



# PLUGGED IN by Tim Hasson

**Inmarsat expands their maritime broadband and enters the handheld sat phone market**

## SATELLITE SOLUTIONS

**B**ased in London, Inmarsat remains the world's oldest and largest satellite communications network for maritime users. Founded in 1979 to improve safety at sea through better communications technology, the company is now in the final stages of deploying their fourth satellite constellation in less than 30 years, and at least two new services this upgraded network will support are becoming reality.

First, in November 2007 Inmarsat announced the commercial availability of their long-anticipated Fleet Broadband service. Fleet Broadband is the maritime version of Inmarsat's Broadband Global Area Network (BGAN) strategy, which allows for true high-speed data connections at sea. Fleet Broadband also supports simultaneous voice and data connections, so you can talk on the phone and download e-mail at the same time. Group III faxing and SMS text messaging are also supported.

Equipment that supports Fleet Broadband is being manufactured by Thrane & Thrane and JRC, with others likely to follow.



There are actually two types of Fleet Broadband service, dubbed FB250 and FB500. The only significant difference between these is the size of the antenna and, consequently, the maximum data speeds that can be achieved.

The exact dimensions for Fleet Broadband gear vary

a little by manufacturer and options. Generally speaking, FB250 terminals use an antenna dome that measures about 11 inches around and weighs around 15 pounds, with a maximum data rate of 284 kbps. FB250 gear is priced at around \$13,000. The faster FB500 terminals use a larger 27-inch dome weighing 40 pounds and upwards, with a maximum data speed of 432 kbps. FB500 terminals retail for around \$20,000. Both FB250 and FB500 have good connectivity options for external computers and voice handsets.

For voice calls via Fleet Broadband, expect to pay around \$1.50/minute when calling back to a fixed landline phone. The always-on data connection is priced on the volume of data you move over the network, not time, at around \$13 to \$14 per megabyte. It is also possible to set the data connection to a slower 64 kbps rate, which is priced by the minute at around \$9. Note these are "ballpark" rates that may vary depending on which provider you contract with for airtime service.

The good news is that Fleet airtime is "pay as you go" and there are no monthly fees or account maintenance charges, though some

vendors may charge an initial account setup fee.

Fleet Broadband coverage depends on Inmarsat's newest 4th-generation satellites and a new network of ground stations that support them. Presently there is broadband coverage over two-thirds of the world, including the Atlantic and Indian oceans. Inmarsat's final 4G satellite is slated to launch in April, bringing coverage to the Pacific Ocean later this year.

There's no question that Fleet Broadband isn't geared towards those of us on a modest budget. Still, it gives a glimpse of where this technology may be headed in the future. And for those with the means who absolutely must remain in touch at any cost, Fleet Broadband will likely be a very viable option.

Traditional Inmarsat solutions, including Fleet, have been fixed-mount equipment that gets put on the boat and stays there. The other news from Inmarsat concerns their entry into the handheld personal satellite communications market, a category previously dominated by the likes of Iridium, Globalstar and Thuraya.

To do this, Inmarsat has partnered with Jakarta-based Asian Cellular Satellite International, or ACeS, a regional provider who originally served only Asia and Indonesia. Under the agreement, the ACeS coverage will be extended worldwide by migrating service to Inmarsat's new 4th-generation satellites and ground stations noted above.

The new IsatPhone is a dual-mode satellite and GSM cellular

phone that switches automatically between the two modes depending on whether cell coverage is available. The present phone, developed by Ericsson, is extremely compact at about 5 inches by 2 inches by 1.25 inches and weighs less than half a pound with the battery installed. It is also attractively priced at around \$650 for the basic handheld equipment (phone, battery and charger) and airtime charges typically under \$1/minute.

An optional cable can connect the IsatPhone to a computer, enabling a data connection at 2.4 kbps in satellite mode, comparable to Iridium. In GSM mode the data rate jumps to 9.6 kbps. While these speeds are pokey in comparison to say, Fleet Broadband, they are more than adequate for transferring e-



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There's also a marinized fixed-mount version of this phone available, which Inmarsat has dubbed FleetPhone. Not to be confused with Fleet Broadband (why do marketers do stuff like this?) the FleetPhone retails for about \$1,600 and offers the same features and data rates as IsatPhone in a package designed for the marine environment.

Present IsatPhone coverage is limited to Asia, Africa and the Middle East. Like Fleet Broadband, this coverage will expand worldwide as Inmarsat launches their final new satellite and completes upgrades to their ground stations to support the enhanced network. While all this is going on, Inmarsat has engaged

EMS Technologies to develop a new, improved IsatPhone to become available when worldwide service is announced, probably around this time next year.

To be fair, I should point out that Iridium and Globalstar are also both hard at work on next-generation satellite constellations and network enhancements. I'll hope to follow up with more on these as details become available. ~

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