

## 4 Game Changers

**S**imrad, Iridium, Navionics and FLIR are launching new products that may well change how we navigate and communicate. On this page we have the Iridium GO. Next we describe Simrad's entry, a forward-looking sonar that is touted as a tool for cruisers. Then Navionics offers its solution to the problem of the disappearing magenta line on ICW charts. And finally FLIR introduces a \$300 thermal imager that works with an iPhone. Hate to use the phrase, but game changers is what they are.

## Q&A

Editor-in-Chief Peter Swanson interviews Tim Johnson, director of Iridium Land Mobile Business, to learn about the new hot spot that turns your smartphone into a satphone and more.

### 1. THE IRIDIUM GO: A COMPACT SATELLITE WIFI HOTSPOT

**PassageMaker:** Let's get right to the product.

**Tim Johnson:** Basically what we've got is a mobile satellite hotspot—a very small device, a little bigger than a pack of playing cards—to enable your smartphone or tablet to make voice calls, to let people do social media ... well outside the reach of cellular providers.

**PassageMaker:** This sounds like a terrific product for people who cruise the Bahamas or anywhere outside the coastal limits of the United States. One question I do have, and I suppose you were going to get to it: Do you retain your own phone number when you make these calls?



Tim Johnson, director of Iridium's Land Mobile division, tests the new Iridium GO in the field.



**Johnson:** You don't. You're going to be using an Iridium app that's installed on your device dialing with the number for the Iridium Go. Unfortunately it's technically a very challenging thing to allow you to have your own phone number.

**PassageMaker:** Funny how I homed in on the only thing that you aren't able to do. Go ahead with the things you can do.

**Johnson:** Iridium has been serving the sailing community for a long time, and there are a huge number of value-added developers out there who have developed solutions for that market, especially things like email applications that use as little data as possible, SOS applications, web applications. There's a whole suite of these applications that can be easily ported over to GO, including those from Android and the iOS platforms.

**PassageMaker:** Will this also work with a PC?

**Johnson:** It will. One of the big intentions was to have an open architecture that will allow this product to be used by a wide variety of vertical markets. ... We went with an open architecture and a tool kit that allows partners to develop application needs of their customers.

**PassageMaker:** Is OCENS among those?

**Johnson:** They are.

**PassageMaker:** The PC version of OCENS software would probably work as is, right?

**Johnson:** There is probably something they have to do to make it interact with GO, but it's probably not a whole lot of heavy lifting.

**PassageMaker:** Have you got the pricing for this hardware and service?

**Johnson:** The pricing is going to be right in the neighborhood of \$800 at

retail, and they'll probably be some variability on that depending on where in the world it's being sold and by which partner. And the service itself is pretty variable based on the size of the bundles people want to take. At the low end, it's comparable to what people are paying for Iridium service, in terms of the standard monthly fee. What I will say is that we have created some really aggressively priced bundles. ... It will probably be fully 50 percent lower than what it has been in the past. You will probably have a range that begins at \$30 a month at the low end to super heavy users who expect to make a lot of voice calls. For them it easily could be over \$100 a month.

**PassageMaker:** That doesn't seem too crazy out of line with what people spend on phones on land.

**Johnson:** They'll be some neat twists we haven't offered before in some plans, like unlimited text messaging. We know there's a large number of users in the handheld community that like using text messaging as a way of keeping up. You'll also see location-based services with position reports at regular intervals.

**PassageMaker:** Will you have the ability for people to go online and see where the users are on a map of the world?

**Johnson:** When we rolled out the Iridium Extreme a couple of years ago that was the first thing we made that had location-based services built in. So there are partners who work with us who have developed portals that will do things like show locations on a map, enable people to communicate back through the web to the handset with the same technology as the Iridium Extreme. ... Like the Iridium Extreme, it also has an SOS button that links back to the GEOS, the emergency response service.

**PassageMaker:** Will the device itself have the "panic button" on it so you don't have to use your telephone to activate that feature?

**Johnson:** GO is highly ruggedized to Mil-65 specs. The SOS button is on the side, so if you're looking down on it—the

## OCENS Is a Satcom Cruising Tool

OCENS supports the new Iridium GO, with "crash and compression" software for downloading weather forecasts, exchanging email and web browsing. OCENS compression effectively accelerates download rates tenfold, roughly equivalent to dial-up web browsing back in the early 1990s, depending on whose satellite device you're using.

As painfully slow as this may seem, it is a reliable way of getting crucial intelligence for passagemaking—weather GRIB files, for example—while keeping in touch with friends and family and getting news reports.

OCENS sells its WeatherNet software for \$99, plus a small fee for each forecast file downloaded (the forecasts I used while cruising the Bahamas cost less than \$2 a day). Its OCENS Mail costs \$59 to activate and \$240 a year. And XWeb data-compression service for accessing the Internet costs \$30 to activate and \$96 a year.

picture with the antenna popped up—the SOS button is on the far side.

**PassageMaker:** How is GO powered?

**Johnson:** It can be line powered. However, it's got a built-in battery.

**PassageMaker:** Do you have any idea how long the battery lasts?

**Johnson:** Stand-by time on this device is 18 hours. Talk time is four hours.

**PassageMaker:** I was just thinking about that in terms of the SOS button.

**Johnson:** It's going to put you somewhere between the four hours and the 18, less than the 18 hours depending on the rate at which you are sending SOS calls.

