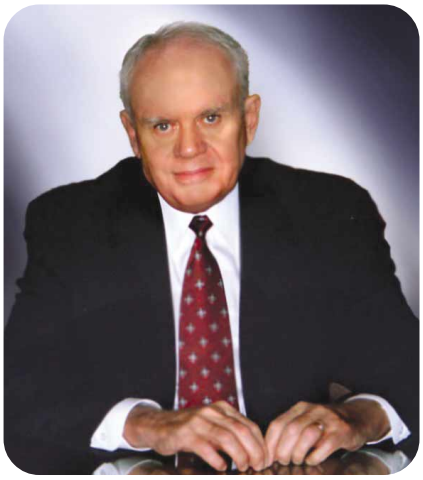
# Don't buy it, rent it!



The military is increasingly looking at leasing privately-owned satellite capacity to meet its global communications needs. Giovanni Verlini, Editor of Satellite Evolution Global, spoke with **Dr. Denis Curtin**, Chief Operating Officer (COO) of XTAR, LLC, about the advantages represented by commercial lease.

**DO YOU NEED X-BAND CAPACITY** for your armed forces? While until not long ago commissioning, deploying and operating your own capacity was the only possible solution, thanks to the arrival of commercial satellite operator XTAR, the option of leasing capacity has become a reality.

**Question:** How would you introduce XTAR to the readers of Satellite Evolution Global?
**Dr Denis Curtin:** XTAR is the world's first commercial provider of X-band satellite services designed exclusively for government users. The two-satellite system's high-powered global and steerable beams provide essential, real-time X-band capacity and flexibility to US and Allied forces in regional theatres or any location from Singapore west to Denver.

XTAR is a joint venture between majority owner Loral Space & Communications and Spain's HISDESAT.

**Q:** What are your space and earth resources?
**Dr DC:** We currently have two satellites operating in orbit: XTAR-EUR, launched February 2004, located at 29 degrees East longitude, and XTAR-LANT at 30 degrees West, which was launched in March of this year.

XTAR-EUR has twelve 72MHz transponders providing 100W of power, with two global beams, one fixed and four steerable spot beams. XTAR-LANT carries eight 72MHz transponders, with one fixed and three steerable spot beams. The combined footprint of both XTAR satellites extends from Singapore to Denver, covering much of North America and all of South America, Europe, Africa and the Middle East and parts of Asia Pacific.

XTAR-EUR is controlled from Loral Skynet facilities in Hawley, PA, with Telemetry, Track and Control (TT&C) from Maspalomas, Canary Islands. XTAR-LANT is controlled from Madrid, Spain.

**Q:** Who is your typical client? What kinds of services do you provide them with?
**Dr DC:** Operating in the X-band frequency, XTAR represents a new breed of commercially provided service designed exclusively for US and Allied government agencies and military forces. Our current customers include the US Department of State, the Spanish military, and the Royal Danish Navy.

XTAR is dedicated to serving the long-haul communications needs of US and Allied government forces. Our high-powered satellites provide complete end-to-end solutions for fixed and on-the-move requirements, whether supporting rapid force deployments or provisioning mobile and agile combat teams. XTAR's X-band On The Move (X-OTMsm) service features 4Gbit/s of capacity on 20 transponders, fast deployment and high data rates into legacy X-band terminals, even those smaller than 2.4 meters, and steerable spot beams that can be positioned anywhere within the broad footprint of the two satellites.

**Q:** Traditionally, governments have deployed and used almost exclusively their own satellite capacity. Why do you think leasing capacity and/or services from XTAR represents a better proposition for them?
**Dr DC:** The US military has several new, high-cost satellite systems on tap, such as Wideband Gapfiller Service (WGS), but there has been significant slippage in the sched-

## XTAR BEGINS COMMERCIAL SERVICE ON XTAR-LANT

XTAR, LLC, announced at the end of April that the second component of its X-band satellite network, XTAR-LANT, has completed in-orbit testing and has entered full commercial service. XTAR-LANT joins the XTAR-EUR satellite that entered service in April 2005.

"With the beginning of service on XTAR-LANT, XTAR can now offer X-band services in North America for homeland security applications and one-hop connectivity to Europe and the Middle East," said Denis Curtin, Chief Operating Officer, XTAR. "The satellite's payload is extremely flexible. It covers a large geographic area with its two global beams and has three spot beams that can be relocated within the satellite's coverage area. This flexibility, added to XTAR-EUR's coverage in Asia, adds tremendous capabilities for government and military users across most of the globe."

Stationed at 30 degrees West longitude, XTAR-LANT carries eight 100W wideband X-band transponders in both right- and left-hand circular polarization. This payload enables greater flexibility and enhanced capabilities utilizing legacy X-band equipment. The satellite is a 1300-class model built by Space Systems/Loral, Palo Alto, Calif, and has a specified service life of 15 years.

