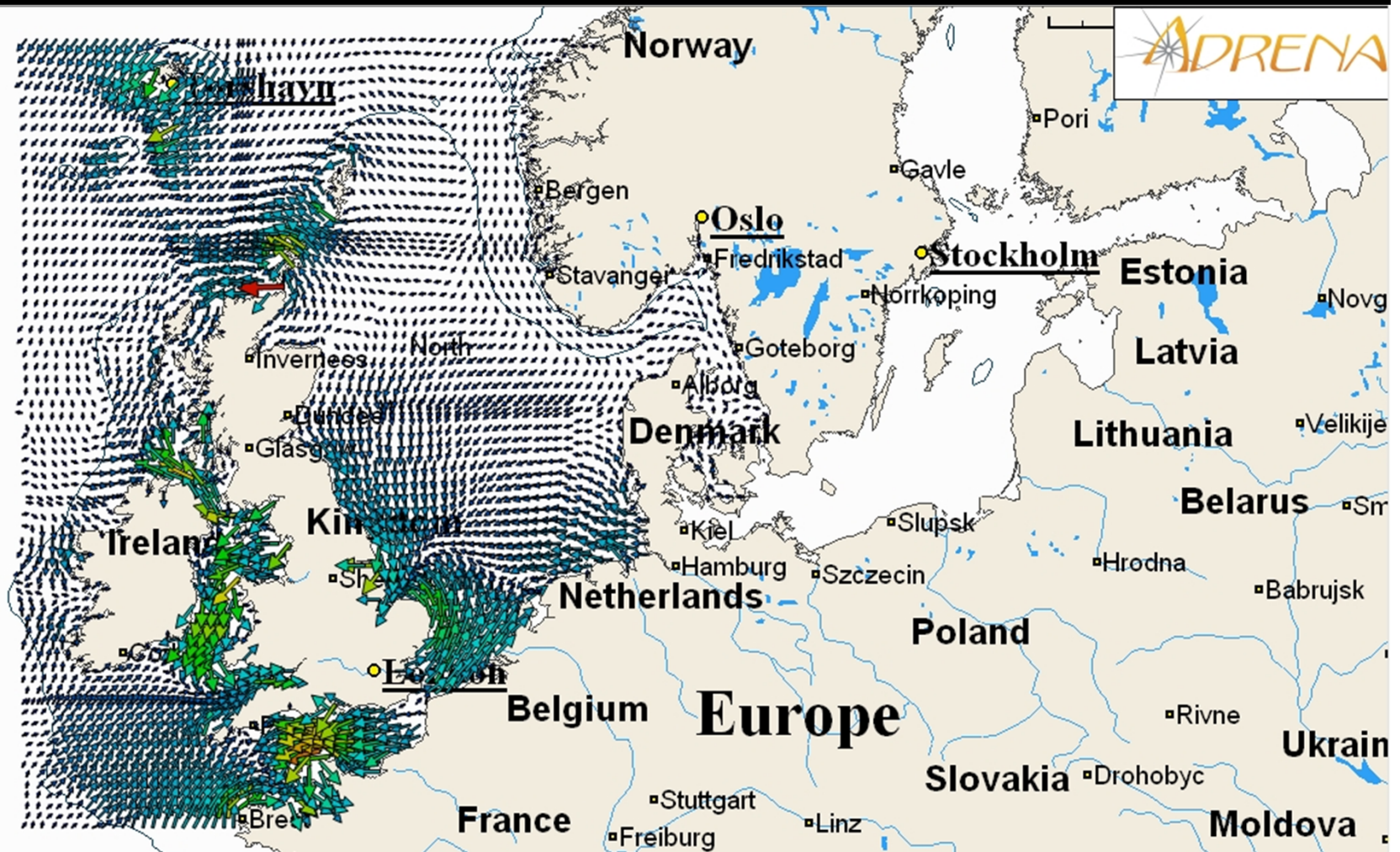
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PROUDMAN Atlas

