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Intelsat To Test Internet Routing In Space For Department Of Defense

In a program designed to provide Internet protocol (IP) services to warfighters and other military personnel anytime and anywhere, the **U.S. Department of Defense** unveiled April 11 a public-private program to test Internet Routing In Space (IRIS).

Managed by **Intelsat General**, the program is one of seven projects that will be funded fiscal 2007 as a Joint Capability Technology Demonstration by the Pentagon. The **U.S. Defense Information Systems Agency** will have overall responsibility for coordinating use of the technology among government users and for developing means of leveraging the capability.

As the military's next generation of space-based communications, IRIS will serve as an orbiting computer processor, merging communications received on various frequency bands and transmitting them to multiple users based on data instructions embedded in the uplink. IRIS will support network services for voice, video and data communications, enabling military units or allied forces to communicate with one another using Internet protocol and existing ground equipment.

The payload will interconnect a C-band and two Ku-band coverage areas. The IRIS architecture and design allow for flexible IP packet routing or multicast distribution that can be reconfigured on demand. With the on-board processor routing the up and down communications links, the IRIS payload is expected to enhance satellite perfor-

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Ondas CEO Embraces Challenge Of Launching Satellite Radio Service

Jacinto Palacios, the new CEO of **Ondas Media**, believes his experiences at **Hispasat** and other technology companies provides him with the tools to lead Ondas through the challenge of launching a European satellite radio provider.

"I started **Matra** in Spain with 60,000 euros ($80,500), and five years later the company was billing 60 million euros ($80.6 million)," Palacios said. "That was a high technology company which sold the two first Hispasat satellites to the Spanish government. We started the company from scratch. The company was successful after six to seven years without any problems. When I came to Hispasat, it was a little local company, which I helped develop internationally, mainly in Latin America."

Ondas plans to launch a satellite radio service that will provide about 150 channels of music and entertainment in Europe in 2009.

In January, Ondas was registered as an operator by the Spanish National Regulatory Authority, **Comisión del Mercado de las Telecomunicaciones**, authorizing the company to provide satellite radio broadcast services from Spain to the whole of the European Union.

"The Spanish regulatory authorities will follow the procedures of the [International Telecommunications Union] step by step and will support Ondas as they do for any Spanish and European company," Palacios said. "As you know the procedure is long but I

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Intelsat Working To Halt Unauthorized Satellite Use

Intelsat officials met with Sri Lanka's Ambassador to the United States April 10 to discuss how to stop unauthorized use of an Intelsat satellite by the **Liberation Tigers of Tamil Eelam** (LTTE), a terrorist group based in Sri Lanka, Intelsat announced.

The **U.S. State Department** lists the LTTE as a foreign terrorist organization, and their transmissions are a violation of Sri Lankan and U.S. laws.

"Intelsat does not tolerate terrorists or others operating illegally on its satellites," Phillip Spector, Intelsat's general counsel, said in a statement. "Since we first learned of the LTTE's signal piracy, we have been actively pursuing a number of technical alternatives to halt the transmissions. We are clear in our resolve to ending this terrorist organization's unauthorized use of our satellite."

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mance and reduce signal degradation due to atmospheric conditions.

"The IRIS architecture allows direct IP routing over satellite, eliminating the need for routing via a ground-based teleport, thereby dramatically increasing the efficiency and flexibility of the satellite communications link," Don Brown, Intelsat General's vice president of hosted payload programs, said in a statement.

Cisco Systems will provide commercial IP networking software for the on-board router while **Seakr Engineering Inc.** will manufacture the space-hardened router and integrate it with the payload.

Intelsat previously announced that **Space Systems/Loral** will manufacture the satellite, IS-14, which is set for launch in the first quarter of 2009 and will be placed in geostationary orbit at 45° West, covering Europe, Africa and the Americas.

Concerto Advisors, a financial advisory firm, is organizing equity financing for a new company that will provide the funds to design, build and operate the equipment for the demonstration.

As described by Rick Sanford, Cisco Systems' director of space and intelligence for its global government solutions group, making modifications to already-existing commercial systems will allow the U.S. military to use them relevantly and provide a truly global reach.

"Cisco provides systems handling about 75 percent of the Internet," Sanford said, adding that "in space systems, almost all are using Cisco equipment." In practical terms, this automatically allows for cost reductions in acquisition and maintenance, he said.

Because payloads can now be manufactured using compatible off-the-shelf hardware instead of being designed and procured by unique program specifications, "it simplifies the system and maintenance support, and the life cycle support as well," Sanford said. "Today we expect to communicate anywhere, so the demand is different than it had been. There were a lot of things that conspired to allow the technology," including current technological capability and evolved expectations among users. Added to that, "budgets are shrinking, and opportunities are ripe for companies like us," he said

Just as there is significant interest for satellite technology among private citizens, demand also is increasing among the military branches, Sanford said.. "Whether it's using Voice Over IP, pictures, video chats or real-time collaboration, the full suite of networks is available," he said, adding that the employment of a satellite constellation has less call for ground-based stations, and their protection and upkeep.

