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? Have a question or technical issue you'd like answered by AOS's Technical Support Team? Email us at communicator@aosusa.com

AOS announces SkyPipe™ Eos Link Enhancement for Secure Satellite (LESS)

In 2003, AOS introduced SkyPipe, a proprietary software application optimized for TCP traffic over secure satellite links, developed in conjunction with the AOS Outpost Communicator™ (OC) 256 system.

AOS is pleased to introduce the SkyPipe Eos Link Enhancement for Secure Satellite (LESS) - a pocket-sized, USB-powered SkyPipe hardware client. SkyPipe Eos is a particularly timely and cost-effective solution for users of the new Inmarsat BGAN high-speed data service - and ideally suited for those who will employ Government encryption devices to secure their mobile networks.

SkyPipe Eos features IPsec compliant, 256-bit AES encryption VPN capability. SkyPipe Eos can be terminated to a Cisco® PIX firewall or security IOS. Multiple options for user authentication are included.

See "SkyPipe™" on page 3



Thrane & Thrane presents BGAN Explorer™ 700 BGAN terminal

Thrane & Thrane unveiled its second BGAN terminal offering at the SATCON 2005 show, held in New York October 26th - 27th 2005.



The introduction of the Explorer 700 enables Thrane & Thrane to offer the market a BGAN product portfolio serving all BGAN segments. Hence, Thrane & Thrane is the only manufacturer that has announced the plan to launch two BGAN products. The Explorer 500 that was launched in March, 2005 is a very small, lightweight and compact high speed data and voice unit. With the Explorer 700, Thrane & Thrane has developed a terminal that is slightly larger but offers the highest available data speed on the Inmarsat BGAN network. Furthermore, the terminal is being developed with a multi-user environment in mind allowing several users to benefit from the Explorer 700 capabilities simultaneously.

To underline the potential of the Explorer 700, numerous user friendly interfaces are included in the terminal, making it the most versatile BGAN terminal in the market.

See "BGAN Explorer" on page 2

BGAN Update - Final milestone for BGAN expansion in the Americas

23-01-2006 The second of Inmarsat's new generation of satellites has entered commercial service covering North and South America and the entire Atlantic Ocean.

BGAN Update: the Americas

Inmarsat is launching commercial BGAN service via the Inmarsat-4 F2 satellite on 17 April 2006. In addition to the Americas, coverage will extend to the portion of Western Africa that lost regional BGAN coverage during the July 2005 migration.

The F2, the second in the Inmarsat-4 (I-4) series, was launched last November to provide Broadband Global Area Network (BGAN) voice and broadband data across the Americas.

The migration from Inmarsat-3 achieves the final milestone in the deployment of the I-4 F2 spacecraft. It paves the way for the launch of the BGAN service in the region within the next few months. BGAN is the world's first global mobile communications service to provide both voice and broadband data simultaneously

through a truly portable device. It also uniquely offers guaranteed Internet Protocol (IP) data rates on demand. The I-4 satellites will deliver seamless BGAN coverage across 85 percent of the world's landmass and be available to 98 percent of the world's population. They are part of an eight-year development and US \$1.5 billion investment by Inmarsat. Each satellite carries a single global beam that covers up to one-third of the Earth's surface, 19 wide spot beams and 228 narrow spot beams.

and well coordinated, ensuring that services were moved across in the shortest possible time. "It took just 12 minutes to shut down the Inmarsat-3 payload and enable the very complex Inmarsat-4 payload, with the first Inmarsat C services being restored six minutes later," he said. "All services were up and running within 16 minutes of turning on the I-4 payload - a real tribute to the Inmarsat staff and those at the land earth stations (LES) supporting the transition."

- Courtesy Inmarsat Ltd. ■



Preparation for the transition to the I-4 F2 took place over many months and involved more than 30 people from Inmarsat's Network Operations and Satellite Control Centers.

Richard Denny, vice-president of Inmarsat's Satellite and Network Operations, said the transition was smooth



BGAN EXPLORER

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The Explorer 700 offers users the full BGAN package available including:

- **Data transmission of up to 492 kbps on a shared basis**
- **Streaming IP (guaranteed bandwidth) of 32, 64, 128 or 256 kbps**
- **ISDN interfaces allowing the users to interface legacy ISDN equipment directly to the terminal**
- **WLAN access point that supports 802.11 a/b/g**
- **Bluetooth interface (class 1 = 100 meters)**
- **USB, fax/phone & Ethernet interfaces**
- **Detachable antenna with transceiver to antenna range up to 70m**

The first Explorer 700 terminals are expected to be shipped from Thrane & Thrane around

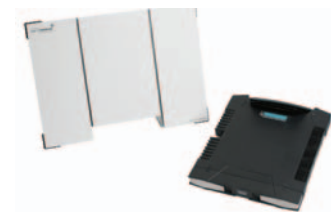
the time that Inmarsat plans to launch the BGAN service on its second I4 satellite covering the Americas in mid 2006.

The development of a further BGAN terminal, the EXPLORER 300, completes Thrane & Thrane's portfolio of BGAN products while also consolidating the company's position as the world's leading provider of portable high-speed terminals. Offering data speeds up to 384 kbps, the EXPLORER 300 will be smaller, lighter and more compact compared with the other terminals.

