

**The Islander  
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## **TECHNOLOGY UPDATE**

**I must go down to the sea again to the lonely sea and the sky, I need a Net connection there, could I use Wi-Fi?**

So just how easy is it to get online on board a yacht, and what are the options available?

This is a guide for Internet fanatics who want to, or have to go to sea.

In today's world the Internet is everywhere. We are all booking flights, checking email or viewing the football scores on our mobile phones. We can't get away from it, we are stuck with it. Even if you can do without it, I bet the owner of your boat can't.

Most offices and even most homes now have ADSL and we are seeing an abundance of Wi-Fi hotspots popping up all over the place. It's so easy to get online nowadays ashore, and due to this, many of us have become dependant on email.

While for many of us it's relatively easy to access the net, what about all those mariners, both ancient and young, for whom downloading that file at sea isn't always that easy, and in many cases can prove to be very expensive?

So, what are your connection options?

### **When harbour rot has set in - land based but with liquid foundations**

Just hook up to the local phone line and use an old school dial up or ADSL connection, but for some this is not always practical. If it all goes wrong getting through to the local phone company can be more hassle than its worth. Even more frustrating is asking for advice from the mariners or the yard as to how to connect up. The alternative is Wi-Fi. See next.

### **Being brave – this is being on the dock, then motoring around the harbour and poking your nose through the entrance - this is where you can use Wi-Fi**

Try "wardriving" as its called (logging on to someone's unsecured Wi-Fi network) or using one of the many free marina networks with a wireless enabled device such as a laptop or PDA. This is interesting and a sometimes convenient and free way of getting on the net.

Last week an elderly friend, a visitor to the island, asked me if I knew a location where he could go and log onto Wi-Fi for free. I suggested somewhere convenient in central Portals. The last time I tried it was whilst sitting in Lloyds Bar and I found four available networks in the area!

Download speeds are generally good and most of the time it's not going to cost you a penny, but it does have its pitfalls. Any unsecured network that you use and send data on can, in theory, be seen by anybody else who is using that network. In addition, signal strength is often sporadic.

But Wi-Fi is not to be dismissed. The whole City of London is about to become Wi-Fi enabled and most airports, hotels and even bars like Key West have Wi-Fi hotspots.

So what options are available for yachts to improve or take advantage of this free or inexpensive way of logging on?

One way is to have an external antenna fixed on the yacht with an interface that will transmit the wireless signal internally around the yacht providing access for wireless enabled devices, such as laptops and PDAs. These relatively inexpensive devices will pick up a signal from perhaps 1km away eliminating the need to sit on the fly bridge because that bigger boat has just berthed next to you. Just remember that unless your Wi-Fi system is secure any sensitive data that you send could be seen by someone else. Likewise any Wi-Fi system you can log onto for free is also usually insecure, so beware.

With Wi-Fi you must look for the following logo to make sure the Wi-Fi network complies with WPA2 or 802.11i standards, first ratified in draft by the IEEE in June 2004. This means that real wireless security is built into the network and protects you. Prior to this, installers often had no choice but to configure the earlier, flawed encryption standard known as WEP or Wired Equivalent Privacy. Most existing Wi-Fi networks and equipment pre-date this standard. If you are concerned as to what you already have we will conduct a survey for you.



### **Massively risky - going further outside the harbour – Wi-Max will come into its own**

There are alternative Wi-Fi options available from other suppliers not using the standard Wi-Fi frequency that require non standard equipment. These systems work exceptionally well with better performance and quality of service. A good local example is that supplied by OmniAccess in Palma, Portals, Barcelona and France. Uniquely, to my knowledge, OmniAccess have also pioneered a Wi-Max solution in Palma providing a 10Mb wireless data link. In theory this will provide a high speed connection across Palma Bay.

**Seriously intrepid – out of the harbour and along the coast but keeping land in sight - centred around populated areas is 3G (UMTS & now HSDPA).**

The next best wireless option you have is 3G. What is 3G? 3rd generation mobile broadband is the continued development of the GSM/GPRS service available on the mobile phone network, provided by your local operators such as Vodafone and Movistar. There are now on the market, and have been for a while, several 3G mobile phones. Where this technology really moves on is with the new data packages available from service providers and new hardware. You can buy a 3G PCMCIA card or modem for your laptop or PDA, along with a data enabled SIM card, and get online anywhere you have a 3G signal (almost all the mobile network coverage in Europe now) at speeds of up to 1.5mb per second. This is faster than most land based ADSL services and is called HSDPA.

The connection is always on and you only pay for the data that you download, much like pre paying for minutes for phone calls. So with a small outlay for the necessary kit and the appropriate package from a mobile service provider (typically €80 per month for 3 Gb) you can be surfing away all day long. In the next year or so we should see even faster download speeds and possibly unlimited data packages from service providers meaning that unlimited mobile Internet will be available anywhere there is a 3G signal.

As Peter mentioned in his editorial last month, I sailed from Croatia to Mallorca as delivery crew on a 30m sailing yacht at the end of August, which was a really tough job - having to endure long sunny days at sea, and dinner with wine under the stars every evening. I am just glad I don't have to do that for a living! Still, it did give me the opportunity to carry out some valuable research on behalf of our clients, and to bore my fellow crew mates by conducting tests all the way on network signal strength! I have to say I was most impressed (sad or what?) by the coverage and distance offshore, especially from small islands such as Malta and countries such as Montenegro and Tunisia. GPRS was present everywhere and 3G always popped up close to areas of denser population. Many clients returning from their summer cruising season have reported back that network coverage has really come of age this year, but they have some scary roaming charges!

**Gone completely mad - out of sight of land - offshore out of 3G range, your only hope is satellite**

The next level is the big step up. Internet over satellite for most boats is for communication proposes only. There are various ways that you can access data or the Internet but most of them are slow by today's standards and expensive. A typical Inmarsat satellite installation providing 128kbs will cost over €15,000 and billing is per minute, and at \$13.00 per minute downloading that favorite track from iTunes is going to cost a small fortune. Billing for what you use is also

available but it is slow. You can use this everywhere except the Poles and who wants to go there anyway?

The best price/performance option is VSAT. This will provide broadband access at sea with up to a 2Mb download speed for a fixed price per month for unlimited data, just like ADSL at home or in the office but a little more expensive. Unfortunately this is the domain of the larger yacht due to the antenna size required. The smallest dish size being 1m diameter, not to mention the purchase cost of €50k plus. The monthly airtime packages start at around €2,200 per month. This will give you 512kb download and 128kb upload but this is often a shared connection with several other boats so speeds can vary. The coverage for this is currently limited to the warm cruising areas such as the Med, Gulf and Caribbean. This is however being extended by the month with some open ocean coverage developing. If you are considering VSAT please consult us, we have installed over 25 systems now and you must take experienced advice, as we have seen many false economies.

Some of these communication options will suit some yachts but not others, and the typical world-girdling charter yacht will require all of these.

Using the right connection at the right time at the right price requires a whole raft of other technologies. More on that another day...

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