"It's a business approach and a commercial approach that shows incentive," Sanford said. "We see this as the next wave."

Since many of the services provided to the commercial and military market-share identical, it allows for economies of scale to be exploited. While costs are always a consideration, working in space is particularly difficult and expensive.

Ultimately, said Sanford, "the military can answer for themselves their questions about its capabilities. On the commercial side, we will see answers very quickly, lessons learned and rolled into second and third to [still future] payloads."

Once the three-year program is completed, the IRIS payload will become the property of a Concerto affiliate, and Intelsat will operate the payload to provide services for government and commercial users.

"IRIS extends the Internet into space, integrating satellite systems and the ground infrastructure for warfighters, first responders and others who need seamless and instant communications," Bill Shernit, president and CEO of Intelsat General, said in a statement. "IRIS will enable U.S. and allied military forces with diverse satellite equipment to seamlessly communicate over the Internet from the most remote regions of the world."

— J.J. McCoy

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do not feel concerned by this point. We need only perseverance and credibility, and I believe we have both."

But the effort will be worth it based on the perceived growth opportunity for satellite radio in Europe, Palacios said. "The research done by Ondas shows that 80 percent of people traveling in car would like to have high quality digital radio in their own language throughout Europe," he said. "There are a lot of people today traveling across Europe from country to country. Around 3 percent of the European population does not live in the country they were born. With the new members of the European community there is a big part of the population that would like to have these kinds of services. The radio is not so bad in Europe, however when you leave one country or the principal centers, you lose the tuning. This product will be well received people. There are more than 7 million trucks going across Europe every day. So, there is extra mobility among people."

While Palacios brings a strong knowledge of how to work with Spanish authorities, but will have to work with many more European governments and content providers to make Ondas a success.

"This is a big European project," he said. "Today, we are in Spain, but this company will be present in Western Europe. You need all the contents, and the capabilities of producing different content in different languages, so Ondas will have to develop as an international European company, even though the initial steps are in Spain. This will only be done with the complicity of the Spanish authorities and the support of all the telecoms organizations in each European country. I guess I can bring a lot of credibility in Spain, as well as in Europe."

Palacios also believes that his familiarity with the European satellite industry will help assuage any fears that potential investors may have about Ondas.

"I think that the need of Ondas, which is starting to be well-known all over Europe, is to achieve the trust of a certain number of potential investors, which are waiting for the new kickoff," he said. "I feel quite comfortable that investors will be comfortable with me, as well as customers, the people within the company, etc. I am sure we will be able to put together strong agreements to make the company successful."

While Ondas is focusing on Europe, there are lessons to be learned by its satellite radio predecessors in the United States — **Sirius Satellite Radio** and **XM Satellite Radio**.

"What we have learned from the U.S. is that any project that involves satellite

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Australian Government Uses Satellite Imagery To Assess Damage Inflicted On Banana Crops By Cyclone Larry

Officers from the department were working with the Australian Banana Growers Council and the University of Queensland to produce a detailed snapshot of banana plantations in the wake of the cyclone, which hit the area in March 2006.

"Queensland's climate is projected to become more variable in the future, with a likely increase in the intensity of extreme events, such as cyclones," Minister Craig Wallace said in a statement. "Current and accurate information on the location of banana plantations will be very important in evaluating the risk of possible future damage from these events and for managing their potential impacts, such as pest and disease spread and communicating this with the growers."

The project, which was launched in November 2006, combines land use maps with high-resolution satellite imagery and aerial photography to provide a picture of what happened to the banana growing areas around Innisfail after the cyclone.

Land use mapping had been done on a state and regional level previously as part of the Queensland Land Use Mapping Program within the ministry, but this is the first effort in mapping specific tree crops such as bananas, Wallace said.

Bananas have a special "fingerprint," making them easy to see on a satellite image, and officers from the ministry's department in Mareeba used the satellite images and photos to map the location and extent of banana plantations following the cyclone.

"The maps were then used by the University of Queensland to test new software for identifying the various colors, textures and patterns on satellite imagery. "The software has the potential to automatically detect and map banana plantations and could be used to produce the same sort of maps in the future," Wallace said. "So far, the results have been very promising."

The results have been provided to the Australian Banana Growers Council, which commissioned the project. The results will be available to other interested parties as digital data for Geographical Information Systems or a hard copy map.

"With the success of this project, future projects with other industries are now possible," Wallace said. "This is a great example of different organizations working together to assist an industry after the hardships inflicted by Cyclone Larry."

Gateway Plans Ambitious Launch In Africa

Gateway Communications will launch a new direct-to-home (DTH) platform in sub-Saharan Africa one of the biggest potential markets for DTH services anywhere in the world, with a target market of more than 40 million households, according to one of the company's top executive.

"It is an underpenetrated market," Julian McIntyre, president of Gateway said. "It is a very large market, and here I am talking about the immediate potential in terms of the number of households in sub-Saharan Africa that have a color TV set and can afford to buy discretionary services. … If you look at that market, 75 percent of those households have an earning stream to afford a pay-TV service."

