



Episode 46 – Innovation, Speeding up Acquisition and Space Enterprise Architecture

Guest: Jeff Rowlinson, Vice President, Strategy and Government Relations of Defense, Space and Security, Velos– 23 minutes

John Gilroy: Welcome to Constellations, the podcast from Kratos. My name is John Gilroy, and I will be your moderator. Today, our guest is Jeff Rowlinson, Vice President, Strategy and Government Relations at a company called Velos. That's V as in victory, V-E-L-O-S. Jeff, how are you?

Jeff Rowlinson: I'm doing well. Thanks for having me.

John Gilroy: Hey, we had a little quick conversation yesterday, found out you were in the Air Force for like 23 years, and you switched careers so you wind up in the satellite industry. Was that an accident, or how'd that happen?

Jeff Rowlinson: No, it was just a fate of good luck, really.

Jeff Rowlinson: As I retired I had some opportunities as all military people do. You transition and I had a fantastic opportunity to join the great team at SES Government Solutions. So I spent about three and a half years working commercial satellite communication issues following my retirement from the Air Force. And then, this July I had the great fortune of joining the, I like how you pronounce the V as in victory, Velos team in July and had been fortunate enough to work with that team since.

John Gilroy: The reason I set that up is because, you know, for 20 years you saw a lot of the same thing, and all of a sudden in the last five years, it's like every day a new adventure. Things are changing so rapidly in these businesses. You've got to go home and complain to your wife, "What's going on?" I mean, you know? I mean, it's changed so much, hasn't it?

Jeff Rowlinson: It really has. And I think one of the really great opportunities in our commercial business is the ability to sort of roll with the punches, change with the times, and really bring new capabilities to the market. Both commercial and the military user, over and over. And so every day is something new. You know, there's a phrase "First time every time", and really that kind of plays out on the commercial side quite well.

John Gilroy: So, you look at what's going on with launches, look at what's going on in satellite, look at what's going on in communications, innovation, innovation,

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innovation. From your perspective, can the Air Force really take advantage of all this innovation?

Jeff Rowlinson: Oh, absolutely. Yeah. I think, you know, the Air Force has demonstrated a commitment to really leverage the commercial industry much more widely over the past, you know, at least in my experience, the last four or five years. And certainly in the commercial satellite communications industry, and all of the supporting elements, there is a concerted effort to leverage the innovations that are coming out of industry more fully for the war fighter. Right? So you hear the narratives develop over and over, both in Congressional testimony and in leadership speakings and breakfasts that you attend on how the government is trying to leverage the pace, and the effects of the commercial industry. And it's just an exciting time to be part of it.

John Gilroy: Whenever you go to buy a car, you ask the people, "What's the limit, how fast can this car go? How many miles per gallon? What's the limit to that?" So the question is, what are the limits to the Air Force taking advantage of this commercial innovation?

Jeff Rowlinson: Well, the limits are sometimes self-imposed. Sometimes there's some legal limits on contractual mechanisms that are available that the department can use. And then sometimes it's just imagination. What can we do and how fast can we go? And so General Hyten, who's the commander of USSTRATCOM, has often talked about, you know, the pace of innovation, the pace of contracting and going fast to meet war fighter needs. And I think really that is sparking a revolution, if you will, of thought and driving sort of some military leaders towards the pace at which they adopt commercial innovations.

John Gilroy: Well, let's switch commanders. Let's go from Commander Hyten to the commander of the Air Force Space Command, General Raymond. If you look him up and look online, you find out that he testified before Congress last year that the end state vision is for a SATCOM user to be able to roam, rapidly, among different satellite providers, ultimately enabling more flexible, resilient SATCOM. That could get a lot of your friends in the Air Force scared, I would think. I mean, do you see it actually happening?

Jeff Rowlinson: Oh, yeah. I think General Raymond has laid the framework for what they're entitling sort of a SATCOM enterprise vision, right? Which is envisioned to allow military war fighters to take advantage of both the government procured new SATCOM capabilities, otherwise known as WGS. And this is just in the sort of wide band SATCOM market and to leverage also the commercial SATCOM options that are available. And so, as General Raymond talks about roaming, I think he's envisioning an area where a war fighter that is leveraging a WGS can seamlessly transition to a commercial resource that may be available in a certain area. And so depending on the conditions of the environment that a war

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fighter is in, he may want to leverage WGS. That WGS may be contended. It may have other priorities that it has to serve. And so commercial options then become the route that war fighter needs to accomplish his mission.