XTAR-LANT's coverage area encompasses a region extending from Denver in the United States to the South American and African continents and across the Atlantic to the Middle East. Combined with XTAR-EUR's coverage, XTAR can provide X-band capacity from Denver east to Singapore. XTAR-LANT's steerable spot beams that can be positioned anywhere within the satellite's footprint and is designed to be compatible with existing X-band terminals, including dishes under 2.4 meters. ■

*XTAR-EUR launched by an Ariane 5. Photo courtesy of Arianespace.*

ules of these programs. Meanwhile, world conditions have changed dramatically and there has been a surge in military bandwidth demand to address these changing conditions. It could be years before the planned military systems go live and even then they will only reduce some of this bandwidth gap. XTAR is a flexible commercial venture that provides X-band capacity today, allowing government users to 'leap-frog' over the construction and deployment stages of major satellite programs like WGS.

Many smaller countries in Europe are choosing to acquire or lease K-band or X-band capacity from commercial providers to meet their Ministry of Defense (MoD) requirements and fulfil NATO obligations.

We believe that Government bandwidth demand will continue to exceed government owned capacity, and that our XTAR service fulfils a vital need, providing X-band capacity without the need for government capital investment.

**Q:** Do you believe this model will eventually replace the old state-run satellite programmes at least for communications applications?

**Dr DC:** There will always be a very strong military/government satellite program in the US, even as the country continues to rely on commercial Satcom as gap filler until its next generation systems come online.

However, that picture is different in Europe. For instance, the UK has already privatised its military system, although it's not a true commercial model. And the Spanish MoD, through its participation in our commercial XTAR system, is taking a middle road between owning and operating its own system and participating in a quasi-commercial system. For smaller countries without the means for state-run MoD programs, the XTAR lease model represents a viable means of meeting critical communications requirements.

**Q:** As XTAR, how do you address an issue such as security? What steps do you take to make sure your clients can rely on a completely secure service? I am not only referring to the security of satellite communications once the satellite has been deployed in space, but to the entire XTAR programme:

### AMERICOM GOVERNMENT SERVICES ANNOUNCES AGREEMENT WITH XTAR TO OFFER X-BAND SATELLITE SERVICE

AMERICOM GOVERNMENT SERVICES, Inc. (AGS), a wholly owned subsidiary of SES AMERICOM, has an agreement with XTAR, LLC making high powered commercial X-band service available to AGS' numerous customers across the US Department of Defense, other agencies and users.

"We're delighted to expand the reach of XTAR services through an agreement with an experienced government SATCOM services partner such as AGS," said Denis Curtin, Chief Operating Officer, XTAR LLC. "Working with companies like AGS is an integral part of our strategy to aggressively pursue opportunities with US and Allied government entities through direct and indirect channels."

Both satellites carry a number of steerable spot beams that can be positioned anywhere within each satellite's footprint. "Adding X-band services to our portfolio of satcom solutions is something we're very pleased to do through our alliance with XTAR," said David Helfgott, CEO of AMERICOM GOVERNMENT SERVICES. "Making X-band capacity available immediately is just the first step – we will also be uplinking to the XTAR satellite and delivering X-band services through AMERICOM's worldclass teleport and terrestrial infrastructure, offering satcom solutions to the US DOD and related programs and users." ■

from satellite and launch procurement to fleet management, TT&C services, etc.

**Dr DC:** Although XTAR is a commercial satellite system, we have taken every precaution to ensure overall system security. Our command links are protected with the NSA Caribou level of encryption. We are operating the spacecraft out of secure facilities that have been approved by the US and Spanish governments. XTAR-EUR is controlled from Loral Skynet facilities in Hawley, PA, while its telemetry and tracking functions are performed from secure facilities in the Canary Islands and Madrid. XTAR-LANT TT&C is handled by HISDESAT from Madrid, Spain. Furthermore, all traffic over the two XTAR satellites is encrypted and managed by the respective government users.

We employed commercial launch service providers for XTAR, just as the UK Skynet program does. But government representatives were active participants in every phase of the launch preparation process to ensure adherence to security requirements and government regulations.

**Q:** What is your view on hybrid platforms (ie, platforms serving both government and commercial clients)?

**Dr DC:** The multi-frequency government/commercial hybrid model is a very efficient and cost-effective way of building a satellite system. It is not a unique concept. Nearly a quarter century ago the US Navy became the first government entity to lease SATCOMS through a dedicated UHF system, LEASAT, which was built, owned and operated by Hughes Aircraft (now Boeing Satellite Systems).

In Spain, the commercial Hispasat satellites carry an X-band payload dedicated to the Spanish MoD. The Optus and Defense C1 satellite provides commercial services in Ku-band for SingTel, and military communications in the UHF, X-band and Ka-band for the Australian Department of Defense. Satellite Communications Corp. of Japan has a similar hybrid payload for its government.

