

Friday, August 6. 2010

The ideal navigation dashboard

Yesterday I got interviewed by a "Strategic Design Consultancy" about route planning, navigation, chart-plotters and the like. One of their clients is working on a new line of products for the "light marine" market - fishing, recreational and leisure craft. I happened to be at the wrong place at the wrong time (or right?), and ended up being the first interview subject. The interviewer wanted to know how I go about route planning and navigation. What software and devices I use and what I think about this and that. He had done projects for the same client in the aeronautic and maritime industries, but the private market was new to him. As was sailing. For two hours we talked about route planning, navigation, software, devices, interfaces etc. Only recently I had experimented a lot with the subjects on Smart-phones (iPhone, Android), Laptops (Windows, Mac), Chart-Plotters (Raymarine, Furuno and Lowrance). So I guess he could have picked a worse interview partner. Or maybe not. It seems while the client has admitted that at the moment he has no idea what his customer base really needs, he has already decided what they are going to get. Software for cool hardware like the iPad and with cool features like augmented reality. Which is a wonderful idea if all you want to do with the gear is to show off in the bar to your non-sailor friends. But actually using it on the boat? Not really. First of all capacitive touch-screens don't work at all with wet fingers or gloves on. Not that I wouldn't be fascinated by cool hardware and features. But as a sailor that has had his share of frustration with electronic gear I am begging on my knees: Please get the basics right first before you add the cool stuff. To me the basics are: • Course over ground (COG) • Speed over ground (SOG) • Compass course • Depth • Distance travelled (Log) • Distance, bearing and time to next waypoint • Time • Temperature • Atmospheric pressure • Battery voltage (• Humidity) Despite having spend more than 4000 EUR on navionics equipment this year (aaargh!) I still need to consult four displays and click buttons just to collect the data that I enter every couple of hours into my logbook. So ... here's my ideal navigation dashboard: My ideal navigation dashboard. See below for glossary. My Raymarine C80 has a dashboard, but it only shows a fraction of the info. And the font size is too small to read from further away than one meter. And the alarms are next to useless. And it uses too much power. And, and, and ... it's actual surprising how bad it is, given the price and the many years they are developing the stuff. We'll see. I send my design to the consulting company together with a summary of the preferred features and some issues. I don't think it'll help much, because I have seen too many times that products are more defined by what's considered cool and company politics than by real market requirements. But we have to try, don't we. Glossary: SOG: Speed over ground Vel: Velocity in water COG: Course over ground HDG: Heading, course of the boat in water Log: Distance travelled Lat: Latitude Lon: Longitude Dpth: Depth VMG: Velocity made good towards the waypoint. BRG: Bearing. Direct course from the current position to the waypoint. DTW: Distance to waypoint. TTG: Time to go. ETA: Estimated time of arrival Best BRG: Fastest course to waypoint. Calculated from VMG on different COGs. MMSI: Maritime Mobile Service Identity. The radio number of a vessel. CPA: Closest point of approach TCPA: Time to closest point of approach

Posted by Axel Busch in Gudrun V at 07:31

Oh dear oh dear... software people eh
I'm having a look at doing some development for the OpenCPN thing to get something on my CV for the time away... any feature requests or niggles?

Anonymous on Aug 6 2010, 13:21

Hi Chris,

splendid idea. I like OpenCPN really a lot. Especially the AIS display and alarm is very well implemented. Only sad that the Apple-version is currently unmaintained.

Features:

- Dashboard ! Or even a data bar.
- Shallow alarm: Sound alarm is CPA and TCPA to a shallow is below configurable limits. Don't know if/how the data can be extracted from the map files.
- Export Waypoints to attached GPS
- Download Grib files

Niggles:

- Sometimes zooming in/out does not work. Then when I click around a little and move the map it works again.

Have fun!

Anonymous on Aug 6 2010, 13:45