

# Crew shortages and falling costs make VSAT compelling



*The tanker Sten Baltic will soon benefit from a high-specification VSAT connection from Globe Wireless*

Installing VSAT was a natural progression, reports John Stenersen, technical manager of Rederiet Stenersen, a Bergen-based tanker operator that is on the verge of completing a roll-out across its fleet of 13 chemical/product carriers. Yet, while convinced by the benefits that always-on fast Internet access could bring to fleet operations, Mr Stenersen was careful to choose a system vendor which fully understood the requirements of marine installations.

“Our objective was to provide a comfortable and convenient environment for our crew while at sea. They must be able to keep in contact easily with their family and friends at home. The physical and mental wellbeing of our crew is a primary concern to us,” he says. “For this reason, we have to provide additional services, such as web browsing, inexpensive phone services and enhanced personal e-mail.”

“VSAT was a major investment for Stenersen. The equipment cost and the time and effort to install it are all good reasons to choose a provider carefully. However, at

A Bergen tanker operator is the latest convert to VSAT, which is becoming an increasingly attractive option as service costs fall and the global shortage of qualified crew becomes more acute

the same time, we needed to ensure that the system capabilities would also meet crew expectations. It is very important to us that the crew feels they have been given a high quality service.”

After considering various options, the Norwegian operator eventually chose Globe Wireless, a company that it has used in the past for e-mail, data and voice services. Mr Stenersen notes that while Globe Wireless is a relative newcomer as a supplier of VSAT services, the company is familiar with what is required to provide solutions, service and support at sea.

President and chief executive officer of Globe Wireless, Frank Coles, believes that a

significant factor behind the increased adoption of VSAT by merchant ships is cost. “Pricing of the hardware has now fallen to a point where more owners will consider the product. This has happened as traditional VSAT providers, who have reached saturation in the offshore oil and gas sector, are seeking new markets at the same time as shipowners are having to manage increased data flow to and from ships,” he says. However, the overriding reason for the surge of interest in VSAT, he believes, relates to the manning crisis.

“Over the last five years the shortage of crew to man the world’s ocean-going fleet has become acute. A lack of training and recruitment in the past 20 years has been one reason behind this. Poor conditions, poor salaries and long periods away from home have also all played a part in making it difficult to entice and retain qualified crew. At the same time, newly recruited crew want and have come to expect connectivity wherever they are,” he explains.

This expectation and desire reaches across the world and applies in the main crewing

nations such as India, the Philippines and China as much as in the western developed world. "There is a worldwide shortage of qualified oil tanker and LNG ship officers, to the extent that in some cases the hiring of crews is done by auction to the highest bidder. So the need to find crew retention programmes and satisfy demands has become critical."

Internet browsing, cheap phone calls to home and free e-mail are top of crews' welfare list of demands and expectations. Mr Coles contends that for these services to deliver a suitable user experience, C-band or Ku-band VSAT services are realistically the only available option.

Connexion by Boeing made an attempt to launch a global service along the main trading routes, but that company is widely considered to have completely misread market needs. In Mr Coles' view, the pricing and service offering, combined with arrogance, doomed it to failure from the beginning.

He is also circumspect of Inmarsat's current broadband offering. "The latest generation of satellites offers some pseudo flavour of browsing, IP connections and the possibility of remote monitoring. However, this service is still not global, remains expensive and is not truly always on," he says, adding that in some areas it already has capacity issues.

Another consequence of the crew shortage is a growing lack of high quality certified officers. The result is that more owners are seeking better ways of monitoring and managing from shore. This in turn is driving a requirement for online connectivity in order to facilitate remote monitoring, remote management and support. Thus, with a properly implemented VSAT service, an owner is able to satisfy the crew requirement for better welfare and online connectivity, as well as the business needs for online efficiency and safety.

The growing market for VSAT in the maritime industry can be broken down in several ways. One way is to consider regional and global trading, and this essentially translates into Ku- and C-band coverage areas. There are some that would argue Ku-band can be or is global, but it is a long way from the fully automated, global coverage required to satisfy the world's shipowners on the main trading routes, contends Mr Coles. Today, only C-band comes close to matching the global coverage of Inmarsat, he says.

