GMC

Linked in YouTube

Global Military
COMMUNICATIONS

Secure voice, data and satellite communication systems

Training soldiers in a virtual world

Q&A Jay Icard, CEO of XTAR

Hosted payloads

Front cover photo courtesy of UK-based Spectra Group

Sign-up now for your **FREE** digital copy...visit www.globalmilitarycommunications.com

● ● *Jay Icard, CEO of XTAR*

Serving government and military users ● ●

XTAR was the first commercial entity to provide X-band satellite services in the world when it was founded in 2001. Today, the company exclusively serves government and military users, and is currently exploring its expansion options by engaging with government policy makers and military acquisition authorities to ensure its new systems fully address emerging user needs. Jay Icard, CEO of XTAR, opines on the state of the satellite industry as a whole, and XTAR's place within it.

Question: XTAR is a world-leading entity providing X-band services exclusively to government and military users; what's your assessment on the significance of X-band in the wider satellite community?
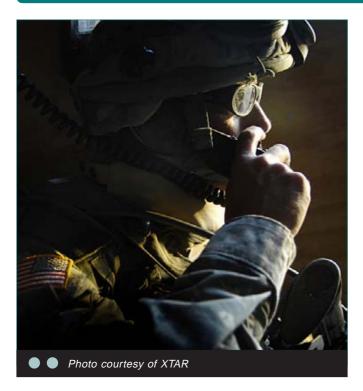
Jay Icard: Commercial X-band is a unique product. It provides a critical tool in the multi-band toolbox and offers advantages such as large spot beams, low interference, high throughput and weather resistance. It solves a particular set of problems such as achieving higher data rates into small terminals, maintaining strong links in poor weather conditions, or low probability of interference. A resilient SATCOM enterprise will use a variety of frequencies with multi-band terminals connecting to the most advantageous link. In a contested SATCOM environment, resiliency will be critical to mission success and the ability to 'roam' across frequencies, constellations and networks is a key concept in future resilient communications.

Question: It's now been more than one year since you took the helm as XTAR's new CEO; what do you feel you have achieved and learned in this time?

Jay Icard: Regarding achievements, we have focused our energy on the DoD SATCOM 'ecosystem.' I use the term ecosystem because of the recent and forthcoming changes in how commercial industry interacts with the US military.

GMC
Q&A

● ● *Photo courtesy of XTAR*

Photo courtesy of XTAR

The US Air Force now has the responsibility for the SATCOM enterprise in the US DoD. There are a number of re-organizations, leadership changes and mission assignment changes that both the DoD and commercial industry must adapt to along with evolving requirements. I believe that XTAR is organized with the right team to respond to these changes. We have certainly made people involved in the DoD SATCOM ecosystem aware of XTAR and our value-add to their missions. We have also continued to make strides in enhancing our partnerships with a few key integrators and terminal providers. The partnerships are a focused effort; we are interested in long term working relationships where our partners value what we bring to them and vice versa. We have made considerable progress in introducing commercial X-band solutions to DoD end users as we have participated in many demonstrations, trials and tests in the last several months. We anticipate this trend to continue. We certainly have demonstrated the value of X-band solutions and how we can be an enabler in the COMSATCOM and MILSATCOM integration efforts. Most importantly, I think we have a demonstrated a culture of cooperatively engaging with the DoD and with our business partners.

I have learned a great deal about the complexities of the DoD SATCOM enterprise. The DoD and Air Force have assigned some of the best minds to create a new strategy for SATCOM. They have been accepting of inputs and ideas from industry and have a genuine interest in collaboration. I think the best way to say it is that I have learned how XTAR can fit uniquely into the DoD SATCOM toolbox.

Question: In October 2019, XTAR demonstrated that high data rates can be achieved using a small SOTM terminal without utilising high throughput satellites (HTS). Can you tell us more about this demonstration, and the implications for end users?

Jay Icard: It was a great way to prove that X-band is a highly effective choice for comms-on-the-move applications. In particular, those missions which require data rates which are higher than 1Mbps into terminals which are 1m or smaller. The demo showed a greater than 26Mbps throughput from a very small airborne antenna. The 26.7Mbps required only 38.2MHz on our XTAR-LANT North America spot beam and we maintained the throughput during a heavy rainstorm.

Another example of high throughput into small aperture

terminals, in April, XTAR and Tampa Microwave demonstrated a 30.75 x 2.6Mbps link on 95cm terminal above the Arctic Circle, in Setermoen, Norway (latitude 69°N) for the US Marine Corps.

Question: What are the biggest trends and challenges currently on the horizon in XTAR's key markets, and how will the company respond?

Jay Icard: Everyone in the industry is closely monitoring the Air Force establishment of the Space Enterprise and the 'ecosystem' with which we have to interact. I think they are wrapping their arms around the state of the SATCOM enterprise and are deliberately developing a strategy to move forward. We are ensuring the community understands how XTAR can fit into their toolbox of solutions, and we are confident that we can provide real-time value-add to the space enterprise.

Flexibility and interoperability continue to be essential attributes for SATCOM system elements. We see the multi-band trend continuing to evolve. XTAR is capable of providing flexibility through actions such as daily use, quick time to service, and porting from beam to beam if needed. The interoperability between XTAR, WGS and other government X-band satellites allows users with X-band terminals to just repoint without the need for different equipment.

As a government frequency, the use of X-band may also allow partner nations to share information more easily. While budget is always an issue, we continue to highlight the

efficiencies of X-band which often means lower overall cost.

Question: How do these challenges compare with those facing the rest of the satellite industry?
Jay Icard: I think everyone is in the same boat with regards to the SATCOM Enterprise and how the DoD to industry interactions will evolve. We believe in XTAR's case, that we can provide one of the least disruptive MILSATCOM to COMSATCOM roaming solutions that are available on the market.

Question: Last time we spoke, we touched on plans for a next-generation satellite constellation. How has this project progressed so far, and what new capabilities is the company considering for these satellites?
Jay Icard: XTAR and our long-term business partner, Hisdesat, announced plans in May to build two next generation satellites as replacements for XTAR-EUR and XTAR-LANT (SPAINSAT). The new satellites will enable XTAR and Hisdesat to continue our long-term partnership, with XTAR as the exclusive provider of capacity to the US Government. The new satellites will offer X, Mil-Ka and UHF bands. They will include state-of-the-art features such as telemetry and command encryption, a digital payload offering flexible bandwidth and connectivity, and anti-jamming and geo-location capabilities. They will also feature NATO compliant nuclear hardening.

The new satellites expand our product offerings and will enhance our role as a provider of commercial infrastructure that complements the US space enterprise with WGS-compatible capacity.

Question: Let's talk about 2020; what are your hopes and expectations for XTAR and the satellite community as a whole?
Jay Icard: I hope that we are able to actively participate in live demonstrations of the ability to "roam" across constellations and be a key enabler for the DoD.

I expect that we will continue our active demonstrations with XTAR supporting end user missions, especially those organizations that have not tried or have little experience with commercial X-band services. Real world use of XTAR allows us the demonstrate our value add. For the SATCOM industry, I expect that the Air Force will begin implementation of its SATCOM enterprise strategy and the execution will include substantial participation from commercial industry partners. The implementation could be in the form of demos, tests or pilot programs to create the building blocks for an integrated MILSATCOM/COMSATCOM enterprise. **GMC**

Photo courtesy of XTAR