Gateway is targeting markets such as Kenya, Uganda, Tanzania, Ethiopia, Ghana, Namibia and Botswana and also has acquired Portuguese content to target Angola and Mozambique. Gateway also wants to move into French-speaking markets, although not from day one, and sees a substantial opportunity in the Congo, Cote d'Ivoire, Senegal and Cameroon, McIntyre said.

While there is a potential target market of more than 40 million, Gateway's targets are on the conservative side initially, McIntyre said, "The first major benchmark in our business will be getting 100,000 subscribers," he said. "I think this could be achieved within 12 to 18 months of operations. That is also a conservative target. We plan to invest substantially in developing a product that will be profitable to sell at a price point that opens up the middle market. The economics of pay-TV are built on economies. I believe that pay-TV operators in eastern Europe have proved the concept that you can make money without having millions of subscribers."

One of the challenges will be marketing a service to households that need to be educated about the benefits of pay-TV.

"I think a large part of that in Africa is going to be about how do you get the product out there and demonstrate it so that people can see it and see the benefits," McIntyre said. "There will be outdoor displays, showing football games, running concerts. From a distribution point of view, I believe the distribution strategy in Africa today for the incumbents has been very much go to the city, put up some billboard with some Hollywood stars, put some [set-top boxes] in some retail outlets and wait for the customers to come to you. In an [expatriate] market, that works because people are familiar with it from their home market. It does not work when you are addressing the local market. I believe that we need to go to the subscriber and we need to go and talk to people and putting a lot of time and awareness of promoting pay-TV.

Gateway can learn from mobile operators such as MTN, which very quickly has turned mobile into a mass market, McIntyre said.

"Consumer services marketing in sub-Saharan Africa is much less developed and complex than in Europe," he said. "If you look at the companies that have been very successful in building brands, the most successful ones in recent times have been mobile phone companies. Brands like **MTN** and **Celtel** have gone from nowhere to being more recognized than brands like **Coca-Cola**. I think a lot can be taken from the powerful and successful branding that mobile operators have used."

The mobile market offers an apt comparison for Gateway when looking at the potential of the African market, McIntyre said. "I believe the opportunity lies in delivering a bouquet of content that is highly desirable but at a price point which is more comparable to a utility," he said. "If I look at the mobile phone market, there are 200 million people in Africa spending between $15 and $20 a month on a telephone. I believe that a price that is closer to a utility will open up the mass market for pay-TV."

One of the other challenges facing the operator is reducing the upfront costs of equipment such as set-top boxes.

"One of the biggest impediments to real pay-TV penetration in Africa is the cost of getting started," McIntyre said. "In most developed markets and an increasing number of emerging markets the set-top-box is subsidized. In Africa, that is not the case. One of our focuses on day one is what can we do to reduce the price of the set-top-box while recognizing there is not a developed credit or microfinance industry in Africa where we can offset the risk of subsidization. We have looked at set-top boxes, which are highly reliable, proven to work with large numbers of subscribers in developing markets but are very cost-effective. Our strategy on the CPE, is how can we get the dish, box, and the smart card into someone's house which is approximately half or under half of what they are paying today without subsidization."

Gateway is working with vendors such as **NDS** to meet this goal.

"People might debate as to when and how much potential the market has, but it is clear there is immense potential and it is exciting to be there at this early stage with a player who seems to be very, very serious," Philip Waterman, director of European platform sales for NDS. "I think over the years that NDS has dabbled in this market but everything has fallen by the wayside, and we have come across some very dubious business groupings. But this is clearly a serious operation, and that is why it is good to be part of it."

With all the pitfalls of introducing a new service, it is going to quite a while before Gateway introduces advanced services such as a personal video recorder and high-definition TV, McIntyre said.

While it maybe the first real operator to attack some of these markets in sub-Saharan Africa, McIntyre believes more competition in these markets would really benefit customers.

"I believe the market now needs to be grown by having a different product focus, a different pricing focus, a different distribution focus," he said. "I think the fundamentals of the market are strong. I believe competition will come from a domestic country level rather than a regional level. I would look forward to the emergence of smaller DTH or cable networks in individual countries, although I think it will be difficult for cable players."

In terms of how the digital TV landscape will develop in Africa over the next 12 months, "I see the consumer electronics market growing in Africa extremely rapidly," McIntyre said. "I think the African economy in most sub-Saharan countries is very robust. I think you will see a substantial uptake of consumer electronics with a focus on television sets. These will grow very rapidly."

— Mark Holmes

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in the first phase involves investment," Palacios said. "You have to be sure to allow the investors to be set up. You need a certain number of regulations and licenses. I know how to do this. We have learned from the U.S. experience that you have to be very fast here. We can't lose time in terms of going to market. If not, maybe people or the users can look at other technologies to fulfill their needs. So we have to move quickly and take these experiences of XM and Sirius as a mirror, which we need to look in every day, in order to avoid any errors they have done and take from them the best things they have done."