**PassageMaker:** Is there a menu of canned messages or is it just SOS?

**Johnson:** You can actually customize (canned messages) similar to what you

can do with the Iridium Extreme. You can also change the destination of the SOS message if you didn't want it going to GEOS, if you had a particular local Coast Guard number you wanted to use or a certain search-and-rescue center that was relevant to your area. It will send an email or a text or it will make a voice call.

**PassageMaker:** What did you say the size was, a deck of playing cards?

**Johnson:** It would be a couple of decks and a little wider. If you were to open the palm of your hand up, it would overlap your fingers a little bit, but you could wrap your fingers around it.

**PassageMaker:** So there is conceivably a pocket you could put it in?

**Johnson:** Yes.

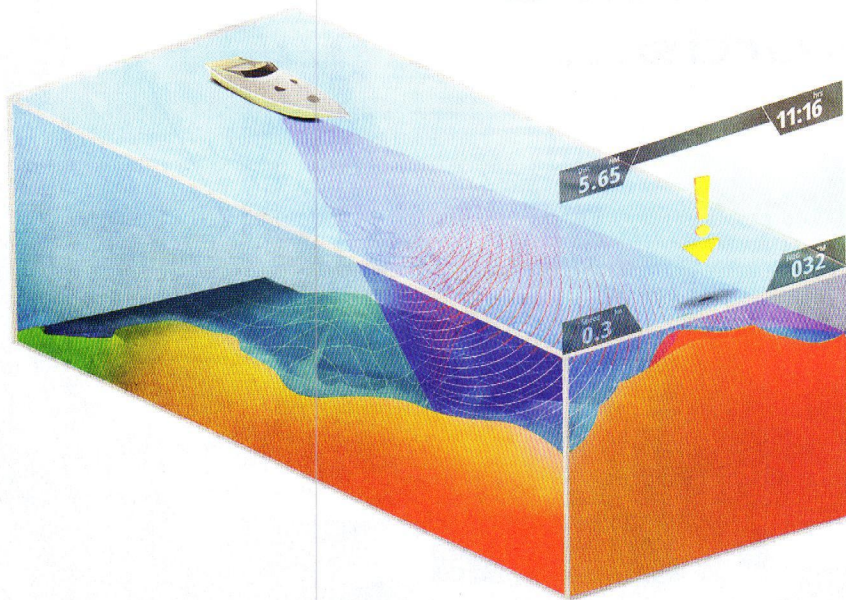
**PassageMaker:** What haven't I asked

## Me Too, Globalstar Says

In the days before Iridium Go was announced, a competing satellite service provider issued a news release of its own, announcing a nearly identical product. The company is Globalstar, the product is called Sat-Fi. Globalstar says it expects FCC approval sometime in the spring "with shipments starting shortly thereafter."

The Globalstar release was short on details, including a description of the hardware involved. It did assert that, unlike the Iridium Go, customers would be able to use their existing smartphone number when connecting through Sat-Fi.

Iridium's Tim Johnson says he doubts that the Globalstar Sat-Fi will come to market any time soon. "We greeted that press release with great skepticism since it seemed like an effort on their part to forward-run our product announcement ... an attempt to introduce uncertainty in the marketplace," Johnson says.



This rendering depicts the activation of an alarm when a boat with Simrad ForwardScan sonar approaches shoals.

that you'd like to answer?

**Johnson:** Actually one of the great things for rec-marine in particular because you have a multi-user environment—lots of people on board. By lots, I mean three, four, five people on board. GO is actually set up for multiple connections. You could have three Android devices, two iOS devices on board. You could have a tablet and an iPhone. While you can't all use it simultaneously in that you only have one voice or data channel, everybody can access it. I can easily see a use case where you have somebody up on deck texting, somebody down ready to pull

a weather GRIB file down, somebody with an iPad sending out position reports every five or 10 minutes. The Wi-Fi is really useful in a multi-user environment.

**PassageMaker:** What do you say the Wi-Fi range is?

**Johnson:** A hundred feet. There's probably some variability when you're talking about boats because the materials that boats are made of may impact that Wi-Fi connectivity.

**PassageMaker:** I can certainly see myself using this product.

**Johnson:** We'd be happy to get one down to you to test once we launch.

**PassageMaker:** That would be great. I'm thinking of going to the Bahamas in June, but that would probably be too soon, no?

**Johnson:** We expect to be shipping in quantity in Q2. June, we should be able to manage. ... Many of your readers are probably fairly comfortable with satellite services. They've been using them for years, and that's always been a big market of ours. They will be able to find GO through the same distribution partners they bought their current products from.

## 2. SIMRAD FORWARDSCAN SONAR INTEGRATES WITH MFDs

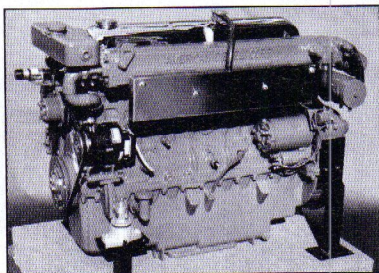
I would have bet on Garmin to be the first of the Big Four marine electronics manufacturers to introduce forward-looking sonar for cruisers. In 2012, Garmin acquired Interphase Technologies, a maker of stand-alone forward-looking sonars on the verge of a breakthrough.

Then came the Miami Boat Show in February. And it was not Garmin, but Simrad that announced ForwardScan, a transducer that sends "a clear picture of what's ahead" to multifunction displays from the Navico family of companies, which also includes Lowrance and B&G.

To be fair, Furuno has long sold an immensely powerful rotating echo sounder capable of looking far forward (and all around). Furuno's current Searchlight Sonar line began in 2000 with the release of the CH250

Navico

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