Examining the market by ship type can also help determine the need for VSAT for business operations, with oil and chemical tankers, and LNG carriers all being amongst those that have a greater need for more sophisticated management. General bulk carriers do not yet have the need for sophisticated systems or to pass large volumes of data, while container ships typically fall somewhere in-between,



*Frank Coles: "C-band is clearly the better option for ships plying international routes"*

depending on ship size and trade. Regardless of ship type, deck space for the antenna remains a key factor.

The market for global C-band can be roughly estimated to include most ships over 40,000 dwt, as only these will have sufficient deck space for the antenna installation. Ku-band based systems, however, could encompass nearly all vessels over 1,000 dwt.

While regional Ku-band growth in Europe and North America is strong, C-band growth is taking off, thanks in part to the launch of Intelsat's C-band service. This offers gapless coverage of the world's oceans and main trading routes, and is paving the way for a truly global maritime VSAT service. It is clearly the better option for ships plying international routes, whereas the level of spot beam coverage provided by Ku-band is likely to remain an issue for some time, continues Mr Coles.

In addition to terminal equipment type and service capabilities, the key to a successful marine VSAT installation is global service and support. This means having a worldwide infrastructure for installation, service and repairs. The logistics, costs and resources for supporting a global maritime VSAT service should not be underestimated, as many ships visit hundreds of ports, not five or 10.

As such, the service must be capable of reaching ships in any port around the world, and support teams have to be sufficiently well trained in all areas to resolve problems with equipment, networks, software or a combination of all three. (The logistics of supporting a localised Ku-band service are more straightforward, but nevertheless important). It is these reasons, together with a proven track record in the marine sector, that convinced Stenersen to choose Globe Wireless.

Globe Wireless has served the commercial maritime market, including regional fleets,

for many years. It currently provides communications hardware, software and services to over 8,600 ocean-going ships globally. "Our employees visit over 300 ships a month. Our staff – not agents or third parties – install the hardware and take care of the software and networking. They can also repair and service the same list. We provide the customer with the total solution – hardware, software, airtime, product and support," stresses Mr Coles.

The company has now partnered with Intelsat to distribute global C- and Ku-band based VSAT services. At the heart of its VSAT solution is the Globe i4, a multipurpose hardware component, which offers full remote management of shipboard PCs from shore and also functions as a voice, data and Virtual Private Network (VPN) router. It is designed to allow least cost routing across several satellite pipes.

"Globe Wireless provides a turnkey solution, installing below decks network equipment that enables both a crew and business network, VoIP, VPN, and fully controlled web browsing. The Globe i4 also provides a backup, so that if VSAT should ever become unavailable, the ship switches automatically to Wi-Fi, Inmarsat or Iridium. This means the ships are never out of communications, solving the issues with regional Ku-band services," notes Mr Coles.

Globe i4 is delivered with a suite of business applications developed specifically for the marine market, including GlobeLocator (for web tracking), AntiVirus, GlobeWeather (which provides three, five, and 10-day interactive weather forecasts) and IT@Sea (for global computer support). Another module, GlobeForms, is designed for streamlining the transmission of electronic forms to comply with US requirements for arrival and departure.

Commenting after the first phase of installation, Mr Stenersen says the company's crews now have access to e-mail, web browsing and very low cost VoIP telephony services. Their feedback has been overwhelmingly positive. He adds: "The installation went very smoothly, and we will continue to roll out VSAT to our fleet and newbuilds."

Asked what is next for the commercial maritime VSAT service, Mr Coles responds: "The adoption of VSAT will continue to grow. In turn, this will increase demand from users for more sophisticated products and applications – potentially bandwidth hungry multimedia ones – that will 'fill the pipe'.

"At the same time, fragmentation, competition and customer pressure will drive down prices. New entrants to the commercial maritime market will find out that the cruise ship, offshore oil and gas and luxury yacht margins are not readily accepted by the commercial maritime market. In order to survive, only a full service solution will suffice and be required." **MEC**