

## TORM Sails the High Waves with “Always-On” Unlimited Broadband Connectivity

SINGTEL GMVSAT SERVICE ENABLES WIRELESS INTERNET FOR TORM'S ENTIRE FLEET,  
ENHANCES CREW WELFARE AND IMPROVES OPERATIONAL EFFICIENCIES



# TORM and SingTel

› **Customer Name:** TORM Singapore Pte Ltd

› **Industry:** Shipping

› **Business Challenges:**

- Needed to manage fluctuating communication costs due to existing dial-up solutions
- Wanted to improve working environment and enhance crew welfare
- Needed to improve operational efficiencies with better ship-to-ship, ship-to-shore and shore-to-shore communications

› **SingTel Solution:** SingTel GMVSAT Service

› **Business Value:**

- Enhanced crew welfare with secure “Always-On” Unlimited Broadband Connectivity, SIP Phones and Pre-Paid Cards
- Built backbone to enable e-training and e-learning at own pace
- Enhanced operational efficiencies with improved ship-to-ship, ship-to-shore and shore-to-shore communications
- Reduced manual workload with paperless electronic navigation charts
- Saved time and resources with auto-beam switching capability
- Increased security with secure network monitoring and data transmission

## › Industry - Shipping



Mr Mikkjal Poulsen

As one of the leading product tanker companies in the world, TORM is the world's premier carrier of refined oil products such as naphtha, gasoline, jet fuel and diesel oil. Headquartered in Copenhagen, Denmark, TORM has a global business presence and commercially operates a fleet of over 130 product tankers and dry bulk Panamax vessels. The company celebrated its 120<sup>th</sup> anniversary in 2009 and achieved its best performance ever in 2007, with a net profit of US\$ 792 million. It also achieved sterling performance in 2008, with net profit on vessel operations clocking US\$ 360 million. It is listed on the Copenhagen Stock Exchange and NASDAQ.

TORM's success in an era of increasing uncertainty, security threats and manpower shortages can be attributed to its focus on "developing employee competencies" and "embracing new technologies as they become available". This is especially vital in an industry which is facing mounting difficulties in attracting and retaining young seafarers. Besides placing priority on building a highly skilled and motivated workforce, TORM also strives to be an early adopter of the latest marine, information and communication technologies (ICT) to boost its operational efficiencies and competitiveness.



## › The Business Challenge

An effective communications infrastructure is a critical cornerstone of maritime companies, which have their vessels out at sea for months at a time.

For TORM, one key communications challenge was the unpredictable communications costs when using existing dial-up solutions. As the system only catered for official business communications from the bridge, crew members could not send personal emails or make private phone calls, except in emergency situations. This made it difficult for them to keep in touch with their family and loved ones. The high costs also impeded communications between shore operations and the vessels. "

Communications is a key enabler in our business. Besides ensuring operational efficiencies, an efficient communications infrastructure will help us provide the best possible working environment for our people. Our crew, which makes up 85% of TORM's approximately 3,300 employees, are usually apart

from their families for months at a time. This drives us to place crew welfare as our top priority, as we consider ways to enhance our communications infrastructure," said Mikkjal Poulsen, General Manager, TORM Singapore Pte Ltd.

TORM also faced challenges while its vessels traveled from one ocean region to another. Without a globally seamless satellite system, TORM's vessels needed to manually tune and reconfigure its satellite communications equipment before logging onto a new satellite region. The use of paper nautical charts was also tedious and time-consuming, as manual corrections are required to keep the paper charts current.

With the aim to improve crew welfare, reduce communications costs and enable paperless navigation, TORM's management wanted to equip its vessels with wireless Internet capabilities.

## › SingTel Solution: SingTel GMVSAT Service

Already a SingTel customer, it was natural for TORM to evaluate SingTel's Global Maritime Very Small Aperture Terminal (GMVSAT) Service. Mikkjal Poulsen said, "Having used SingTel as our airtime provider for more than a year, we are familiar with SingTel's offerings. We have a good business relationship with SingTel and know the quality of service we will enjoy."

As Asia's first maritime broadband service delivering seamless, worldwide coverage over all major shipping routes, SingTel GMVSAT is a high speed, two-way IP broadband ship-to-shore satellite telecommunications service with high bandwidth speed of up to 1Mbps. It has the capability to provide maritime companies with eMail, Internet, fax, Voice Over IP (VOIP), SIP phone services and more. Offered as an unlimited usage service plan with a fixed monthly charge, it delivers significant savings in communication costs.

SingTel's GMVSAT delivers global and seamless satellite connection with its integrated advanced auto-beam switching capability. This provides vessels with automatic logon capabilities to the next satellite, as it moves through the Atlantic Ocean Region(AOR), Indian Ocean Region(IOR) and Pacific Ocean Region(POR) satellite regions.

In addition, the unique advantage of integrating with SingTel's telco-grade private IP network, ConnectPlus IP-VPN, also enables maritime companies to build an integrated land and sea Virtual Private Network (VPN). With ConnectPlus IP VPN, the network can be managed centrally with a high performance and secured IP network. This helps to integrate operational processes and secure the transmission of business-critical information between shore operations and vessels.