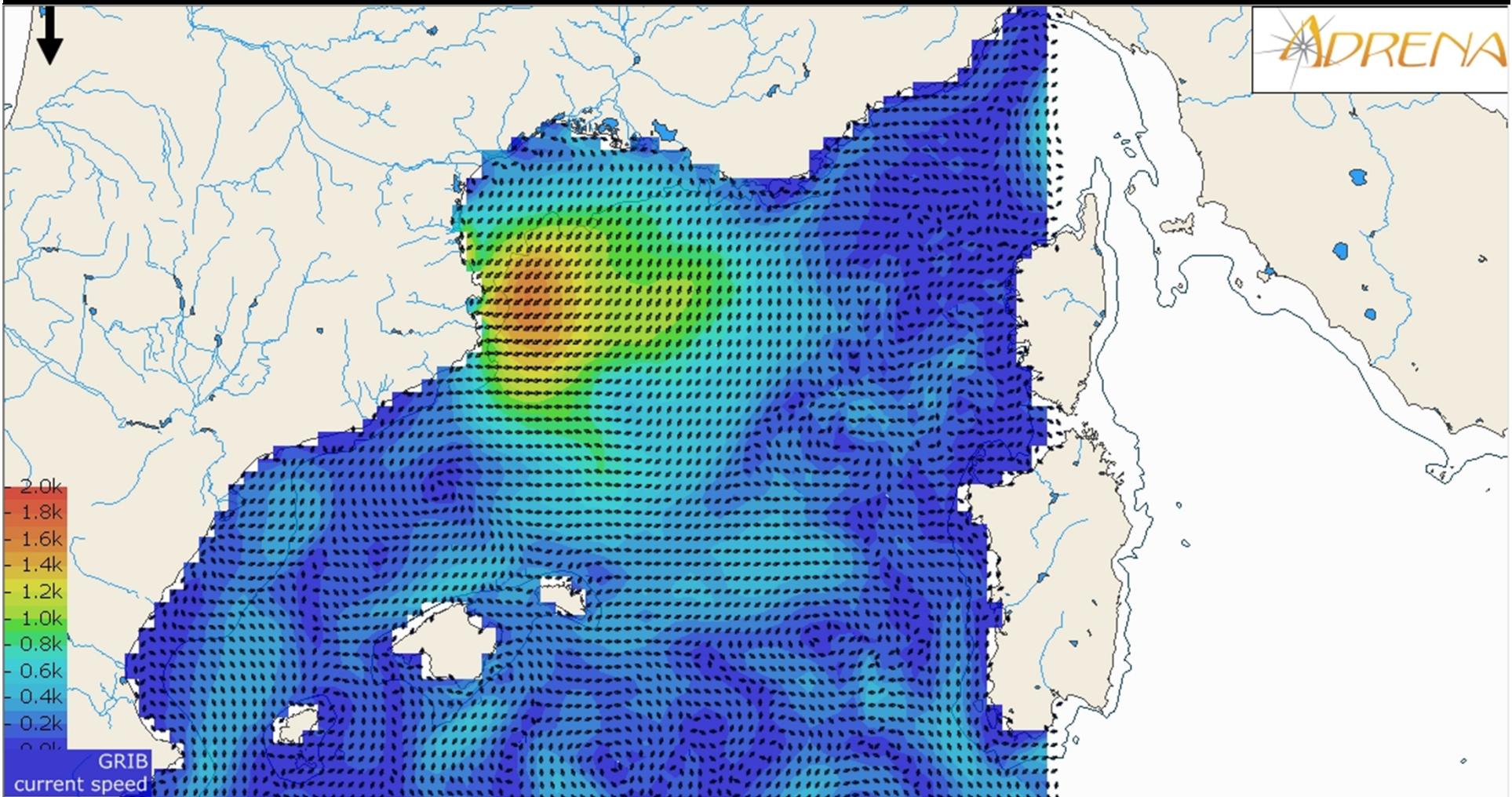


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GRIB TIDETECH Med

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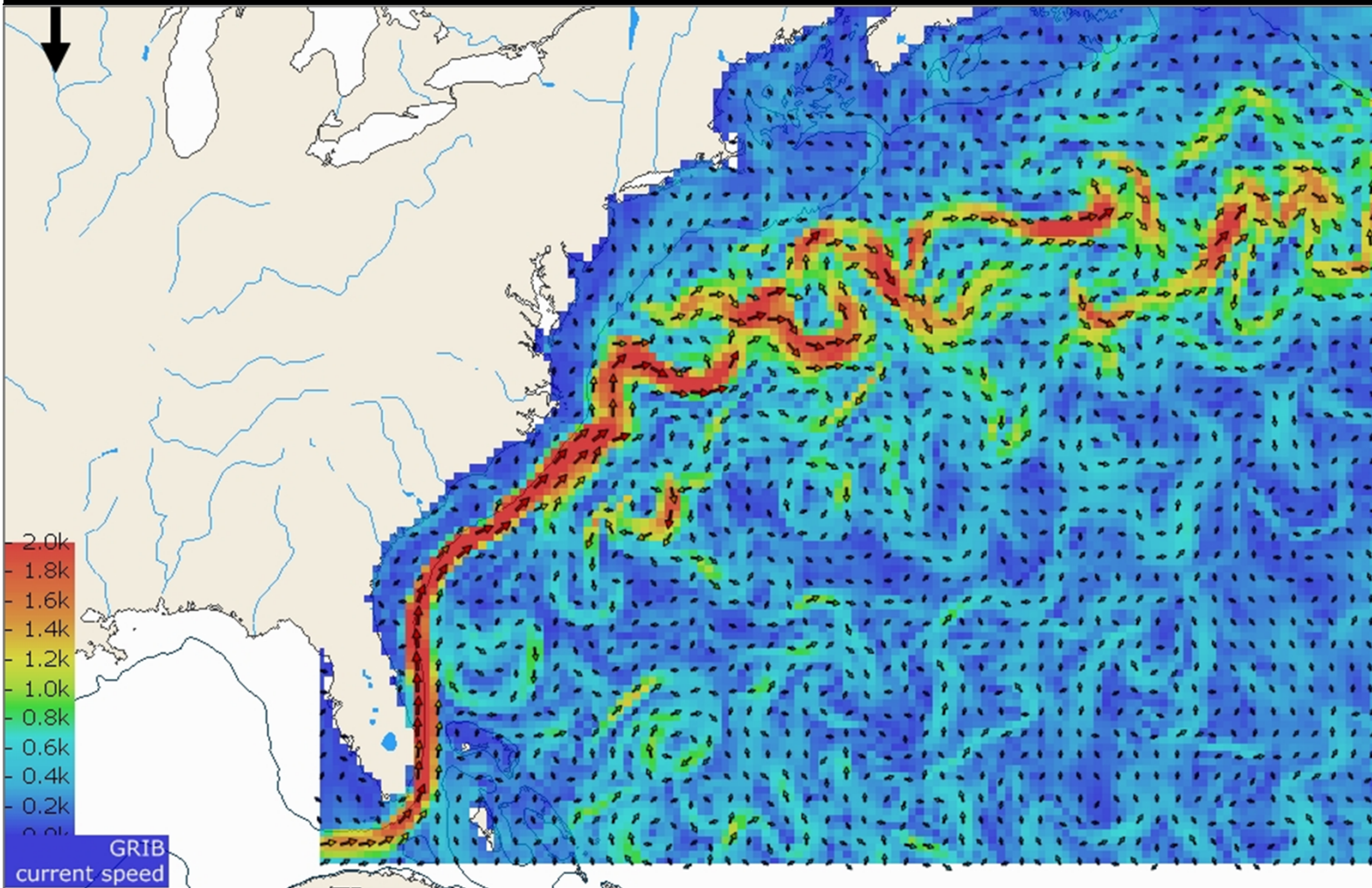


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GRIB TIDETECH Gulf Stream

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Routing setup

Calculate a routing

Name: GFS00_BristolChannel_8km_3hr_115% 100% 05/03/12 16:29:34

+ Start

+ Destination

- Calculation parameters

Scan angle: 180° Isochrones duration: 15 mn Max. duration: 365 d rhumb Sides Right side Left side

- Polar

POGO40.pol 100% Use engine if necessary Min speed for sailing: 6.0 knts

- Gribs (winds and waves)

