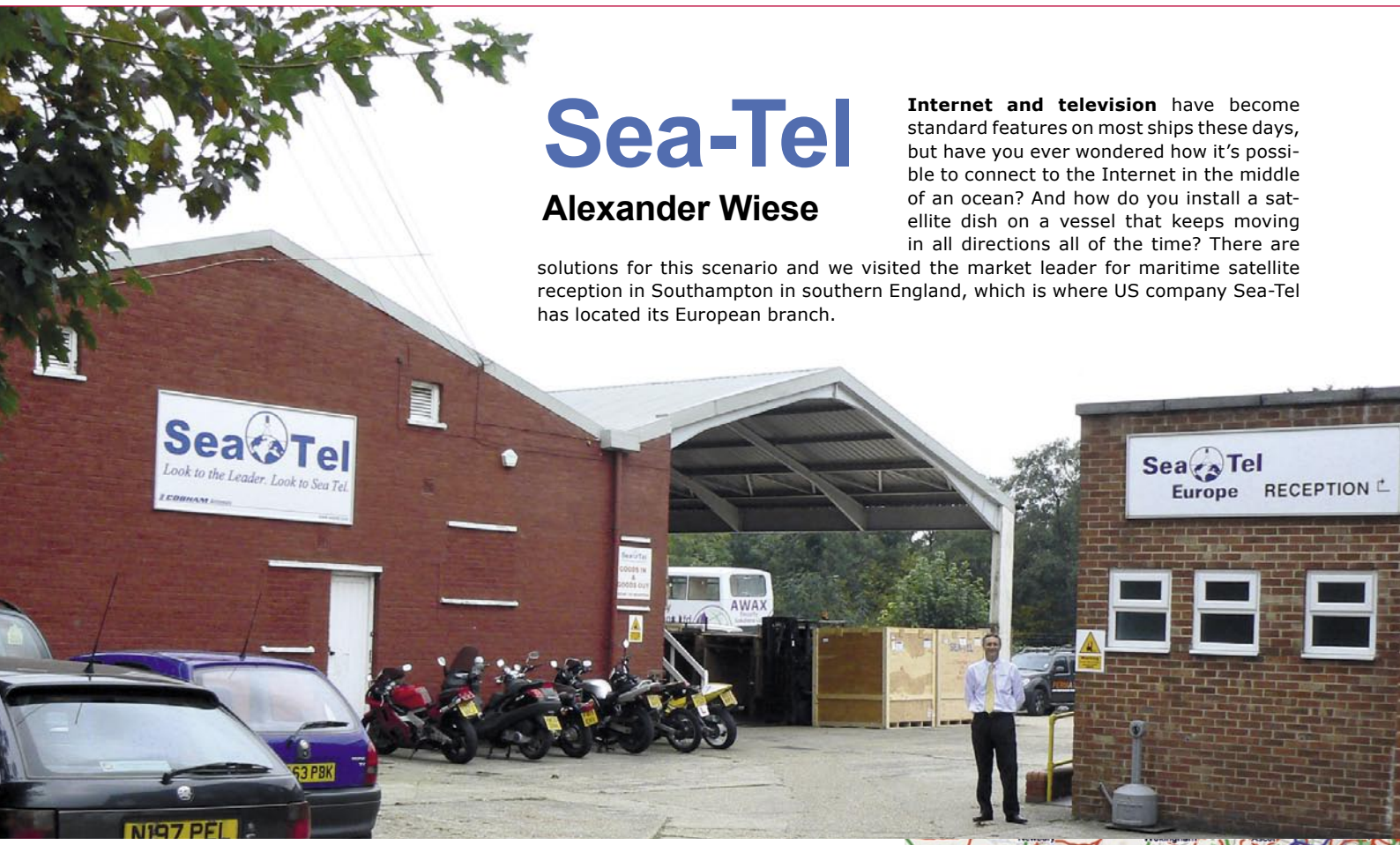
Sea-Tel

Alexander Wiese

Internet and television have become standard features on most ships these days, but have you ever wondered how it's possible to connect to the Internet in the middle of an ocean? And how do you install a satellite dish on a vessel that keeps moving in all directions all of the time? There are solutions for this scenario and we visited the market leader for maritime satellite reception in Southampton in southern England, which is where US company Sea-Tel has located its European branch.



▲ **Right next to the railway line to London and very close to Southampton airport is where Sea-Tel has established its European branch. The warehouse is to the left and the office building with Peter Broadhurst, Sea-Tel Vice President, in front is to the right.**

Sea-Tel was founded in 1978 by design engineer Robert J. Matthews. Before becoming an entrepreneur, he had worked for COMSAT und was in charge of developing the first maritime stabilized satellite reception system in the world.

The specifications were based on current military designs which meant that the specifications were very sophisticated, which is usually the case for military jobs. One day Robert J. Matthews thought to himself that there must be a less expensive way to achieve the same goal and decided to found his own company, Sea-Tel.