Jeff Rowlinson: And so General Raymond wants to be able to leverage an environment where those commanders and those war fighters can leverage all of their available resources.

John Gilroy: Most of my career has been in software development. And so we talk about agile software development all the time. And so an agile development allows you to change, move and dynamically create space on drives, and dynamically have different types of software. And in fact there's software defined networks now. But it looks like they're adapting some of these agile methods, looking what's out in the commercial world, and the Air Force saying, "Well, you know, maybe we can adapt some of that agility to transfer depending on needs." Because you can't predict what your needs are going to be in six or eight months, or six minutes, can you?

Jeff Rowlinson: No, and the ability to ingest innovation at a commercial scale, both at the network layer and at different levels, that are impacting war fighter use is really an important step. And so companies that are able to adapt their services using already fielded technology, but maybe at the network layer, provide solutions that allow different options are going to be really important going forward.

John Gilroy: It's nice to read a press release, or go to a meeting and hear someone on stage talk about being agile and dynamic and tossing out all the words. Then it comes down to it, has the department been able to facilitate all these, these grandiose statements?

Jeff Rowlinson: Yeah. And so we've seen over the last couple years where, specifically in this market space, COMSATCOM pilot programs that were funded a couple years ago and really executed over the last year or two years have been able to demonstrate some of those innovations. And more recently, there was a pilot program demonstration. And, Kratos was one of the companies that did this, they demonstrated at the network layer the sort of ability to roam between systems, whether that be MILSATCOM and a commercial system and they were able to do that using already fielded tech terminals and along, with their network layer overlay, they were able to demonstrate the ability to roam.

Jeff Rowlinson: So that is something that as the users look forward into developing architectures of the future, then these demonstrations are going to be even more critical.

John Gilroy: Is that the Pathfinders and Pilot program?

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Jeff Rowlinson: Yeah.

John Gilroy: Or is it a different one?

Jeff Rowlinson: It's called the Pilot program.

John Gilroy: Okay.

Jeff Rowlinson: So the Pathfinders were envisioned as a way to leverage some contracting tools that they use available funding. You know, so procurement funding, some RDT&E funding to procure SATCOM SATCOM services. The Pilot programs were envisioned and really supported by Congress as a way to develop and motivate some innovations in terms of how those technologies can be leveraged by the war fighter. So one is a procurement effort. The other one is more of a technology effort. And that's where the Pilot program demonstrations really use technology to enable the utilization of both pre-fielded WGS, MILSATCOM capability, and the commercial innovations available to the war fighter today.

John Gilroy: In my world many of the high level people may accept the innovation, and then the people who deploy it will accept it, and there's one little obstacle in the way. And that maybe is the word acquisition.

Jeff Rowlinson: Mm-hmm.

John Gilroy: And speed and acquisition, where we know it works and we know it's proven, and that seems to be a barrier for a lot of these innovations being applied, isn't it?

Jeff Rowlinson: It is. And what we've seen over the last couple years is the use of other transaction authorities. The ability to use some innovative contracting techniques to bring these capabilities to bear. I think the SMC, Space and Missile Systems Center, has been really kind of on the leading edge of that. And additionally, last December there was a stand up of a new office that was originally in DISA, but has moved over to Air Force Space Command, which is really charged with acquiring COMSATCOM. And so Air Force Space Command now has innovation and contracting mechanisms available to it that it didn't have before. And so that's really some exciting trends in the industry both from, you know, we talked about the referenced Pathfinder, talked about Pilot program, and then you talk about the innovations and authorities that are coming with acquisitions. And I think that's all a very positive trajectory.

John Gilroy: About six months ago I did an interview with a retired brigadier general by the name of Greg Touhill. The word I remember was resilience. "John, you know, you've got to be resilient here, buddy". It seems like you could use commercial

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success with flexible systems to use that as being a resilient aspect of what happens if. I mean, it gives you a whole new deck of cards to play with, doesn't it? This has "resiliency" written all over it.

Jeff Rowlinson: Oh absolutely. And anytime you're talking about supporting a war fighter mission, they'll want some redundancy and capability and resiliency so that they are not forced into a single path sort of solution. And so building resiliency across the enterprise of COM's architectures or mission architectures is really important for any sort of military planner and commanders that have to provide services to the folks that they're leading.