In addition, Thrane has announced the launch of the world's first vehicular BGAN terminal, the EXPLORER 527, which offers BGAN services "on the move". The EXPLORER 527 transceiver connects to a low-profile, rooftop tracking antenna, making a car, truck or other vehicle a true mobile communications post. ■

Features include:

- **Simultaneous voice and data communications over BGAN**
- **High-speed data transfer up to 464 kbps**
- **Seamless global coverage**
- **Support for streaming 32, 64 and 128 Kbps**
- **Standard LAN and phone/fax interfaces**
- **Easy system setup and operation**
- **Robust, reliable and durable design**



Thrane & Thrane

For more information on Thrane & Thrane products, contact AOS. AOS is a Thrane & Thrane Preferred Partner.

Rigorous BGAN tests conducted for government market

Events in Iraq and Afghanistan have caused a dramatic growth in the communications requirements of the military, while recent natural disasters in Asia and America have underscored the critical importance of high-speed, highly portable satellite communications to various government-backed relief agencies. BGAN is being launched at an opportune moment as armed forces, police and other key government agencies seek to use commercial satellite services to augment their existing so-called 'milsatcom' provision.

To prove the benefits BGAN can offer governments, live beta testing in various locations, situations and scenarios has been under way since the Fall of 2005. These trials will prove the value propositions already expressed by Inmarsat's Government Solutions team at various conferences and seminars this year about BGAN's ability to provide:

- **Global coverage**
- **High capacity and high data rates**
- **Information assurance**
- **Support for a range of applications (for example e-mail, filetransfer, video teleconference)**
- **Cost-effective service provision.**

See "BGAN tests" on page 4

SkyPipe™ Eos Features:

- **IPSec compliant - AES 256-bit encryption offers enhanced security**
- **Statefull Inspection Firewall**
- **Performance Enhancing Proxy (PEP) maximizes data throughput**
- **Prefetching and Caching**
- **On-the-fly compression**

SkyPipe™ continued from page 1

U.S. Government/Type 1 hardware encryption devices are afforded an additional layer of security by "double wrapping" of traffic.

SkyPipe substitutes the TCP protocol with a highly efficient and reliable UDP-based protocol that is especially designed to maximize data transfer over high-delay and loss-intensive networks such as satellite and radio links. The SkyPipe Performance Enhancing Proxy (PEP) supports multiple

standard application protocols, including HTTP, HTTPS, FTP, SOCKS, and Protocol-independent Port Forwarding. A simple, "plug and play" device that requires no proxy settings to operate, SkyPipe Eos is transparent to users and to standard applications.

SkyPipe also utilizes HTTP prefetching, further enhancing transfer of HTTP-based data -drastically increasing web traffic performance and download times for web pages. On-the-fly compression saves the user bandwidth and money.



Public SkyPipe servers will be available from various satellite service providers. Private servers are also available and can be installed at user facilities.

For more information on SkyPipe™ Eos, contact AOS. ■

Enhanced coverage in AOR-W for digital services

Following the successful completion of in orbit testing Inmarsat has announced the planned transition of Inmarsat digital services in AOR-W to the new I-4 F2 satellite in January, 2006. Apart from providing the network infrastructure that ensures the long-term availability of our current and future portfolio of maritime services, the enhanced power and flexibility of the I-4 satellites will bring improved capabilities to users of digital services in AOR-W. Based on the current schedule it is planned that Inmarsat digital services in the AOR-W will transition on January 22nd at 11:00 Hrs UTC.

The transition will result in an unavoidable short period of downtime in the AOR-W (estimated at 15-30 minutes) for all digital services via all Inmarsat Land Earth Stations. To prevent an interruption in service Stratos recommends that customers in the AOR-W operating in a location where a second satellite is visible switch prior to the planned outage period. Once the transition is complete end users will not need to make any adjustments to their terminals in order to access the new satellite.

Customers using the following services will benefit from extended coverage.

- **Inmarsat Fleet F77 128Kbps ISDN data**
- **Fleet F55 - 64kbps Mobile ISDN, MPDS and fax**
- **Fleet F33 - 9.6 kbps data, MPDS and fax**
- **Mini-M - voice, fax and data**
- **SWIFT64**

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The trials will also enable further development of communications-on-the-move, netted communications and aeronautical and maritime BGAN applications. Early trials with end-users for communications-on-the-move have already taken place, using prototype tracking antennas fitted to military vehicles. Such trials are essential on the journey towards the

implementation of upgrades for optimized comms-on-the-move solutions planned for launch in 2007. These upgrades will provide customers with a smaller antenna and great resilience to channel blocking and fading.

System compatibility with encryption equipment, including the ViaSat KG-250, Taclane and Thales DC2K has already been confirmed through trials using R-BGAN. Tests during the BGAN beta phase with these encryption devices have been positive.

Confirmation of BGAN's compatibility with the new Internet protocol 'cryptos' - known as High Assurance Internet Protocol Encryptor (HAIPE) - is also anticipated in the near future. A number of verification studies have been commissioned with trusted parties, including AOS, to confirm that information assurance can be achieved on IP devices and legacy circuit-switched encryption devices. ■



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