Space Industry Optimistic About Future Architecture, Policy Reform

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Space industry leaders are closely watching the Air Force's consideration of future space architectures and acquisition policies, and according to one executive, are optimistic the Pentagon will adopt innovative architecture concepts that will allow it to better leverage commercial capabilities.

Kay Sears, president of satellite services provider Intelsat General, told *Inside the Air Force* in a Feb. 9 interview that there appears to be a momentum among Defense Department leaders that is driven by a few unique factors: the age of existing space systems, the level of the threat in space, and the budget constraints that make smart decisions an imperative.

"It starts with leadership but it has a lot to do with the point in time for the systems to think about the new architecture and then you have this threat environment that has escalated dramatically," she said. "And all of that is leading these leaders to be very consistent in what they're saying, which is: Not only do we need a new architecture but we need it to be resilient, we need it to withstand this threat environment. And the commercial component of that is a very, very critical component."

Of several ongoing architecture studies the service is pursuing, Sears said she is particularly interested in the Wideband Global Satellite Communications (WGS) analysis of alternatives, which considers options for meeting future military SATCOM needs. The AOA is fed by multiple capability studies, including that of a protected tactical waveform, which Intelsat General is testing with Boeing.

The protected waveform has the potential to allow the service to bring protective features to any frequency band, which would give it flexibility and harden the security of its communications. Sears said that as a part of this Air Force study, Intelsat and Boeing are demonstrating that the Intelsat fleet can carry a protected tactical service in the future.

Sears said she is also watching and participating in discussions about strategies for meeting warfighter SATCOM demand in the future -- particularly as it relates to surge capability.

Traditionally, as its baseline capability, the department relies on its WGS and Advanced Extremely High Frequency satellites for SATCOM. When it needs communication services to meet combatant commander demand in areas where its program of record does not provide coverage, it has sought out commercial industry to provide that capability through short-term, spot-buy contracts.

While this has worked in Afghanistan and Iraq because industry has significant bandwidth in those areas, that is not the case for all regions. And if industry does not have existing capability when DOD needs it, the department may have to rely on other options for acquiring those services. In fact, the department saw this play out in 2012 when, in response to an urgent need request from U.S. Africa Command for satellite bandwidth, U.S. providers could not provide the capability on the spot. To meet that need, DOD entered into a lease agreement with a Chinese company.

One possible solution that has been discussed, Sears said, is to change the way the department thinks about surge and baseline capabilities.

"Maybe you flip that model and instead you surge on military satellites and your baseline communication is on commercial," she said. "And the reason you would do that is because when you surge, it means you are in a conflict and you're surging and you're able to control and move those military satellites around. Whereas with commercial, we could be carrying the baseline."

She said this discussion is representative of a larger set of questions about how government can be smarter about the ways in which it partners with industry.

In the area of wideband communication, Sears said she thinks the Air Force and DOD have invested significant time and resources to feed the AOA -- and she is optimistic that something fruitful will come from this discussion.

"I think for wideband, there has been a lot of work done on how to integrate commercial and industry," she said. "We're pretty excited about it and I think we're encouraged that it's going to be done with some real commercial information." -- *Courtney Albon*

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