However, Palacios believes Europe could prove a bigger market for satellite radio and multimedia services than the United States. "In the U.S., this market is more uniform, more standard," he said. "In Europe, there are many languages. There will be hybrid cultures, which means there will be a mix of European and local content. I expect the growth of the European market will be bigger than in the U.S. once the system has started and once the first services start to be given to the users."

> **"You have to be sure to allow the investors to be set up. You need a certain number of regulations and licenses. I know how to do this. We have learned from the U.S. experience that you have to be very fast."**
>
> *—Jacinto Palacios, CEO, Ondas Media*

But Ondas also faces competition, as **WorldSpace Inc.** has received approval from the Italian Ministry of Communications to launch service in Italy. WorldSpace expects to begin broadcasting in the country in 2007 using a terrestrial repeater network to augment service from its Afristar satellite.

WorldSpace has said it expects to add 4 million to 5 million new subscribers in Italy and has partnered with **New Satellite Radio**, an Italian company primarily owned by **Class Editori SpA**, to launch the service. The companies hope to further expand on their expected subscriber base in Italy by tapping into the country's automobile manufacturing industry.

WorldSpace also is seeking authorizations to launch its service in other countries across Europe.

— Mark Holmes

Short Transmissions

ViaSat To Provide Blue Force Tracking Network Upgrades

ViaSat Inc. received a contract to develop the satellite ground equipment for a planned satellite network upgrade for the **U.S. Army**'s Force XXI Battle Command Brigade and Below – Blue Force Tracking system, ViaSat announced April 11.

Under a $9.3 million contract from **Northrop Grumman Corp.**, ViaSat and **Harris Corp.**'s RF Communications Division will build a prototype network and terminals designed to increase network capacity and improve accuracy. Northrop Grumman is the system integrator for the program, which provides battle command and situational awareness information using GPS navigation signals and communication satellites.

Work under the contract is scheduled to be complete in a year, and production and delivery of replacement terminals may begin as early as 2008, ViaSat said.

Orbital To Provide Test Booster For NASA

Orbital Sciences Corp. will design and build the next-generation NASA Orion Abort Test Booster for **NASA** and the **U.S. Air Force** Space Development and Test Wing, the company announced April 11.

Orbital will develop, build and test a new booster configuration to demonstrate and qualify the Orion Launch Abort System that will allow the astronaut crew to escape in the event of an emergency during launch pad operations and early ascent.

The work is part of a contract awarded under the Test Wing's Sounding Rockets Program 2 contract, which allows the use of surplus government boosters to reduce launch vehicle cost for U.S. government-sponsored missions.

The basic contract, valued at about $35 million, provides for a three-year program that ends with a pair of test flights scheduled for 2009 and 2010, respectively. Contract options valued at $45 million could add up to two additional flights and two spare vehicles through 2011.

Globalstar Launches Unlimited Airtime Program

Globalstar Inc. has launched a satellite airtime rate plan which will provide customers in the United States with unlimited satellite voice minutes for calls to the United States, Canada and Caribbean, the company announced April 10.

Under the Globalstar Unlimited Loyalty, customers will pay $49.99 per month for the remainder of 2007 for Globalstar satellite network access and unlimited home airtime satellite voice minutes. In 2008, the fee will be reduced to $39.99 per month, and in 2009 and 2010 the customer will pay only $19.99 per month. The fixed price guarantee ends June 30, 2010.

Hughes Supplies Satellite System To Galaxy Broadband

Hughes Network Systems LLC has supplied a broadband satellite system to **Galaxy Broadband Communications Inc.**, Hughes announced April 11. The system will enable Galaxy Broadband, an authorized Hughes service provider based in Ontario, Canada, to extend its satellite service offerings for the enterprise, small business and government customers.

SES Americom Launches HD Satellite Newsgathering Neighborhood

SES Americom unveiled a high-definition service intended to provide a bandwidth home to customers using IP-based connectivity platforms for providing voice and data communication to satellite newsgathering (SNG) trucks, the company announced April 10.

The service, delivered via the AMC-5 satellite at 79° West and the AMC-6 satellite at 72° West, includes the SkySwitch IP platform, which features **ND SatCom**'s SkyWAN and iDirect's 7000 series satellite router-based service.

"The launch of SES Americom's HD SNG neighborhood coincides with our increasing capital investment in additional HD equipment and new HD SNG units through 2007," Paul Edwards, vice president of transportables/production services for Crawford Communications, said in a statement. "SES Americom's market vision is HD clear and allows us to respond to the rapidly increasing demand for HD production and distribution services with the most advanced satellites and SNG solutions in the industry."

SES Americom plans to expand the neighborhood when the AMC-21 satellite is placed at 125° West in the 2008 second quarter.

Separately, **Turner Broadcasting System Inc.** (TBS) signed a multi-year agreement with **SES Americom** for two additional transponders aboard the AMC-3 and AMC-5 satellites to deliver CNN news gathering and special events programming, SES announced April 12.

Turner has used SES satellites to deliver on-location and breaking news reports for 13 years.

Details of the contract were not released.