John Gilroy: In the world of marketing you tell people to listen to their customer. Listen to the customer. Listen to the customer. So we have generals like General Raymond making statements, like Touhill making statements, and so, from your perspective, have the commercial people listened to their customers and responded? Or they just said, "No, this is how we do it."

Jeff Rowlinson: I think if you just look at the Pilot Program, you've got commercial companies that are on the bit to perform at any given point. Right? The companies like Kratos and others that are really just leaning so far forward, with their own sort of commercial innovations and tailorable solutions that the government can leverage, that it's really an opportunity waiting to happen across the board. We've got a lot of energy towards this enterprise management and control, you know. A SATCOM enterprise, if you will, that we can leverage for the government. And I think industry has proven over and over that they want to be aggressive partners with the department to make sure that all of these innovations are brought to bear.

John Gilroy: You know Jeff, thousands of people from all over the world have listened to this Constellations podcast. If you're listening to this now, and want to get regular alerts when new episodes are available, go to Google and type in Constellations podcast. Click on the Kratos and sign up and you'll get us, delivered to your doorstep every time we have a new interview. We have all kinds of exciting interviews coming up.

John Gilroy: I want to go back to a topic you mentioned earlier. You talked about COMSATCOM and the way I understand it is this is a procurement initiative of CB Acquisition that was taken away from DISA. Are these fighting words here, or is this all coordinated?

Jeff Rowlinson: You know, I think it was coordinated. And I think it's these missions transition from organization to organization to organization and I think this was an evolution of the importance of this mission set being assigned to Air Force Space Command is really the driver here. It consolidates the vision and the focus and

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the authorities under one procurement arm and then it allows Air Force Space Command to do that in a more holistic fashion, right? So the congressional language that accompanies this gave Air Force Space Command procurement authority in concert with the DOD CIO to do this for all of the Department of Defense. And so what this allows General Raymond's team to do now that it's transitioned from DISA, is to acquire services, COMSATCOM services, in the like and a more holistic fashion. And hopefully, that's an operational benefit for the war fighter and they in a way consolidate and save on resources, right?

John Gilroy: Now if you're listening to this and you're in Seattle, Washington, you might shrug your shoulders. But this little DISA release, this is like moving the tectonic plates. This is a big deal in this town, isn't it? This is a major deal.

Jeff Rowlinson: Well it's, it's not trivial. And I think where Air Force Space Command did the transition extraordinarily well is they communicated with industry. They set their vision, they set an achievable roadmap and now they're starting to put the framework together across the department to reflect and enterprise vision that incorporates their sunk cost with their already fielded and appropriated you know, MILSATCOM capabilities and they're looking very deliberately to leverage the commercial market.

John Gilroy: Speaking of Washington D.C., we have SATELLITE 2019 coming up I think first week in May. So I went to the website and looked at the programs, and one of the programs, they have thousands of different speakers, and one program's going to be how to acquire commercial satellite bandwidth for your business. And I said, well, guess what. Military's doing the same thing. Maybe it should be how business could be the military. So I think there was a 49 million dollar program dedicated to that too. And so there's effort from Congress, there's effort from the military. It could produce great things here, couldn't it?

Jeff Rowlinson: Yeah. I mean you referenced the FY 19 appropriations bill that re-appropriated 49.5 million dollars from the Air Force under a WGS line, and created a new program element dedicated for COMSATCOM. So going forward, what we would expect in future budgets is funding that reflects the department's commitment and sort of sustained effort to better leverage and integrate commercial capabilities. And so that program element that you referenced is, right now it's already teeming funding line, under the Air Force budget. And so that's going to be a vehicle that the department can use going forward to really motivate and invest in commercial capabilities.

John Gilroy: Jeff, I don't want to do inside baseball here and get too detailed, but we have to maybe dip in a little, get a little detailed here. Now there's a guy named Colonel Russ Teehan, I think his name is. And he's the portfolio architect of the Air Force Space and Missile System Center. And if you listen to what he's had to say, he is stressing the need for a family of systems to work within an integrated space

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enterprise architecture. This really sounds like software development here, doesn't it? And he's talked about rapid prototyping, swift acquisition again, and the need to collaborate with allies and commercial partners. This is really a flexible approach he's talking at now. And so, is this really developing, or is this just a pie in the sky? I mean, this is a really a new flexible approach.