SingTel's GMVSAT is supported by SingTel's 24x7 helpline and customer service support to address customers' needs anytime, anywhere. The same service can be used to support emergency calls from vessel to shore.

Recognized for its innovation, SingTel's GMVSAT has garnered two industry awards, namely: The "Seatrade Asia Awards 2008 for Technical Innovation" and the "Frost & Sullivan 2008 Asia Pacific Technology Leadership Award in the field of Maritime Broadband Communications".

## › Why SingTel

Commenting on the choice of SingTel's GMVSAT service, Mikkjal Poulsen said, "After testing the solution on the vessel TORM VITA, we have experienced first-hand, the tremendous enhancements brought about by SingTel's award-winning maritime technology solution. It has brought our vessels "closer to shore" and enabled our crew to stay in touch with their loved

ones. This gave us the confidence to deploy SingTel GMVSAT Service across our entire fleet."

In July 2008, SingTel installed the 2.4m SeaTel stabilized C-band antenna for a 6-month trial on the deck of TORM VITA, a product tanker of 45,940 DWT. Pleased with the successful trial, Claus Larsen, Captain of TORM VITA said, "The SingTel GMVSAT installation on board TORM VITA has changed life at sea for the crew in a very positive way. Using the cheap and efficient Voice Over IP (VOIP) telephone communications, the system has resulted in the officers and crew having a much closer connection with their family and friends. Internet surfing has also become available and is proving very popular. It is clear that SingTel is fully committed to be TORM's GMVSAT fleet provider."

Over the next three to five years, TORM will deploy SingTel's GMVSAT service across its fleet of 100 vessels. To date, the service had been successfully deployed on **17 more vessels, namely TORM Anholt, TORM Emilie, TORM Estrid, TORM Garonne, TORM Gunhild, TORM Gyda, TORM Horizon, TORM Ingeborg, TORM Ismini, TORM Kristina, TORM Lana, TORM Lilly, TORM Louise, TORM Loire, TORM Lotte, TORM Margrethe & TORM Saone.**

## › Business Value

### **Enhanced Crew Welfare with Secure "Always-On" Unlimited Broadband Connectivity, SIP Phones and Pre-Paid Cards**

According to Claus Larsen, "With SingTel GMVSAT, being far at away at sea no longer gives us the same sense of isolation." Indeed, the new service enables TORM Vita's crew to stay in contact with their family and friends via email and chat.

Private phone calls are now possible at an affordable rate, thanks to the use of SIP phones with SingTel's pre-paid OCEAN cards. Previously, crew members who needed to make phone



# TORM and SingTel



calls had to use the ship's satellite phone on the bridge. This could sometimes be difficult for the Master to separate crew communications from the ship's business communications.

Mikkjal Poulsen explained, "SingTel's pre-paid OCEAN cards eliminated the administrative hassle of charging back the costs of the calls to the crew. Our crew now enjoy the freedom of making their private calls and knowing exactly the cost for each call." He added, "Besides email and Internet, the new service will also allow TORM to extend its corporate intranet on board. This will keep our crew updated on the latest corporate developments, which help in building a greater sense of belonging."

## **Built Backbone to Enable e-Training and e-Learning at Own Pace.**

A strong believer in encouraging professional and personal development, TORM now has a robust backbone for more efficient e-training and learning.

As TORM's crew have to go through mandatory CBT every 3 years, the "always-on" broadband connection allows the crew to undertake online distance learning at their convenience. With SingTel MVSAT service's fixed monthly charge with unlimited usage, they can study at their own pace without worrying about the time and cost of surfing the Internet.

E-training materials for other courses, such as the stress management courses by TORM's human resource department, can now be posted conveniently on the corporate Intranet for easy access during self-study sessions.

## **Enhanced Operational Efficiencies with Improved Ship-To-Ship, Ship-To-Shore and Shore-To-Shore Communications**

According to Mr Claus Usen Jensen, TORM's Executive Vice President, Technical Division said, "VSAT opens the doors for

the future. We can now ensure better communication between vessel and office... We now have to think in new work routines both in the office and onboard."

Indeed, with SingTel's GMVSAT service, 3-way communication between ship-ship, ship-shore and shore-shore is now seamless. Mikkjal Poulsen explained, "By extending office applications such as email, Intranet and Internet access to our vessels, SingTel's GMVSAT service has enhanced our operational efficiencies by enabling our vessels to function as seamless extensions of our shore-based operations."

"Always-on" Internet access also allows captains and officers to surf the web for latest news, port data, regulatory, weather and suppliers' information. Even the procurement of goods and services, ships' spare parts and more, can now be easily checked on the makers' web pages before the purchase orders are forwarded to the Purchasing Department.