SpaceDev, United Launch Alliance Explore Placing Dream Chaser On Atlas 5 Rocket

SpaceDev Inc. finalized a memorandum of understanding with **United Launch Alliance** to pursue launching the SpaceDev Dream Chaser aboard an Atlas 5 rocket, SpaceDev announced April 10. The vehicle is intended to provide a reusable and reconfigurable platform to ferry humans and cargo to space, with initial flight launch demonstrations are scheduled for 2009.

SpaceDev will work with United Launch Alliance to explore the technical requirements for commercial launch services needed to transport crew and cargo to space, including compatibility analysis of integrating a Dream Chaser on an Atlas 5. The vehicle likely would be launched aboard an Atlas 5 431 configuration, SpaceDev said.

Meteosat-9 Becomes Prime Eutmesat Satellite

Eumetsat, the European Organisation for the Exploitation of Meteorological Satellites, confirmed that Meteosat-9 is

now the prime satellite operating at 0°, replacing Meteosat-8. Meteosat-9 was placed into orbit in December 2005 and has been operating as backup to the Meteosat-8 satellite since July 2006. The transition marks the end of an extended validation period to correct some minor problems. Meteosat-9 satellite is expected to be the prime satellite until 2012.

Telesat Anik F3 Placed Into Orbit

Telesat's Anik F3 satellite was carried into orbit aboard a Proton rocket, Telesat and **International Launch Services** (ILS) announced April 10.

The spacecraft, manufactured by **EADS Astrium**, is equipped with 32 Ku-band and 24 C-band transponders to provide broadcasting and telecommunications services throughout North America and also carries a Ka-band payload to supplement services being carried on the Anik F2 satellite, Telesat said.

Telesat will take possession of Anik F3 after the satellite has completed in-orbit testing.

Raytheon To Upgrade Satellite Terminal; Receives Approval For NPOESS Antenna

Raytheon Co. will produce upgrade kits for its Secure Mobile Anti-jam Reliable Tactical Terminal, or SMART-T, for the **U.S. Army** and **Marine Corps** as well as Canada and the Netherlands, the company announced April 12

The Advanced Extremely High Frequency kits, which will be produced under an $84.6 million contract, will expand the data rate of SMART-T systems by a factor of four.

Separately, Raytheon received approval from the **National Science Foundation** to build a pair of antennas for the National Polar-orbiting Operational Environment Satellite System Safety Net system at McMurdo Bay research station in Antarctica. SafetyNet is a network of 15 sites and fiber-optic communications around the world. Construction will begin during the 2007-2008 Southern Hemisphere summer.

Envivio To Supply Mobile TV Headend For Indian Pilot Program

Envivio Inc. will supply a Mobile TV headend for a DVB-H pilot program operated by India's **Doordarshan**, Envivio announced April 12. Doordarshan, the national television service of India, provides public service broadcasting and runs the largest free-to-air satellite services covering the entire country.

The mobile TV pilot, launched with eight channels, enables Doordarshan to test the reception quality of the broadcast coverage as well as explore service bouquets, advertising and interactive services. The company plans to expand the trial to 16 channels later this year.

The headend, comprised of Envivio's 4Caster M2 encoders and the 4Manager network management system, has been installed **Shaf Broadcast Pvt Ltd**.

SISLink Signs Deal With Sky News

SISLink has secured a contract to supply **Sky News** and **Five News** with satellite services for the next five years, SISLink announced April 12. Included in the deal are 17 satellite news gathering trucks, standard uplinks, flyaways and a production truck as well as dedicated leased satellite capacity. Financial details of the agreement were not released.

Transocean Renews Contract with CapRock

Transocean renewed an with **CapRock Communications** to provide broadband communications for Transocean's drilling rigs in the Gulf of Mexico, the company announced April 10. Under the terms of the renewal, CapRock will continue to provide broadband Internet, Voice Over Internet Protocol and secure access to Transocean's corporate network. The system allows Transocean to remotely monitor its drilling systems and transfer data and images between the remote rig site and the service center.

EVC Adds Ikonos Images To Online Store

East View Cartographic (EVC) has added about 700,000 Ikonos satellite images to the online EVC Store, the company announced. EVC is an authorized reseller of Ikonos imagery via an agreement with **GeoEye**, which owns Ikonos. New data will be added on an ongoing basis and imager from French Spot satellites also will be added to the Web site in the future.

EMS To Supply Components For Globalstar Communications Payload

EMS Technologies Inc. received a contract from **Alcatel Alenia Space** to supply components for the communications payload of **Globalstar**'s next generation satellites, EMS announced April 9.

Under the $5 million contract, EMS will supply RF transmitter power-combining assemblies for the constellation of 48 spacecraft, dubbed Globalstar 2. Alcatel received a contract from Globalstar in December to develop the satellites, with the first launches scheduled for 2009.

Separately, EMS' Defense and Space Systems division unveiled an anti-jam antenna for the commercial space sector based on the company's work in the military market.

"Anti-jamming technologies have been employed by the military to protect communications channels for some while now," Michael Fatig, vice president of business development for Defense and Space Systems, said in a statement. "… We estimate that 25 percent of the commercial satellite market will be interested in anti-jam technology. These tend to be broadband infrastructure satellites offering country-wide data services in developing regions of the world."