Jeff Rowlinson: I think the leadership at SMC and Colonel Teehan is on the leading edge of that. Has demonstrated a commitment to create a system that, from a space layer architecture, if you will, is accessible to the war fighter. That enables resources and a resiliency that we've not seen before. And this all goes back to creating solutions that enable better, faster, economically sound, and architectures that are for the war fighter. And this is all part of the narrative that the Air Force has led and certainly is something that all commercial industry is looking to contribute to.

John Gilroy: Tomorrow night I'll be in a classroom down in Georgetown. I'm going to have students there. Some of them are studying project management. And there's some projects that are very, very complex. It takes years to understand what's going on. All the moving parts. But we talk about a guy like Russ Teehan was talking about. A portfolio architect. This is notching it up a couple levels here. I mean, portfolio ... there's so many different aspects of this to worry about. It just seems like this is a four or five year challenge here. This isn't oh, on you spare time over the weekend, you know.

Jeff Rowlinson: Well this is certainly something that all of industry is paying close attention to. All right, so you've got leadership within the department that is paying attention to it from the DOD CIO into the prospective services. The Air Force Space Command obviously is in a position of keen leadership, and even the administration is on the front edge of this, as they're submitted their space force legislative proposal, right? So the ascendancy of the issues that are really dominating the political day, and the operational day, are the use of space-based capabilities, and then how do we leverage that across the board. So, you know, Teehan's portfolio architecture is a piece of the puzzle that we're all trying to contribute to. And so I think we've got a great opportunity here.

John Gilroy: You know what competition always accelerates development in many areas. And we see some international competition here. I think that is going to force people like Russ, or whoever taking, and push this forward. And other people are going to have given the resources to be able to accomplish that task too. So it's a big huge job we're getting almost forced into it because of some international aspects to this.

Jeff Rowlinson: Oh absolutely. And the creation of, and the importance of the conversation surrounding space force, is because we are in an operational environment that creates the conditions where now we've really got to consider the threat

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dynamic and what is affecting our operational capabilities in space. And the so the thought process is in, and the priorities that are going into this conversation, can't be understated.

John Gilroy: There's a publication in town here called Inside DOD, or Inside the EPA, and if you read some of these publications you might get the impression, and maybe I'm not accurate here. It looks like the DOD doesn't seem really ready to adopt LEO or mega-constellation architectures. I don't know. I mean, do you think these LEO mega-constellations like OneWeb will be successful in proving that that model?

Jeff Rowlinson: Well I think that the listeners are probably much more versed than I on what the department has committed to. Right? So there's a DARPA Blackjack program that is the sort of I think the precursor to some of the department's investigations into the LEO constellations. And so you can, you can look to the Blackjack program as an example of how the department is leaning in towards these opportunities. And in trying to figure out where they can best contribute to the different missions and roles that are needed.

John Gilroy: I heard a phrase two or three weeks ago, it was like "Head in the sky, feet on the ground, or talking about ground systems". And whenever you talk about satellites, you have to think of the impact on ground systems as well because they're there. I mean, it's part and parcel of it. So what about this non-geo impact on ground systems?

Jeff Rowlinson: Well, the department has recognized that terminals in the ground systems are a critical piece of the architecture that they've got to figure out. And then, this goes back to our Pilot Program discussion a moment ago. The ability to leverage ground systems in an architectural scale is going to be real important. So the government's got to acknowledge and utilize already fielded systems while adopting future systems. And so the ability to integrate that, and operate with and through those is going to be critical. So that ground architecture's a key component of any sort of enterprise discussion.

John Gilroy: We got the two-minute drill here now, Jeff. Earlier in the program we talked about obstacles. And I was indirectly talking about acquisition. But I think there may be other stumbling blocks that we haven't mentioned. So what kind of policies you think are lagging, or what are the stumbling blocks from your perspective?

Jeff Rowlinson: I think clear lanes and roles of responsibility are going to be critical. Right? We've got a lot of energy towards integrating this. And I think Air Force Space Command and SMC have done great work at motivating that discussion. Clearly defining those acquisition roles and responsibilities within the department is

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going to be critical. Right? And then funding those responsibilities, right? You know I don't think any of our senior leaders that go to the hill ever have the comment of "Hey, we can do this for no money at all". So we need to fund this. And we need to set clear lanes and we need to fund it year over year. And that's a political discussion, that's a planning discussion. And we've got to acknowledge the realities that you can't do this without the appropriate level of funding.

John Gilroy:

Well Jeff, unfortunately here we're running out of time. I'd like to thank our guest, Jeff Rowlinson, Vice President Strategy and Government Relations at Velos.