> "Operating in the X-band frequency, XTAR represents a new breed of commercially provided service designed exclusively for US and Allied government agencies and military forces. Our current customers include the US Department of State, the Spanish military, and the Royal Danish Navy."

**Q:** How big is the world's market for government services?

**Dr DC:** There are no firm statistics citing the global size of the government satellite services market. However, according to Department of Defense (DoD) statistics, non T-Sat military/government demand will exceed supply in Financial Year (FY) 2007 by 6Gbit/s. This capacity shortfall is anticipated to increase to 11Gbit/s by 2010 and 18Gbit/s by FY 2012.

This shortfall between bandwidth requirements and available capacity is evidenced by increasing government reliance on commercial Satcoms. Commercial Satcoms are already a critical component of the Global Communications Grid. Just recently, the office of Command, Control, Communications and Computer Systems for the Joint Chiefs of Staff indicated that roughly 80 per cent of its communications in and out of Iraq is via commercial satellite.

**Q:** What share of this market do you aim to serve?

**Dr DC:** We provide a unique service that covers a large portion of the globe - regions that will be of interest to the US and other governments for years to come.

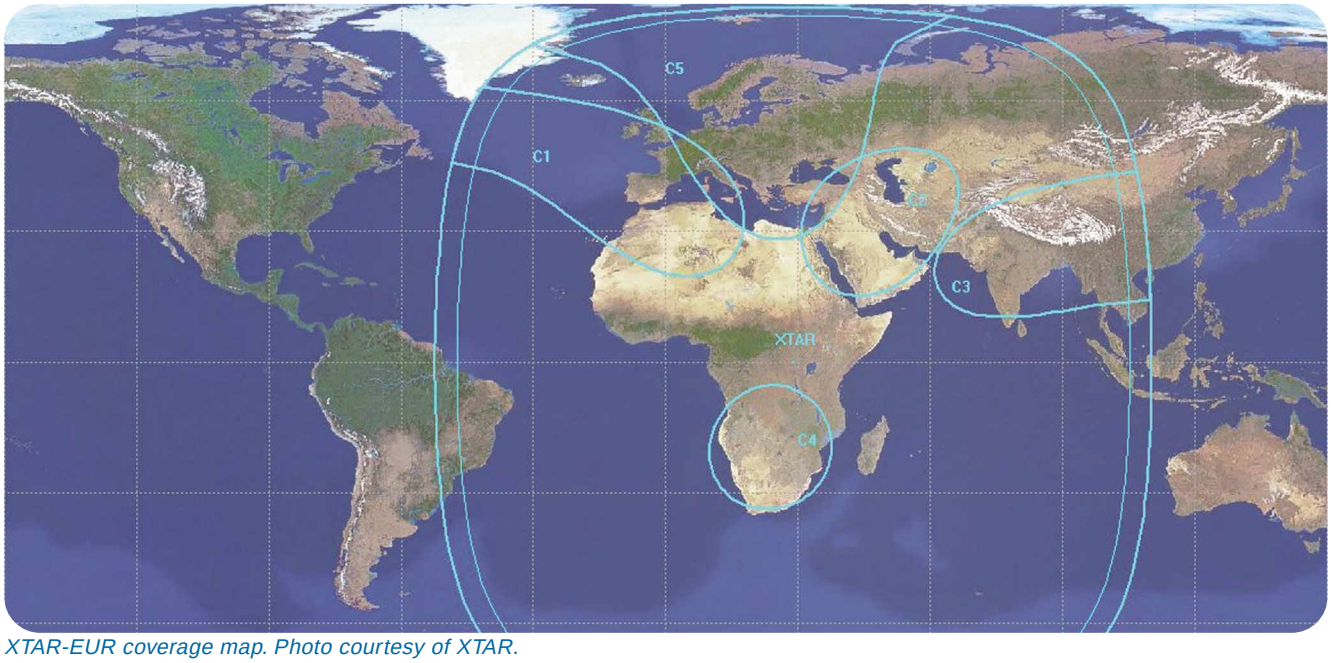
We will aim to serve as much of the market as we can.

**Q:** The US Government is known to be the world's largest client for defence services, but you also seem to be targeting "allied governments worldwide." What is the composition of your customer base at present? Do you expect it to change in the future?

**Dr DC:** We currently have a healthy mix of US and Allied government customers and are confident that we will retain this balance as we continue to book new business.

**Q:** Where do you see XTAR being in five-year time?

**Dr DC:** We would anticipate having strong growth in the utilisation of both our satellites and will be engaged in activities to opportunistically expand the XTAR system. ■




*XTAR-EUR coverage map. Photo courtesy of XTAR.*