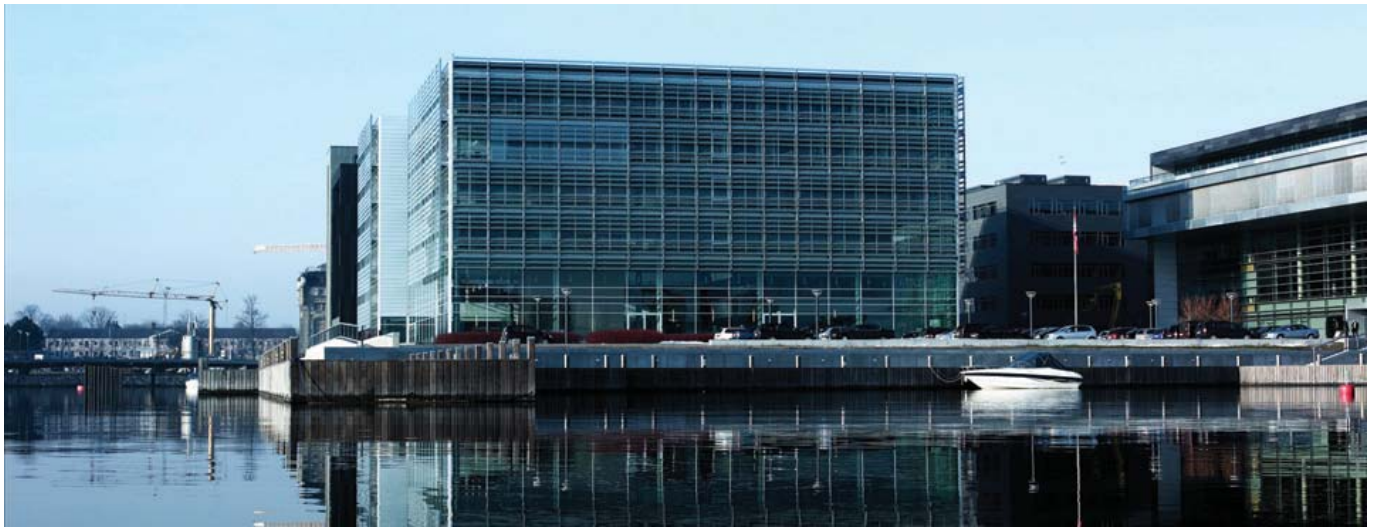
In addition, the IT department is now able to service the onboard servers or computers remotely from the office. Using SingTel Network Management System solutions which enable the secure access, view and control of the vessels around the world, its IT personnel can now remotely monitor their vessels' operational data such as real-time network performance, throughput and latency. Plans are also underway to install SingTel's Collaborative Networking solution which provides TORM with a single management console for effective remote management, monitoring and secure video conferencing.

With integrated management of the computer systems from the office, this further reduces the maintenance costs of the onboard computer systems, while speeding up problem resolution and reducing the costs of flying solution engineers to distant ship platforms.

## **Reduced Manual Workload with Paperless Electronic Navigation Charts**

With wireless Internet, the use of electronic chart displays and information systems (ECDIS) is now better possible, thus minimizing the use of paper charts. Previously, chart updates were sent in compact disks via port of calls and much time was wasted, translating these changes to the paper charts manually. With electronic charts, latest chart updates are downloaded on a "pay as you sail" basis, when sailing to new areas.

**"SingTel GMVSAT service enables us to create a paperless environment, while greatly reducing a huge amount of manual workload. By purchasing licenses to the electronic charts online, the "pay as you sail" model by chart agents enables us to purchase the charts only when we need them," said Mikkjal Poulsen.**



### **Increased Security with Secure Network Monitoring and Data Transmission**

Mounting security threats from hackers and terrorists have brought security to the forefront of every maritime company's focus. SingTel's GMVSAT service offers TORM secure connectivity to their shore offices via SingTel's ConnectPlus IP-VPN's extensive coverage over 80 worldwide destinations. SingTel's Managed Security Solution's firewalling and content filtering capabilities help TORM ensure secured web access and interaction by discovering, classifying, monitoring and protecting against external threats.

When there is an emergency on board, the entire bandwidth can be allocated to one vessel, making it possible for TORM's shore staff to follow the events on board via a camera.

"Besides securing our staff and cargo on board, SingTel GMVSAT service's seamless integration with ConnectPlus IP-VPN also delivers data security. This ensures that sensitive shipboard information and data applications are securely transmitted, safe from the threat of hackers and terrorists," explained Mikkjal Poulsen.

### **› Looking Ahead**

Being the first major Danish shipping company to equip all its vessels with wireless Internet, TORM values the strategic competitive advantage it will gain with this new capability.

Mikkjal Poulsen said, "With SingTel's GMVSAT service, we have seen cost efficiencies with affordable VOIP voice calling,

improved crew welfare with email and Internet surfing capabilities, increased security and enhanced ship-shore communications. As we consider deploying more applications, we are confident that SingTel is committed to continually provide our entire fleet with the same high standard of end-to-end ICT experience in the years to come."

**"The SingTel GMVSAT installation on board TORM VITA has changed life at sea for the crew in a very positive way. Using the cheap and efficient Voice Over IP (VOIP) telephone communications, the system has resulted in the officers and crew having a much closer connection with their family and friends. Internet surfing has also become available and is proving very popular. It is clear that SingTel is fully committed to be TORM's GMVSAT fleet provider."**

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