



# DOME sweet DOME

Captain Michael Howorth talks to industry leaders and elicits their views on this fast and ever changing method of on board satellite communication

The seemingly never ending demand for faster, cheaper, satellite broadband is not, as many in the superyacht industry could hope, being driven by the needs of superyachts. Nor is it, as one might have expected, being driven by the ever-increasing use of the medium by commercial shipping. It is in fact being driven by the likes of Iraq, Syria and other Middle East companies where fixed-line broadband connectivity is expensive.

"Telecoms is an important element in a country's infrastructure. Iraq is a good potential for the satellite industry because of the oil and the political challenges," said Riyadh Al Adely, the managing director at SkyStream. Countries that are affected by instability tend to become lucrative markets for satellite service providers because the communications infrastructure and

backbone may be easily affected or shut down. Non-governmental organisations, news outlets and emergency services in such places rely on satellites for communication. As the Syrian civil war heated up, Dubai-based Thuraya noted higher sales and a 40 per cent increase in traffic during communications blackouts that frequently occurred in the country.

The lack of fibre-optic infrastructure in Iraq and the rising number of oilfields makes it a prime target. "Iraq as a market is huge. Its infrastructure is still lacking and needs more resources, and people need to access more data in retail and oil and gas," said Mr Al Adely. "But superyachts are demanding Internet and television-on-demand connectivity, which can only be provided only with these same satellites," said Mr Al Adely, whose

company has been appointed as the international distributor of YahSat's YahClick satellite broadband service that will sell the satellite broadband service across the Middle East and North Africa region to consumers and enterprises. Yahsat's satellite has coverage in 28 countries across the Middle East, Africa and Central and South-west Asia, covering 1 billion people. Already YahClick is live in 11 countries, including Afghanistan, Iraq, Yemen and South Africa.

Tore Morten Olsen, Head of Maritime Satcom activities at Airbus Defence and Space however believes that it is the rising number of superyachts in the world that is driving up demand for satellite broadband "Look at the owner profile," He explains "Having his family on board means the Internet must be available for children or spouses, who will no doubt want to be connected to friends and family at home all the time. Or perhaps the owner is himself a 24/7 trader, so being connected is not a nice to have, but a must-have."

Costas Charalambous the Sales Director of Global Marine Communications is not so sure it's the superyacht owner that is driving demand saying, "It's more the proliferation of services we need and want, together with a growing awareness of these services that is driving demand."

### Early adopters

A few years ago users on a yacht only had one device. In 2013 they typically had three devices. This year there will now be users wearing their own devices as well. This is not just owners and guests but crew with large disposable incomes with time on their hands. "People on yachts have always been early adopters, said Roger Horner Managing Director of e3 the communications specialist company based in Palma Mallorca."

Throughout this time there has been a steady growth in data hungry apps on mobile devices used by those on superyachts such as iPhoto, iCloud, Dropbox and other Cloud services. Many crew are now wearing Internet compatible devices such as the fitness monitor Fitbit. Horner says, "All you have to do these days is take ten photos on your iPhone and if you have iPhoto switched on the clever old smart phone will connect to iCloud via the satellite connection and upload 30Mb of photos and of course vice versa."

"Facebook and many other similar apps that everyone used 2 years ago may look the same as they did back then but they are considerably more data heavy today." "So many client captains suggest, nothing has changed, but my goodness a lot has changed it is just that most of it is invisible and they simply are not seeing that change"

### Size does matter

Sean Farrell of Station 53, Inc with sales offices in both Italy and the USA believes that size of yacht has got something to do with the higher proliferation. "Definitely, the bigger the yacht the more megahertz it needs is a truism" he says "Although it is difficult at times to explain this to a captain who is watching expenses." High usage equals high bandwidth, which in turn equals high costs. Some superyachts elect to go with lower costs only to find out they require much more bandwidth. We offer bandwidth upgrades to be put in place at a moment's notice to increase speed and bandwidth when we are informed the



### NSSL Global

Established in 1969, NSSL Global is an independent provider for satellite communication solutions, specialising in superyachts offering "on the shelf" and bespoke packages with the fastest download speeds available. Their Cruise-IP network offers the most extensive VSAT coverage in the market with six teleport, 15 satellites and 21 beams. This provides customers with an assured coverage of the vital superyacht destinations such as; The Caribbean, Mediterranean, Seychelles, Maldives, Australia and New Zealand. In addition, they offer a first class customer service 365 days of the year, 24 hours a day; providing you with peace of mind.