GFS00_BristolChannel_8km_3hr.grb 115% 100%

- Wind

Constant wind: 0 kt 0039M Min upwind: 0 kt downwind: 0 kt

GRIB Shift the GRIB: 0 mn Max upwind: 100 kt downwind: 100 kt

Go to GRIB from: 0 kt 9M during: 0 mn

- Currents

GRIB or atlas Force: 0.0 kt 0039M 100%

+ Waves

+ Dangers to avoid

+ Scan the variables

Center screen on the route Avoid Grib colouring Hide other routings while calculating

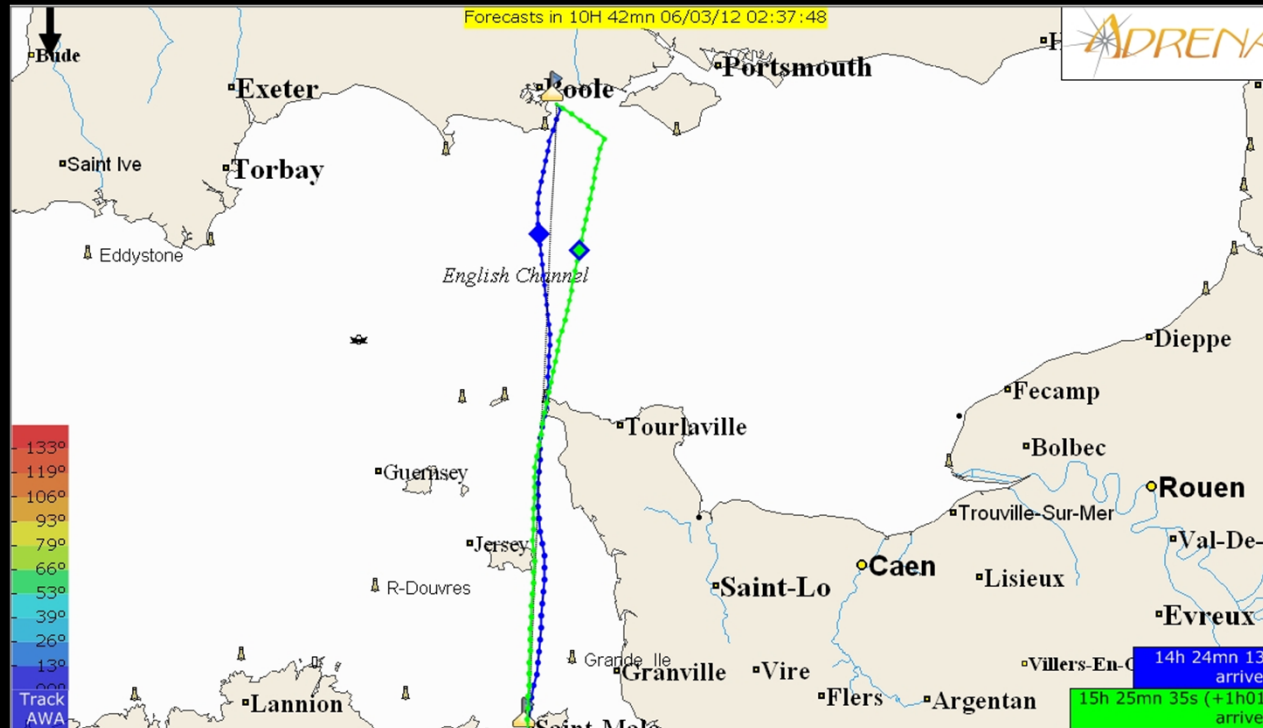
Calculate Cancel

- Selection of the Current data source
- If no data, fixe current value
- A % is available to modify current strength value of the data source

Routing from Saint Malo to Poole

Green : Without current; Blue : With current

Difference : One hour less with the current, 6,5 % in this case and a different route