Hughes Part Of Winning GSA Networx Universal Contract Bid

Hughes Network Systems LLC will provide satellite broadband network equipment and services to the federal government as a subcontractor on **Qwest Communications International Inc.**, winning bid for the **U.S. General Services Administration**'s (GSA) Networx Universal contract, Hughes announced April 9.

The 10-year program, valued at an estimated $68 billion, is designed to support federal mission-critical telecommunications requirements by providing voice, Internet Protocol, wireless and satellite services to 135 federal agencies across 191 countries.

"Networx Universal is the most comprehensive telecommunications contract

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ever awarded by the federal government," Tony Bardo, assistant vice president of government services at Hughes, said in a statement. "Its breadth and scope means that federal agencies will receive continued, uninterrupted telecommunications service while simultaneously providing a robust suite of new service offerings and the flexibility to add innovative services in the future."

Air Force To Issue Final RFP For GPS 3

The **U.S. Air Force** will post the final request for proposal for the GPS 3 program April 19, according to the Federal Business Opportunities Web site.

Teams led by **Lockheed Martin Corp.** and **Boeing Co.** are competing to build the 3 constellation, and both teams received contract modifications to their development contracts from the Air Force April 6. The modifications call for the companies to complete Space Vehicle Risk Reductions and Systems Definition activities by the end of September. Lockheed Martin's modification is valued at $25 million, while Boeing's is valued at $18 million.

The Air Force plans to award a multi-billion dollar GPS 3 development contract before the end of the year.

SES Americom Adds Home2US To IP Prime Service

Direct-to-home provider **Home2US** signed a contract with **SES Americom** to deliver content via the IP Prime service, SES announced April 9.

Under the agreement, SES will begin delivering channels such as Korean News Network, YTN, the Ethiopian TV Network and Kenya Live TV via IP Prime an IPTV distribution solution for the U.S. market. Home2US, which caters to ethnic subscribers throughout the United States, already delivers its lineup via the AMC-4 satellite.

"IP Prime now enables us to broaden our reach across multiple distribution channels with a growing lineup of the best content from around the world," Emrah Ozkan, president and CEO of Home2US, said in a statement.

Orbiting Wall Street

Alcatel-Lucent, Thales

Alcatel-Lucent completed the transfer of Alcatel's shares in **Alcatel Alenia Space** and **Telespazio** to **Thales**. Thales and **Finmeccanica** then combined their space operations under an entity dubbed the New Space Alliance, the companies announced April 10.

The moves follow the **European Commission**'s April 4 approval of Thales' acquisition of Alcatel's 67 percent share of Alcatel Alenia Space and its 33 percent Telespazio. Telespazio's main shareholder is Finmeccanica. Alcatel Alenia Space will be renamed Thales Alenia Space."

Pascale Sourisse will remain president and CEO of the Thales Alenia Space joint venture company and join the executive committee of Thales. Giuseppe Veredice remains president and CEO of Telespazio.

"Thales and Finmeccanica welcome the decision announced by the European Commission," Pier Francesco Guarguaglini, Chairman and CEO of Finmeccanica and Denis Ranque, Chairman and CEO of Thales, said in a statement. "This agreement is now finalized, making the New Space Alliance between Finmeccanica and Thales a reality. The association of our companies in the space business will further enhance our leadership in satellite-based technologies and services."

Sirius, XM

Sirius Satellite Radio and **XM Satellite Radio** have received a request from the **U.S. Department of Justice** for more information about their proposed merger, XM announced in an April 12 filing with the **U.S. Securities and Exchange Commission**. This is a second request under the Hart-Scott-Rodino Antitrust Improvements Act of 1976 and extends the waiting period under the Act an additional 30 days.

Meanwhile, the **U.S. Senate Committee on Commerce, Science and Transportation** will hold a hearing on the Sirius-XM merger April 17, the fourth on Capitol Hill since the proposed deal was announced.

At the same time, analysts and other interested parties continue to put in their two cents on the merger and the definition of competition in the market.

Telecom Media and Finance Associates Inc. (TMF) did not take a stance on the proposed merger, but strongly disagreed with an April 3 release by **Carmel Group** that came out against the merger. The research paper was funded by the **National Association of Broadcasters** (NAB), which strongly opposes the XM-Sirius merger.

The research paper by Carmel Group "ludicrously overstates the case for opposing the merger and fundamentally misinterprets the competitive environment for satellite radio," TMF said in its April 10 release. "…We consider that the potential alternatives to satellite radio are, in essence, those technologies which provide (either live or recorded) in-vehicle audio content (i.e. talk, music, sports and information services such as news, traffic and weather)."

The **Free State Foundation**, a non-profit Maryland-based think tank, also challenged the NAB's rationale for opposing the Sirius-XM merger.

