



Islander May 2013

Technology Update

Inmarsat Global Express and In-Car WiFi

Inmarsat GX Ka band VSAT is gathering momentum

The new and emerging Ka band system from Inmarsat is starting to gather momentum. The new Ka band satellites will be able to offer higher bandwidth to smaller antennas than the existing Ku band satellites, so clients will be able to subscribe to higher Internet speeds at lower prices.

The spot beams of the Global Express GX service will almost cover the world with the exception of the poles whereas Ku band coverage is regional. A maritime vessel will be able to transit from spot beam to spot beam and satellite to satellite simply and easily on the GX system without the need for Automatic Beam Switching (ABS).

This new high bandwidth, Ka band service from Inmarsat should have three of their satellites in orbit and be in beta test by the end of 2013 and the full constellation of satellites operational during 2014. Once running, Global Xpress will offer superfast mobile broadband with download speeds of up to 50Mbps through a 60-100cm antenna.

A few Ka band ready 100cm antennas are already available from Sea Tel and Intellian but we have yet to see the first of the 60cm antennas and we hope to see these in the second half of this year after full type approval testing has taken place.

These 60cm antennas will be perfect for yachts of all sizes and types and should be less than 25kg; so much better for mast mounting on large sailing yachts and for smaller yachts.

According to Inmarsat this \$1.5 billion project is on course and will provide high bandwidth services for the maritime, land, aero and military worlds.

This is a very exciting new project. Ka band services are already in use and new ones are being introduced by a number of different satellite operators worldwide, but Inmarsat is the only satellite operator intending to provide a global service.

In-Car WiFi for every yacht's land based tender

In-car WiFi was launched as a standard option by Audi this month.

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Audi America was the first car manufacturer to embed a factory-installed cellular modem and WiFi hotspot in 2011. Chrysler did it earlier, but it was a dealer add-on.

If you were to buy an Audi in the USA, you can now get virtually unlimited WiFi in your car for \$15 per month. The Audi Connect WiFi hotspot service, backed by a 3G T-Mobile connection, may be the biggest technology leap by a car manufacturer this year. However, in reality it's as much a pricing-and-marketing leap rather than a technology tour de force. There is only one hitch. You have to sign up for 30 months in advance for \$450 (\$15 per month) after the free initial six month period for new car buyers. However there is an Audi month-to-month service plan for car owners at \$30 per month. The service is locked to the T-Mobile network which Audi uses worldwide.

It is unlimited WiFi on an "all-you-can-eat plan," says Audi communications manager Brad Stertz. However he continues to say that "T-Mobile reserves the right to limit extreme users." Audi says the data plan includes car access (via apps using the Audi LCD display) to real-time news, weather, Google Earth, Google Voice Local Search, plus connections for as many as eight devices in the car. They can hedge against excessive users as the system cannot be removed from the car and most people don't spend all day and night in their car.

Audi have chosen to go with T-Mobile as they have a presence in almost every country but I understand the service doesn't have the reach of Verizon in less populated areas of the USA which will not be good news for Audi dealers in those locations!

Coverage is always the big consideration, as we know well in the yacht industry. Albeit Audi of America's senior manager for connected vehicles, Anupam Malhotra, enthuses, "The T-Mobile-powered Audi Connect service delivers unmatched connectivity to our customers at a rate that will turn their Audi into the ultimate mobile device. This plan will help move us toward the goal of one million connected Audi vehicles on the road worldwide by 2015."

However does this mean you will see no Audis on the road where there is no T-Mobile service coverage?

How's the competition doing? BMW has announced, but not yet delivered, a dealer-option cellular modem with WiFi. It will connect into the smartphone dock in the center console to make use of the car's cellular antenna. But BMW is still working out details on which carrier to use and how many simultaneous connections to allow. The device can be removed from the car but it's big and only rated for a half-hour of on-air time until you have to plug in a supplied external battery. If you've ever seen a mobile hotspot that's the size of a deck of cards, the BMW solution is about 10 times as big!

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In-car WiFi is not rocket science. I would guess many readers have used a 3G dongle connected to their laptop in a car at some time in the past. It is pretty simple to use a portable, quality 3G router with a built in access point in a car with your own SIM card. Such a 3G router will eliminate the down sides of a 3G dongle.

The moment when all new cars have dedicated in-built WiFi is still a few years away. A couple of years ago, the Head of Product Marketing at **Vauxhall** in the UK suggested legal issues, not technical capabilities, are set to hold up the introduction of truly internet connected cars to British roads. Expanding on the mooted legal issues that are expected to hinder the introduction of in-car WiFi he said, “whilst driving you will be able to have access to the likes of Google and Facebook which might not be the best idea. When you think of the legal issues involved with simply answering a mobile phone or operating a sat nav whilst driving, you can see there will be issues around accessing the internet and these are currently being discussed by the health and safety executives of the world.”

Finally – a tiny device with a huge idea

Imagine if you could do things on your computer just like you do them in real life. If natural movements replaced all those clicks and taps and drags and drops. Imagine if technology finally figured out people, instead of the other way around.

It senses your hands and fingers and follows their every move. It lets them move in all that wide-open space between you and your computer. So you can do everything without touching anything. It's the tiny device that will change the way you use technology. It's the world's most natural technology that just might change the world.

This great new device will start to be shipped in May. Look out for the full details in my column next month!

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