He literally started out in his garage, and since both his house and his garage are in Concord, some 100 km east of San Francisco, Sea-Tel still has its headquarters far inland rather than on the coast.

Meanwhile Sea-Tel has changed owners and now belongs to the Cobham corporation, which possesses a number of companies in the military and technical fields. Sea-Tel Vice President Peter Broadhurst

◀ **Stuart Broadfield, Training/Services, shows us the inside of an antenna of the Coastal range: the parabolic antenna is very deep and rotates in relation to elevation and azimuth. Since all Sea-Tel systems are based on the cassegrain concept the LNB is located on the back, as can be seen on this picture, and a motor keeps moving the LNB in place for the correct reception position. "All control signals are transmitted via the coax cable," explains Stuart, "in order to minimise the number of connections and facilitate installation." The rotation range of the antenna comprises 680° which means the antenna can complete almost two full rotations before reaching a dead stop.**

▲ **The intermediate '04' range features more sophisticated technology: it creates an artificial horizon by always keeping the dish mount in a level position. The box to the left on the right arm contains the control unit for this system and the box to the right of the arm contains a GPS receiver. In this setup, the LNB is only rotated for fine-tuning the skew. The rotating unit is connected electronically via a slider, so that it can rotate endlessly without reaching a dead stop.**

explains us why Matthews sold his company to Cobham: "He was in his 70s already, the company was expanding fast, and it was only the next logical step to sell the company to sustain the level of growth." The price that was paid then for Sea-Tel was approximately equivalent to the annual turnover. "For Cobham the investment paid off," according to Peter and he goes on to explain why. "Our growth has continued with over 20% growth year on year and now accounts for a $100 Million + turnover .

It's interesting to observe how this business changes over time and even re-invents itself again and again. According to Peter "we have only begun to offer VSAT systems in 2003 and today VSAT generates 65% of our turnover." The remaining 35% are generated with TVRO equipment.

Since ships are hardly ever stationary it is difficult to geographically define where most customers come from. Peter estimates that some 45% are European customers, 40% Americans and 15% Asians.

This distribution explains why Sea-Tel has established a European branch in Southampton. "We have 35 staff members here in Southampton," says Peter "and in the headquarters in the US we employ 215 persons, as this is where the antennas are actually manufactured."

Other support offices are located in Norway, Florida and possibly soon also in Singapore. "We are currently in the process of setting up an office in Asia to establish closer ties with our Asian customers," Peter hints at his future expansion plans.

So who is actually looking for self-guiding 3-axis satellite reception units? "The majority of customers come from oil and natural gas companies which equip both their drilling platforms and their service vessels with our antenna systems," elaborates Peter and produces a big smile before continuing that "the Norwegian authorities have passed regulations that require all ships to be equipped with a TV reception system for the entertainment of the crew onboard." Talk about good intentions! If similar regulations are passed in other countries that would please Sea-Tel no end, for sure.

Another important customer segment with a 25% share are yachts and pleasure ships, meaning privately owned ships. Some 10% of Sea-Tel systems go to commercial shipping, i.e. freight ships. All of these segments show an upward trend, while the cruise ship business is steady at 10% and the OEM segment at 5%. The remaining 10% go to fishery ships, but this segment is shrinking in volume.

For those of us not too familiar with the business Peter sheds some light on the way the ship-building business works. "If you order a ship today, it will be finished by 2010 or 2011." Will requirements and demands have changed by then? Will the oil price have risen further? Or perhaps eased again? Will all ships on order now really be required and will all of these new ships need

▲ **This is the control unit on the 19'' rack. The display shows the degree value – here you can see 013 E for the HOTBIRD satellite – and the threshold setting as well as the NID (network identification) PID for detecting HOTBIRD.**

TELE-satellite World

www.TELE-satellite.com/...

Download this report in other languages from the Internet:

Arabic	العربية	www.TELE-satellite.com/TELE-satellite-0803/ara/seatel.pdf
Indonesian	Indonesia	www.TELE-satellite.com/TELE-satellite-0803/bid/seatel.pdf
Bulgarian	Български	www.TELE-satellite.com/TELE-satellite-0803/bul/seatel.pdf
German	Deutsch	www.TELE-satellite.com/TELE-satellite-0803/deu/seatel.pdf
English	English	www.TELE-satellite.com/TELE-satellite-0803/eng/seatel.pdf
Spanish	Español	www.TELE-satellite.com/TELE-satellite-0803/esp/seatel.pdf
Farsi	فارسي	www.TELE-satellite.com/TELE-satellite-0803/far/seatel.pdf
French	Français	www.TELE-satellite.com/TELE-satellite-0803/fra/seatel.pdf
Greek	Ελληνικά	www.TELE-satellite.com/TELE-satellite-0803/hel/seatel.pdf
Croatian	Hrvatski	www.TELE-satellite.com/TELE-satellite-0803/hrv/seatel.pdf
Italian	Italiano	www.TELE-satellite.com/TELE-satellite-0803/ita/seatel.pdf
Hungarian	Magyar	www.TELE-satellite.com/TELE-satellite-0803/mag/seatel.pdf
Mandarin	中文	www.TELE-satellite.com/TELE-satellite-0803/man/seatel.pdf
Dutch	Nederlands	www.TELE-satellite.com/TELE-satellite-0803/ned/seatel.pdf
Polish	Polski	www.TELE-satellite.com/TELE-satellite-0803/pol/seatel.pdf
Portuguese	Português	www.TELE-satellite.com/TELE-satellite-0803/por/seatel.pdf
Russian	Русский	www.TELE-satellite.com/TELE-satellite-0803/rus/seatel.pdf
Swedish	Svenska	www.TELE-satellite.com/TELE-satellite-0803/sve/seatel.pdf
Turkish	Türkçe	www.TELE-satellite.com/TELE-satellite-0803/tur/seatel.pdf

View of the warehouse: "You're looking at items worth 2 million US$," says Peter Broadhurst. It takes six weeks for the equipment to reach the warehouse in Southampton from the US. "Our top selling system is the 100cm VSAT antenna," according to Peter, and he adds that "we have sold more than 2000 of these so far." Sea-Tel offers three production series: the Coastal series with dish sizes between 30 and 80 cm, the '04' series from 80 to 150 cm and the '97' series from 200 to 360 cm, which is also suitable for C band reception. Sea-Tel only delivers to specialised dealers and the prices range from 4,400 US$ for a simple 30 cm system all the way up to 90,000 US$ for the 360 cm variant. "Cruise ships mostly use the 200 cm type, and usually they install two systems per ship for operational reliability," explains Peter.

Amy Bishop in the spare parts warehouse. Sea-Tel can supply spare parts for products that were produced ten years ago. And since all products are manufactured by Sea-Tel itself and all production documentation is readily available spare parts can even be reproduced in special cases. This way Sea-Tel can guarantee its customers extremely long periods of operation and a high level of operational reliability.

satellite reception? For Sea-Tel the answer not only lies in excellent manufacturing standards but also in excellent after sales service.

And of course in tapping into new markets like the Internet. "After all, guests on a cruise ship expect a working Internet connection these days," explains Peter – or more than that. "We even offer solutions which allow using ones own mobile phone via so-called pico spots."

Another business for the future is mobile reception systems for trains. "Railway companies are increasingly competing against airlines and therefore are upgrading the services they offer," explains Peter.

The first client is Thales, which will offer Internet in their trains from 2008 through a company called 21net. Ku band capacity of HISPASAT will be used to this end and inside the trains customers will be able to access an Internet server via WiFi.

Sea-Tel will provide the mobile VSAT equipment which will be specially adapted to fit this new field of application: the antennas will have a limited elevation range because it is known beforehand, in which latitudes the trains will run. This way the antenna can be kept very compact in order to minimise aerodynamic drag.

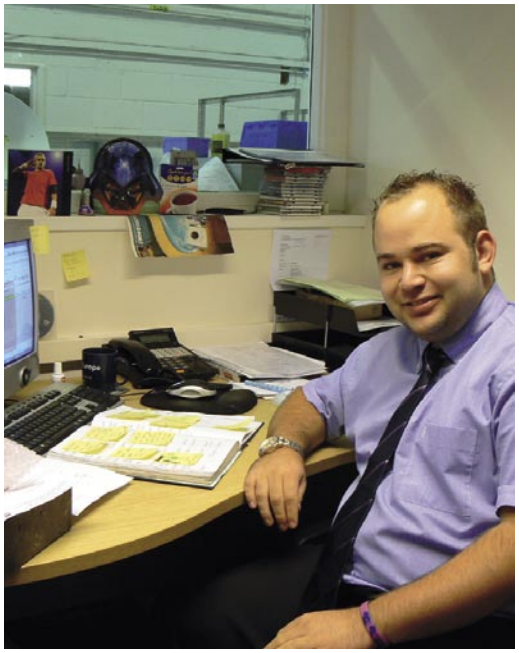
Sea-Tel is operating in a fascinating niche market. And it can be expected that this

◀ **View of the sales team office: Vice President Peter Broadhurst to the left and Sales Coordinator Samantha Whittlesey to the right.**

▲ **Sea-Tel places great importance on its technical customer service. Jake Barrow-Sutton is one of the service technicians.**

niche will keep growing because the world is getting more mobile and satellite reception on ships and in trains as well as in planes and in passenger cars has become technically feasible.

So the prospects for the future look very promising.



▲ **Aaron Peach is the production scheduler and responsible for making sure all required items are available on time and fully tested for delivery to the customers.**