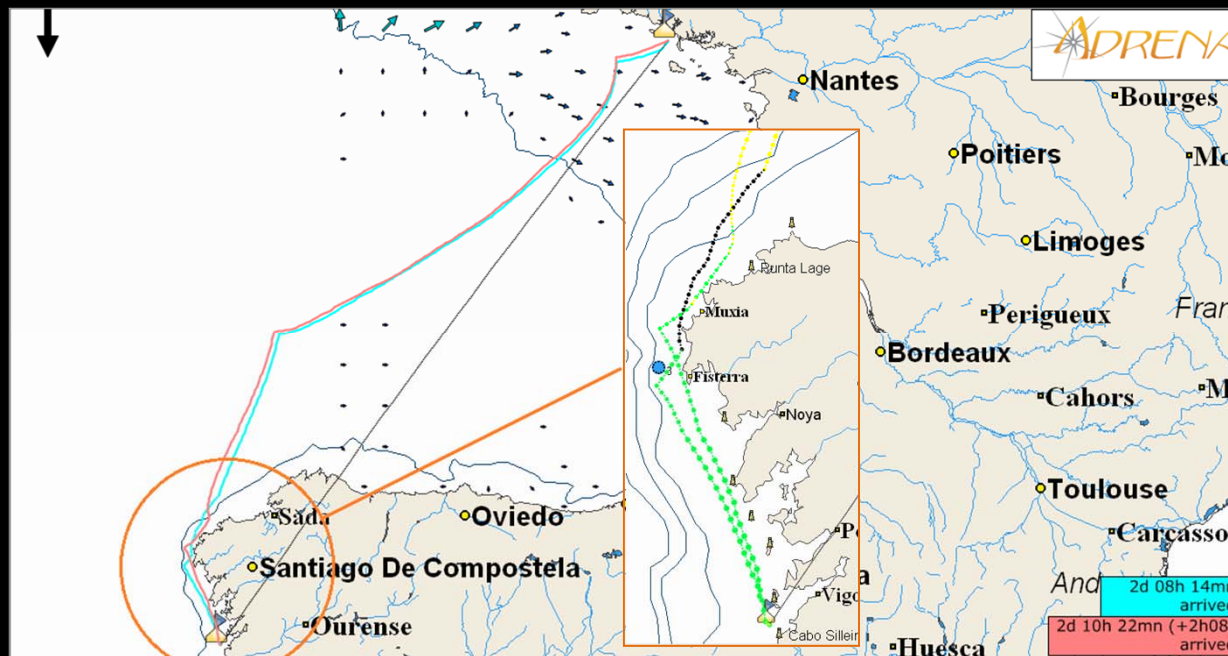


Don't included current could make the routing simulation wrong

Other routing development

Dual routing

We provide a dual routing between sailing or motoring. Engine is ON when boat are sailing below a speed limit. There is always the best route target which is not mandatory the direct line due to weather forecast. Fuel consumption is also evaluate.



The black course segment is with engine compare to sailing for the green and yellow course segment.

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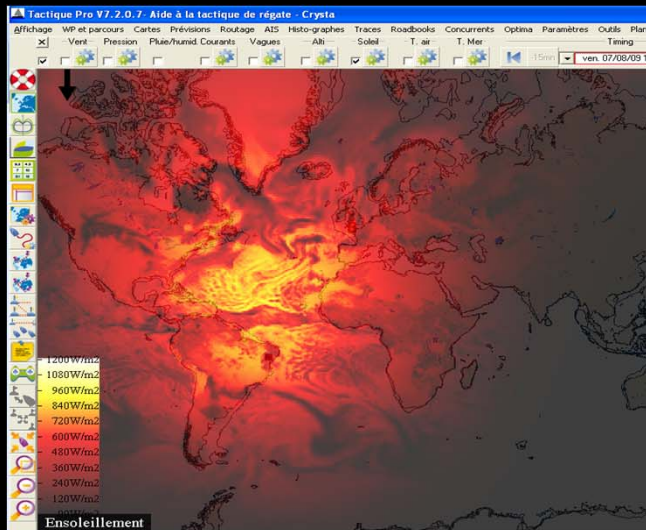
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Solar routing : Planet Solar

First boat around the world by Solar energy. Adrena provide a routing and the balance energy prediction. Two decision factor : The fastest route or the less consume energy route.

Input : Wind, Current, Waves, Sun



Next Step

Provide a routing software to commercial ship that include

- Wind for drag & drift
- Engine consumption
- Current for drift
- Wave for drag

Best route decision base on fuel consumption, arrival time



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What we need :

**A worldwide coverage in a GRIB file format with the data validity,
easy to download.**

Thanks for your attention