For more details Tel: +44 (0)1737 648 800 or visit [www.nsslglobal.com](http://www.nsslglobal.com)



### e3 Systems

Why do yachts spend a vast amount of money to use a VSAT system which is the slowest communications connection? Many new wireless technologies are faster and cheaper and can be combined and managed with a reduced VSAT service using e3.Hybrid. They can look after you by using the leading services , via satellite, 3G, 4G and terrestrial broadband which gives you; high bandwidth connections to support video and TV streaming, high speed networks on board and expert online support regionally or globally.

For more details Tel: +34 (0) 971 404 208 or visit [www.e3s.com](http://www.e3s.com)

owner or a charter is onboard. But there are examples where a 150m yacht demands an internet connection that equals that of an average fifty metre yacht on charter. The demand of their Internet bandwidth is purely driven by the type or number of people using the yacht or the type of equipment the owner chooses to install.

## Superyacht owners need to be educated in terms of how they can use their satellite communications package more efficiently

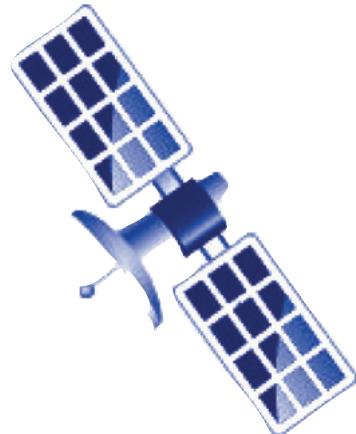
Established in 1969, NSSL Global is an independent service provider for satellite communications solutions. Adrian Harrow the company's Marketing Director suggests, "To get the provision right, superyacht owners and captains should actively manage the satellite broadband." He says, "One very simple way of reducing bandwidth use is turning off automatic updates on devices. This ensures that bandwidth is only being taken up when people onboard are actually using their connected devices, which means they can enjoy a faster service on their current package. Alternatively, limiting crew's access can ensure that owners and guests get the service they want, when they want. Therefore, superyacht owners need to be educated in terms of how they can use their satellite communications package more efficiently by establishing protocols and guidelines for crew members and guests."

### Need for speed

Barry Panter of the International Ocean Network (ION) believes that superyachts are demanding faster and faster Internet and television-on-demand connectivity. "Companies that manufacture the satellite routers that function in a similar way to our home ADSL router are working ever harder to develop new software that increases Internet speeds without the need for more space being purchased on the satellite. At ION we have chosen the world leading satellite platform manufacturer iDirect Evolution hardware and seen gains of up to 60% additional throughput in ideal conditions."

Satellites carry a number of transponders which can be pointed to serve different or overlapping earth regions. In the past each transponder provided 32 Mhz to 64 Mhz. As technology has advanced these transponders now provide in excess of 100 Mhz. The limitation is the amount of power the satellite demands from its batteries versus the amount of weight and mass the rocket that launches it is able to handle.

New KA Band satellite technology is claimed to be the answer to the demand for more bandwidth but the technical ability and reliability of this concept are very much a controversial point among industry experts. AuroraMaritime is the new Maritime specific service based on the AuroraGlobal initiative's infrastructure and capabilities. It offers KU services with throughput comparable to



## International Ocean Networks

ION is a direct source satellite airtime provider focused on beaming internet access into the maritime industry directly from the Satellite Earth Station for 14 years! They have designed and built satellite networks from the ground up specifically designed for 'at sea' applications. Mega Yachts or Oil Rigs, Cruise Ferries or Fishing vessels all talk about how ION has gone the extra mile to keep them connected regardless of hazardous conditions.

