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Welcome to the first edition of AST Marine News Update, in which we plan to keep you informed of the latest satellite communications news that will impact the marine industry.

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### **VSAT OVERVIEW (Very Small Aperture Terminal)**

We all know the Maritime market is changing more rapidly than ever with fleet owners and managers requiring better and faster information, which has led to a soaring demand for fixed price broadband services over deep ocean routes.

In an effort to enhance efficiency of shipboard operations, ship owners and managers are implementing new broadband intensive software applications to facilitate fuel optimisation, remote monitoring and surveying, centralisation of routine tasks to shore and remote PC management and maintenance. Demand for transmission of large files is also rising as ports require more and more information regarding crew and cargo prior to docking. Crew welfare applications are also a significant driver for the growth of broadband.

In a labour market where attrition is high and the cost of recruitment and training is rapidly rising, ship owners and managers know that such services as low cost ship-to-shore communications, cellular aboard ship, transmission of video clips (including those of crew family and friends) plus live and near live entertainment over IP TV will increase crew retention rates. Hence, there is a growing market for provision of low cost, fixed price broadband at sea.



VSAT can play a part in reducing satellite transmission costs compared to other satellite communication technologies as Ku Band services now cover approximately 70% of the major deep ocean shipping lanes, offering relatively inexpensive fixed price services.

For ship owners and managers that require full global coverage, innovative hybrid solutions are rapidly becoming the market standard. These solutions employ Ku Band VSAT for primary coverage with Inmarsat FleetBroadband or Iridium OpenPort as secondary systems (which can double-up as the "backdoor" system for remote diagnosis of on-board IT systems or primary VSAT system).

Automatic switching between these systems utilises cost effective routing that facilitates connectivity via Inmarsat or Iridium when Ku satellite coverage is not available.

Additional new technology such as Automatic Beam Switching extends the coverage available and remote access capability and allows for Ku & C Band Stabilised antennas to be automatically re-pointed to other satellites, eliminating the need for manual re-programming of antenna controllers by ships crew.

In addition to transmission of data, provision of cellular services over satellite is now becoming economic and practical. The rapid adoption of Blackberry and other smart phones means that crews will want to use these devices in the privacy of their own cabins and VSAT can make this possible at a reasonable cost.

For entertainment providers, IP TV is almost upon us and will allow transmission of the latest news, sports & special events to further enhance crew welfare.

## FIXED COST (VSAT) OR VARIABLE PAY BY USAGE (FleetBroadband)?

What are the savings that you can make on the cost of Inmarsat traffic when moving to a fixed cost VSAT?

There are many variables, typically VSAT, including hardware lease over 3 years, that can cost as little as \$3000 per month at a fixed flat rate to help you budget. This service will provide an "always-on" connection and 2 - 4 phone lines with an option of using a virtual PBX on board the vessel.

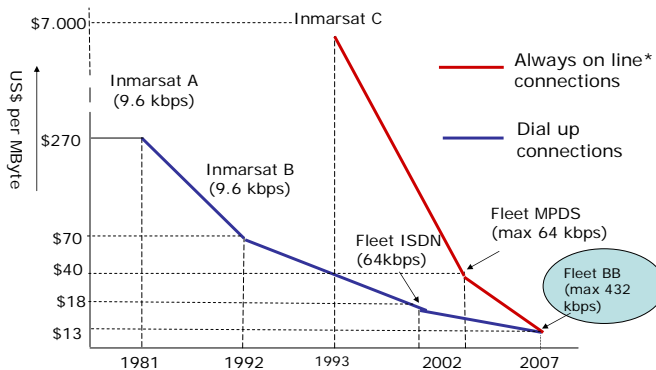
To determine if VSAT is effective you need to have a certain volume of traffic to make it economically viable compared to other communication devices which charge per MB or time utilised, this we call the cross-over point.

If the requirement for data is short term, a solution charging per MB\* or time using traditional satellite technologies would be more suitable. In mission critical contracts very often we see a combination of both technologies to provide redundancy.

No two customers have similar data traffic requirements, and a number of factors need to be considered before the cross-over point can be determined.

Our experience so far suggests that cross-over points (when it becomes more cost attractive to go VSAT) can be as early as 10 months in some cases. A detailed assessment of the clients requirements needs to be made from an experienced provider.

Satellite cost for data is dramatically lower with Fleet and FleetBroadband  
Time is ready to drive your business processes with new applications



\*Satellite communication costs have reduced over time

## SAILOR MIGRATION OFFER ON INMARSAT-B

Are you aware there is still a migration offer from SAILOR if migrating an Inmarsat-B to FleetBroadband?

Switching to SAILOR FleetBroadband which utilises the Inmarsat network is about helping ship owners/managers to switch to Internet Protocol (IP) based applications.

The offer is valid until 30 April 2009.

Contact us for details.

## NEW PRODUCTS

### Iridium OpenPort

Introducing Iridium OpenPort™ — the world's first and only global voice and data service engineered for the maritime market.

Easy to install, and surprisingly affordable, Iridium OpenPort delivers up to three phone lines for simultaneous use and features always-on data with speeds up to 128 kbps — on an all-IP backbone.

