Nordic-IT installed the WiFi network and hardware. "We found suitable positions on the vessels to install the access points, which boost the WiFi network," says Mr Ross. "On a standard container ship with six decks, we use two of our access points. We recently did some installations for Reederei Werner Bockstiegel in Singapore and Latvia, and on newbuildings in China. The installations take half a day as we try and get the crew to do the preparation work, such as installing the mountings and cable runs. There will be cables connecting the antenna to the below-deck control units and one to the firewall unit in the bridge area. There is also a cable to the first access point. The second access point installed is a wireless repeater, so there are no cables."

Globecomm's se@Wall firewall unit can also be connected to Inmarsat and/or VSAT terminals. The company also provides se@Connect units for managing crew Internet browsing and connectivity. "If the VSAT is available, then crew can browse the Internet. But if VSAT is not available, then se@Connect can throttle back crew connectivity to just voice and messaging, by blocking Internet access until VSAT becomes available again," Mr Ross explains.

Globecomm is also working with Ericsson to provide an onboard GSM solution for container tracking and crew calling on other container ship fleets worldwide. The main contract for these services is with Maersk Line, and includes linking GSM through VSAT services. Ericsson is the overall project manager and provides the onboard GSM base stations. Globecomm provides the VSAT back haul through its operation centres and satellite network.

*Iridium Pilot terminals provide the satellite link for Reederei Werner Bockstiegel managed vessels*

"We also provide the geofencing that follows the ships and manages the satellite link when they are out of GSM roaming range," says Mr Ross. "When the ship is close to shore, then mobile phone services can roam within the terrestrial networks. But when the ship is out of range, the traffic goes through the satellite link. We developed the system that manages the GSM network seamlessly for the clients. This is part of Ericsson's service to Maersk. It is a major contract covering 150 vessels with options to extend this to 400 vessels. We are rolling this out to the Maersk fleet through our service centres in Singapore, Malaysia and the Middle East." **MEC**

## Container tracking costs controlled through GSM

The costs of tracking containers on ships is about to drop as Vobal Technologies is launching a new GSM-based technology. Companies using containers to transport their products around the world will be able to track their cargoes, and eventually control their storage environments with a chip linked to an onboard network.

This is particularly important for companies transporting perishable cargoes in refrigerated containers, says Vobal's chief operating officer, Ronnie Ravi. He explains, "The GSM network would provide connections around the ship and inside cargo areas. Companies will be able to track containers at sea and monitor sensors that can alert them if the refrigerated temperature drops or if there is a break-in.

"By the fourth quarter of this year, we will have introduced GPRS [general packet radio service], so companies can communicate with their containers. At present we have GSM networks for cell phones and messaging services, and container tracking. When GPRS is available, people will also be able to control container temperatures and pressures."

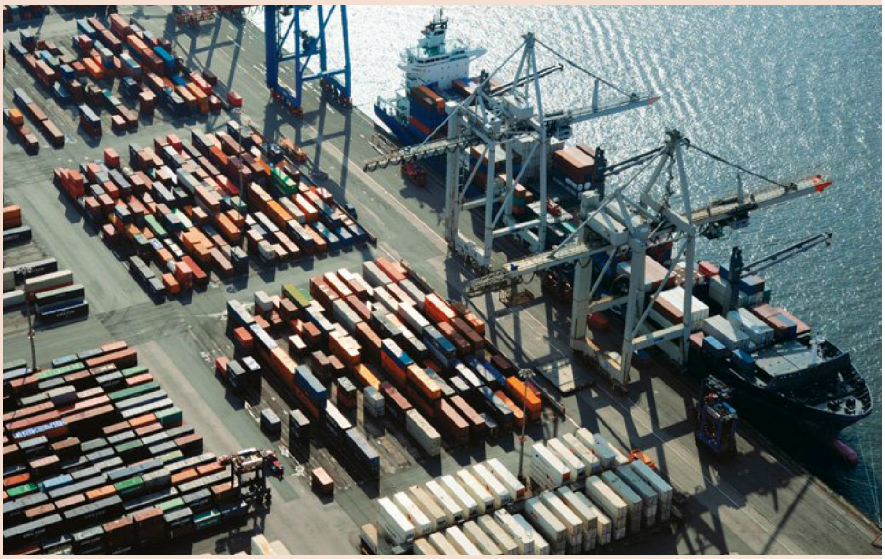
Mr Ravi says most GSM networks use a lot of bandwidth, which is why some operators, such as Maersk Line, have chosen to install VSAT services to accommodate the additional data requirements. But Vobal's GSM technology can operate over FleetBroadband (FB), he says. "Our technology uses much less bandwidth than other GSM networks, which means it is viable as an attachment to FB150 L-band services," he adds.