For more details Tel: +44(0) 1269 833 800 or visit [www.internationaloceannetworks.com](http://www.internationaloceannetworks.com)



### GMC

Global Marine Communications know exactly what their clients need because they listen. Only when they really understand do they propose a solution. Whether you are the owner, captain, management company or technical partner, their mission is simple, to find the right solution to satisfy your communication needs. Broadband has moved from a novelty to a luxury to a necessity and with their VSAT internet services, their bandwidth management solution and their 24/7 technical support they make sure you have the right solution for your needs.

For more details Tel: +377 (0)680 860 820 or visit [www.gmcomms.net](http://www.gmcomms.net)

forthcoming next generation services available now, using existing antennae. The company is suggesting they will double the value for money offering High speed broadband with increased data allowances or throughput speed to meet the growing demand for IP applications and Internet connectivity on all types and size of vessel.

Satellite manufacturers continue to place the well-established KU Band technology satellites in orbit, which is a good indicator that KU Band will continue to dominate the industry by means of companies like iDirect advancing the satellite platform abilities. You might not see it, but the evidence is all around us and yes VSAT is changing so very quickly.

## THE VSAT ALTERNATIVE

### The case for 3G/4G data at sea

The information age has proved expensive for those who live and work at sea. The burgeoning requirement for Internet access in all walks has put increased pressure on owners and operators to provide high speed Internet access available to crews and guests on board, but the use of VSAT has been the only real option. Steve Smith the Managing Director of Buzz Connect in the UK is now able to offer 3G Broadband at speeds up to 21Mbps for use on yachts.

Captains are turning to services such as these to access shore based mobile networks that deliver the sort of high speed connectivity that users require, and whilst the solution is good it also brings its own challenges in choosing the right kit for the job and also keeping up to date with the wide range of data SIM card packages available in different countries. Add to this mix the lack of a global standard set of operating systems and radio frequencies and it is not surprising that a certain amount of confusion exists.

Vessels operating in coastal waters in individual countries have an easier choice in so much that one operators SIM package will support them in most situations up to maybe 15 miles offshore, but there are still spots where there is little or no signal and there are still areas where one operator provides coverage and another does not. Travelling across borders creates other problems as data roaming from one country's operator to another is prohibitively expensive and largely impractical.

However, the problems apart, lying at anchor close to the shore or in marinas, there is generally a good opportunity to use a 3G/4G modem or router to provide a quality connection for both fixed devices on a wired network or via wi-fi to the various smart-phones, laptops and tablets that are all hungry for data. In such situations the costs against VSAT are comparatively minimal and worthy of the time and effort invested by the diligent captain to provide this increasingly essential service.



## Buzz Connect

Buzz Connect has been at the forefront of the marine 3G market with products like the Hubba X selling across the world. They have just released a range of 4G/LTE units with single and dual SIM versions in order to take advantage of the new high speed data services becoming available and to help satisfy the burgeoning demand created by more data hungry devices now arriving on board vessels.

For more details Tel: +44 (0) 203 488 0088 or visit [www.buzzconnect.co.uk](http://www.buzzconnect.co.uk)



## Station 53

Station 53 is widely recognized as a VSAT leader in the yachting industry. Encompassing over 30 years experience in marine electronics and communications. Offering Trans-Atlantic and Trans-Pacific global coverage connecting vessels around the world. Yachts rely on Station 53's technology to provide and maintain their VSAT and VoIP communication connection while they travel around the globe. Station 53's unparalleled client/technical support supersedes the standards in the VSAT industry. Yachts confidently depend on Station 53's knowledge, expertise and reliability to deliver quality internet and VoIP communications. They also offer Inmarsat and Fleet Broadband Services.

For more details Tel: +39 (0)236 007 355 or visit [www.station53.com](http://www.station53.com)