With its small footprint and light weight, the Iridium OpenPort omni-directional antenna array can be quickly installed in any convenient location on deck. It does not require a stabilisation platform and is virtually maintenance free. With no moving parts, the array reduces risk of failure or downtime and lowers total cost of operations.

With Iridium OpenPort, you'll get maximum value from your investment. Iridium OpenPort's simplified service plans replace expensive and wasteful per-minute pricing with more cost-effective per-megabyte rates. And the affordable, easy-to-install Iridium OpenPort equipment provides a smooth upgrade path.



Available now!

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## NEW PRODUCTS – COMING SOON

### New ASTBroadband™

ASTBroadband™ is AST's portfolio name for encompassing IP based 'state-of-the-art' equipment from Thrane & Thrane; FleetBroadband 150, 250 & 500 plus their latest Sailor 700 VSAT system. Iridium OpenPort will also be included within the portfolio, providing cost-efficient data and voice services.

In addition, after intensive field testing for their own VSAT based solutions, AST have standardised their approach by stocking only the market leading high performance stabilised antennas from Sea Tel. These antennas are combined with an AST independent "backdoor" diagnostic and auto-switchover solution. This service, monitored remotely by AST, reduces downtime for mission critical operations and can avoid costly service visits.

The VSAT product set also provides increased satellite capacity from just a few fully evaluated satellite service providers for AST in coverage areas such as Europe, Africa & Asia. Utilising Automatic Beam Switching as the vessel moves from one satellite coverage area to another avoids the need for any crew intervention.

Value Added Services include; simultaneous voice and e-mail, internet, prepaid calling cards, payphones, crew GSM & Wi-Fi mobile phone integration, video streaming and flexible billing.

Martin Yates, Sales Manager for AST Marine said; "AST's global remote monitoring solution, in combination with our partnership with Sea Tel, provides a strong foundation for this new service, which will maximise the potential of ASTBroadband™."

The new IP based solutions for end-users will be added to AST's expanding portfolio of Inmarsat, Iridium, NewSat, Eutelsat and Thuraya maritime satellite communications solutions.



### New SAILOR 700 Mini VSAT

Thrane & Thrane have announced the new SAILOR 700 VSAT solution which delivers mini-VSAT Broadband service with data rates up to 2Mbps shore-to-ship and 512Kbps ship-to-shore. At a fraction of the 1-meter VSAT systems, the new system offers easy installation and integration to shipboard networks, fully stabilised tracking, and a significant reduction in hardware and installation costs, without compromising performance.

The SALOR 700 VSAT is a total VSAT solution; a concept that has been designed to simplify the procurement, installation and operation of Ku-band satellite communications.

The advantages of the new **SAILOR 700 VSAT**:

- Even more compact and lighter antenna (much lower cost of transport and installation)
- International multi-region satellite coverage
- Automatic hand-over from one satellite beam to the next
- Higher download and upload speeds
- Competitive airtime rates for global availability

The SAILOR 700 VSAT can be integrated with SAILOR FleetBroadband and SAILOR Fleet solutions to ensure that a vessel can easily utilise the best connection wherever it is in the world.

Due Spring 2009

### New SAILOR FleetBroadband 150

Thrane & Thrane has unveiled a new terminal in its SAILOR FleetBroadband product portfolio, for use with the forthcoming Inmarsat FB150 service.

The new FB150 service has been established to provide a low-cost means for leisure and smaller fishing and commercial vessels.

The new SAILOR 150 FleetBroadband terminal will offer 150 kbps IP data, simultaneous landline quality voice and enables broadband internet browsing and downloading with cost-effective airtime. It also features a compact dome and below deck unit for simple installation

Due Summer 2009

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## ONSATMAIL

onsatmail provides reliable Internet email over mobile satellite phones such as Inmarsat, Iridium, Globalstar, and Thuraya or IP based links such as with Inmarsat's Mobile Packet Data Service and BGAN.

onsatmail features:

- Mail Fetch
- Max Message Size Limit
- Message Forwarding
- Trusted Address List
- Message Kill List
- Ok List
- POP Mailer Support
- Dialling Locations
- Interactive Dialling Mode
- Event Scheduler

onsatmail uses a specialised data transfer protocol specially designed for transferring data over low-bandwidth. The protocol along with data compression reduces connection time and increases throughput on circuit-data connections and overall data traffic on IP based links.



For further information or to download onsatmail, please visit [www.onsatmail.com](http://www.onsatmail.com) or contact us

## SEA TRIALS

AST are involved for Sea Trials of the SAILOR FleetBroadband 150 and SAILOR 700 mini-VSAT starting Spring 2009.

If you are interested to involve your ships for the trials please contact us for details and how to register.



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## MEET THE TEAM



(from left to right)

**Emma Lawrence** – TVRO and TV Subscriptions  
**Niladri Kundu** – Technical Sales  
**Martin Yates** – Sales

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AST are committed to ensuring our customers are kept informed of the latest developments in the market-place and that the equipment we supply meets the specific criteria required to fulfill a project / contract, no matter how big or small.

Visit our website [www.satcomms.com](http://www.satcomms.com) to view our full range of communication solutions.