

PLUGGED IN by Tim Hasson



Where in the world...?

Position tracking for cruisers

Most of us have a pretty good notion of exactly where we are when we are out on the water. But what about the folks back home?

For the friends and family we leave ashore, there are now a lot of ways to periodically report and plot your position for all to see. These position-reporting tools can be very reassuring to those left behind, and will let them participate at least vicariously in your adventure. There is a safety benefit, as well. In the event of an emergency, a recent plot can be a valuable tool for search and rescue authorities.

Presently there are two general classes of tracking solutions available, which I'll categorize as being either "passive" or "active."

Solutions in the passive category are usually satellite-based. Typically you mount a tracking device on your boat, turn it on, and then pretty much forget about it until the end of your voyage. The device logs your position with a land-based service at pre-programmed intervals, with little or no user intervention required. Passive tracking systems are all automatic.

On the other hand, active systems require a degree of participation on your part. These schemes work using a cellular/satellite phone connection, or even via SSB radio

using Pactor e-mail or a voice call. Active systems depend on a human being to make a data connection or place a call to file the report.

Regardless of active or passive, on the receiving end there is universally some combination of e-mail notification or a graphical website where family and other observers get progressive updates on your status.

For an example of passive tracking on a grand scale, consider the Cruising Rally Association's annual Caribbean 1500 Rally. For the first time last year, every vessel in the Caribbean 1500 fleet was equipped with an AXTracker T3 satellite transmitter from Axonn, LLC. These self-contained, battery-powered devices are about the size of a shoebox lid, and it was easy to distribute them to rally participants with instructions to secure the device on deck with a good view of the sky.

Friends, family and other interested observers like me were able to follow the 69-boat fleet almost in real-time by clicking a link on the Caribbean 1500 website that tracked the group in Google Maps. For those so inclined, an even more dynamic and interactive display of the fleet's progress was also available in Google Earth, thanks to some savvy programming by the folks at a German firm called Magnalox.

I can report first-hand that this

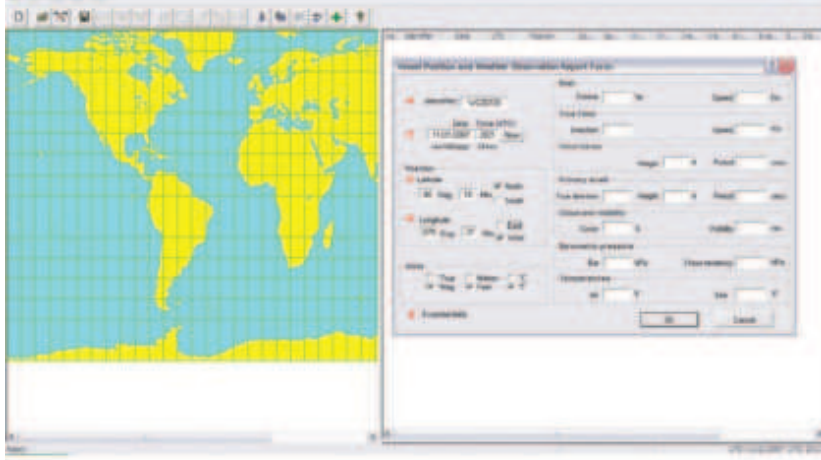
system worked almost flawlessly.

There were a handful of occasional "missed" reports over the course of the roughly 14-day run, but not a single boat failed to "check in" at least once during every 24-hour period. For the 1500, the AXTrackers were set to report every four hours.

There are other solutions for those of us who aren't part of a large group event like the Caribbean 1500. One promising new offering is the SPOT Satellite Messenger, which is also based on technology developed by the folks at Axonn.

The SPOT Messenger is a personal device that can clip to your belt or harness—it's about the size of a small handheld VHF radio. The device is rugged and waterproof to 1 meter, and it floats. Powered by two AA batteries that should last about two weeks in normal operation, the Messenger also has its own built-in GPS receiver for accurate position information.

The SPOT device has a lot of cool features geared towards outdoor enthusiasts and adventurers, blue water cruisers included. In "Track Progress" mode (which costs extra), the SPOT Messenger sends an updated position to the company's servers every 10 minutes, provided the device is reactivated every 24-hours to continue tracking. The folks at home can log in to the SPOT website and keep tabs



on you viewing Google Maps. For those who don't need such constant updating, there's also a "Check-In/OK" feature, which sends just an e-mail message containing your GPS coordinates to your personal list of pre-identified contacts.

At only \$170 for the device and \$99/year for basic service, I'm going to invest in a SPOT Messenger for myself. I'll follow up with a report on how it works in a future column.

There are other passive tracking systems, some of which have been around for a while. For example, owners of the SkyMate satellite e-mail service also enjoy a nice position reporting capability. You turn this feature on in the SkyMate software, and specify the e-mail address of one or more shore-side recipients. Once activated, your contacts receive e-mails noting your lat/lon with a link to a website where they can view your position graphically. Incidentally, all of the SkyMate service plans allow up to two free position reports per day. Additional reports can be sent, but are counted as usage against your monthly plan balance.

SkyMate equipment starts at around \$1,200, and service plans (which are based on the amount of data you move over the network, not minutes) range from \$16 to \$70 per month, with no annual contract.

For those who don't mind keeping a schedule or pressing a few buttons now and again, one of the many active solutions for position reporting may be a fit. In this category, it's my understanding that

that also collects weather observations. The weather info is forwarded to marine forecasters to help them refine their predictions.

There are a number of ways to file a position report with YOTREPS. If you have access to the Internet at sea, say via a satellite phone, you can use the free YOTREPS Reporter software to transmit your report directly. SSB users with a Pactor modem who use SailMail or the amateur Winlink system can file using the reporting tool built into AirMail, the e-mail program used by SailMail/Winlink. Those with an amateur radio license but no e-mail or Internet can still report to YOTREPS by checking in with either the Maritime Mobile Service Network or the Pacific Seafarer's Net (14.300 MHz) asking the Net Control Station to relay a YOTREPS report.

YOTREPS is a free service, and the only limitation is that users are asked to submit only one report in a 24-hour period. The crew at home can monitor your progress by visiting the YOTREPS website.

Amateur radio operators who use the WinLink system for e-mail have yet another free position reporting option. Similar to YOTREPS, provisions for the Winlink Position Reporter are also built into AirMail, the e-mail program used by Winlink. You can file reports as often as you like, which the folks at home view by visiting the Winlink website.

Vessels checking in with either YOTREPS or Winlink can also be viewed on the ShipTrak website at

www.shiptrak.org. Operated by the Maritime Mobile Service Network, ShipTrak consolidates reports from both YOTREPS and Winlink and displays them using Google Maps. Many cruisers enjoy maintaining a web log, or "blog" to record their travels and share adventures with the folks at home. SailBlogs is one popular hosting site that now supports position reporting as a supplement to regular blog entries. When you include your lat/lon with a posting, a map on your blog automatically updates with your latest position. SailBlogs also supports Google Earth, so visitors can track your progress and read your blog entries right in Google Earth. To gain access to this feature you'll need to subscribe to SailBlogs at the advanced XJSail level, which costs \$95/year.

It should go without saying that, while all of these systems track and report your position, none of them are a substitute for a functioning and properly registered EPIRB.

There is also another whole class of tracking solutions available, many of which use some combination of satellite or cellular phone technology to monitor your boat and trigger alarms when things go awry.

Finally, if you've been filing regular position reports during a voyage and decide to stop for some reason, try to let the folks back home know about it. They've likely become accustomed to checking in on you—if you disappear suddenly and without explanation, it's likely to cause them some undue concern. ~

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