"Our GSM service works over standard IP channels at just 6 Kbps for crew communications and uses just 5MB of bandwidth per month. So we can design GSM systems to operate over FB as well as VSAT to minimise the expense and bandwidth use. It is a different approach as it is more like voice over IP (VoIP).

"For our service there would be no SIM card changes and we can extend the service down into the cargo hold, which land line-based GSM services cannot penetrate. We have just released the container tracking service and have done trials on it at sea. These trials have proven that the concept works."

For crew calling Vobal has its S3 GSM base station and S2 VoIP server. The company wants to do further tests with the container tracking technology, says Mr Ravi. "There is a lot of interest in cargo tracking through GSM. We are looking for partners that have a vessel for further tests of the GSM infrastructure, to provide the cargo tracking for their customers.

"Container ship operators will be interested as the costs will be less than US$1 per voyage to track the container. Operators can charge their clients more, so it could be profitable for them. We are also in talks with companies that provide container monitoring and controls. We would provide the GSM infrastructure to ensure their products can be accessed at sea as well as on land."



*Containers can be tracked on ships as well as in port*

# Your customers can monitor their cargo on land, why not give them the option at sea?

**Extend a GSM network out at sea with Vobal's CargoGSM™ solution**

**It's more effective than using smoke signals.**

sales@vobal.com
www.vobal.com

Vobal TECHNOLOGIES

We specialize in providing GSM and voice coverage for the commercial maritime industry with technology designed to operate at sea. We use industry-leading minimal bandwidth, significantly reducing data expenses, while maintaining excellent voice quality. We are certified by Inmarsat to operate over the Standard IP Channel of FleetBroadband and to operate on Inmarsat VLA accounts. We are also compatible with VSAT and can operate in failover environments between VSAT and FBB so you won't need to upgrade existing broadband satellite equipment (FBB or VSAT). There is no need to swap in special SIM cards or to have a GSM Roaming Agreement. The CargoGSM solution provides complete GSM coverage of vessel's cargo spaces, both above and below deck and will also relay land GSM signals into the holds when in port. Our patented protocols and hardware allow Vobal's systems to work on board even if satellite connectivity is temporarily lost, relaying important alerts to crew members.

HELKAMA PROUDLY PRESENTS

# Offshore (IEC) Cables

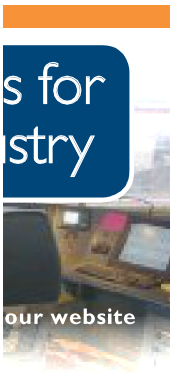
For further information,
visit our web and our stands at

| | |
|---|---|
| SMM 2012 Hamburg | 4.–7.9.2012 |
| OMC Ravenna 2013 | 20.–22.3.2013 |
| Nor-Shipping 2013 | 4.–7.6.2013 |
| Kormarine Busan 2013 | 22.–25.10.2013 |
| Marintec China 2013 | 3.–6.12.2013 |

more than you expected

**HELKAMA**

www.helkamabica.fi




Supply, service and support to the highest standards

SES

☎ +44 (0)1634 295500 (24 hrs)

sales@ses-marine.com

service@ses-marine.com

www.ses-marine.com