"The notion that satellite radio constitutes a discrete market for purposes of assessing the merger's competitive impact seems problematical — and to defy common sense," Randolph May, the Foundation's president, said in a post on

freestatefoundation.blogspot.com. "… I am not sure that the appropriate product market with respect to assessing the competitive impact of the XM-Sirius merger is not somewhat broader than strictly audio entertainment and information. Consider that both cable and DBS "multi-channel video programming distributors" offer many different channels of audio only programming. In today's fast-changing technological and marketplace environment, perhaps the relevant market is the audio and video information and entertainment market."

Astro All Asia Networks

Malaysia's **Astro All Asia Networks** signed a deal with India's **Maran Group** to provide direct-to-home (DTH) TV services in India, Astro announced April 5.

Under the agreement, **South Asia Entertainment Holdings Ltd.**, a wholly owned unit of Astro, will invest up to $166 million for a 20 percent stake in **Sun Direct TV**, a provider of DTH services across the country. Maran will retain an 80 percent interest in Sun Direct.

Service is expected to begin in the second half of 2007 using transponders on the Insat-4B satellite placed into orbit in March.

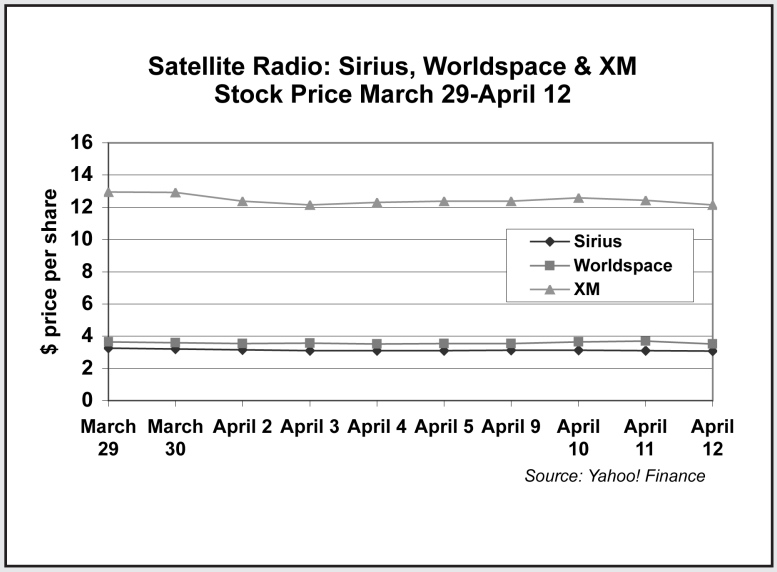
"There are over 65 million pay-TV homes [in India], and this market is expected to grow to over 150 million homes in the next decade," Astro CEO Robert Odendaal said in a statement. "We believe that DTH platforms coupled with the implementation of conditional access systems by cable networks will allow DTH services to expand rapidly in India."

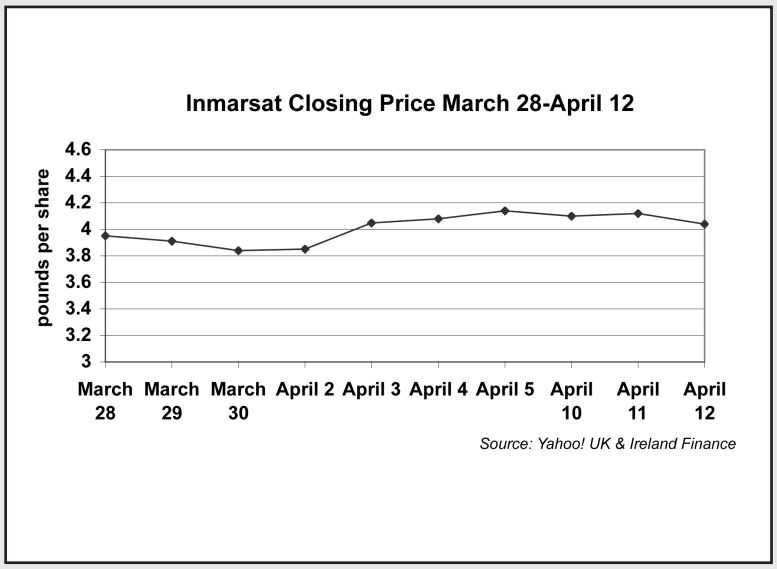
Spacehab Inc.

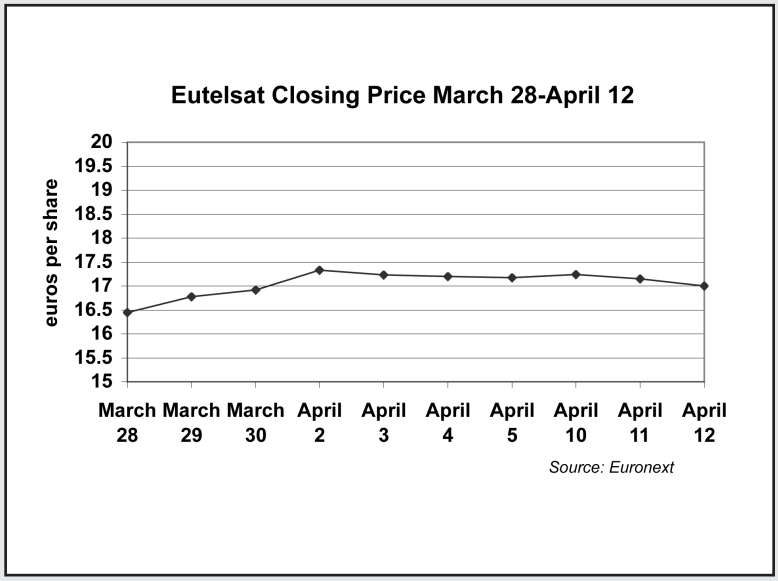
Spacehab Inc. has been granted another 180 days to meet the minimum requirements to remain listed on **Nasdaq**, Spacehab announced. Spacehab has until Oct. 1 to meet the market's requirements that a company's stock bid price close at or above $1 per share for a minimum of ten consecutive trading days.

Spacehab's first 180-day period to meet the requirements closed April 2. The price did top $1 per share for four consecutive days — Jan. 30 through Feb. 2 — but slipped and has not close at more than 70 cents since Feb. 26.

Separately, Spacehab appointed Mark Adams to the company's board, filling a vacancy created by the retirement of former Spacehab president and CEO Michael Kearney. Adams serves as chairman, president and CEO of Advocate MD, a stock insurance medical liability carrier based in Austin, Texas.







Space Tourism

Bigelow Aerospace Unveils Business Plan Targeting High-End Clients For Private Space Module

Bigelow Aerospace thinks the secret to turning the suborbital tourism marketing in a successful business is by selling "hang time" to "sovereign clients" — specifically astronaut-supporting countries harboring aspirations of a space program — aboard the company's planned low-Earth orbit space complex.

Founder and CEO Robert Bigelow divulged for the first time April 10 his company's business plan and pricing model for providing training, transportation and a four-week visit to the company's planned space station.

"The suborbital business is going to be a resounding success," he said at the National Space Symposium in Colorado Springs, Colo. "We're in business to make an economic benefit and hopefully help mankind along the way," added Bigelow, entrepreneur and owner of the **Budget Suites of America** hotel chain. "We think we're doing something good and positive."

Bigelow is in the process of targeting between 50 and 60 potential customers — including foreign governments and businesses ranging from the high-tech or biotech fields to pharmaceutical, automotive and entertainment industries —- who will be willing to pay nearly $12 million per ticket (or $15 million in 2012, when the first voyage is expected). Customers are being encouraged to make a deposit of 10 percent of the price, which will be refundable until the first module becomes operational.

Bigelow's space modules, designed using inflatable technology purchased from **NASA**, will feature more living space that the International Space Station (ISS), including exercise equipment and private compartments.

"We anticipate fees to be less than the current fees charged for the ISS," Bigelow said. Even at $15 million, Bigelow's ticket plan would undersell the cost of going to the ISS by roughly 40 percent while offering four times the duration. For example, as the fifth private space tourist, **Microsoft** developer Charles Simonyi reportedly paid the Russian Space Agency $25 million for a week's visit.

That said, Bigelow understood that the initial pricing will limit demand. "We don't think that space tourism will have legs for quite some time due to costs," he said. "The long pole in the tent is transportation," which he described as a major consideration, consuming roughly two-thirds of the total cost for the service. Realizing that, he balked at the notion of his service being described as a "space hotel," instead describing his business as a lessor of wholesale property in space.

Bigelow's pricing guidelines call for leasing available by month or year, for costs ranging between $4.5 million and $88 million depending on terms. There would also be options available depending on a client's needs, whether it be for more privacy, confidentiality or separate facilities. "There are some uses disharmonious to others, and we might orbit in different inclinations," he said. "We leave it to the customers to say 'yes'" to whatever services and amenities they might choose.

At the same time, "We have a plan that banking understands," be it leasing, depreciation of vessels and other more earthbound business considerations, Bigelow said. While Bigelow said that his company had invested about $95 million, "it will take a lot more to the 2012 timeframe for capitalization with facilities and launches." Bigelow also intends to provide all supplies and maintenance, upgrades and replacements.

Bigelow said customers could lease sections of the module for confidential research work. Based on the inflatable technology Bigelow has tested and lofted with the company's Genesis 1 spacecraft in July, the finished module will initially feature a life support system for six people. Genesis 2 is scheduled to be orbited aboard a Dnepr rocket at the ISC Kosmotras Space and Missile Complex near Yasny, Russia, during a launch window starting April 19.

Bigelow's schedule for transport launches called for two in 2010, one in 2011 and three in 2012, then increasing from 13 in 2013 to 30 by 2017. Meanwhile the company expects to increase from its first operational space complex in 2013 to a set of three by 2017.

Currently there are about 225 astronauts around the globe. "Why can't we add a zero to the end of that?" Bigelow said. "If you look at satellites, they were a novelty in 1957 and a necessity today. That's where we're headed."

— J.J. McCoy

Please send all comments to J.J. McCoy; jjmccoy@accessintel.com