

“Operationalizing ABMS-JADC2”

Col. Frederick "Trey" Coleman:

Good morning. Thanks for being here this morning. Thanks for choosing to attend this panel. We know there's a lot of great topics out there, so we're honored you chose to come and spend time with us. This topic today is on operationalizing ABMS and JADC2. It's a great topic because, frankly, we've all been talking about this for quite a while. You probably didn't attend a panel today. There's probably not a panel out there that didn't say the words ABMS or JADC2 or at least C2 at some point. It's really exciting and it's a great opportunity to talk about how we're going to... Or how we are making it real, because I want to be clear that this isn't a brief about tomorrow, or a panel about tomorrow, or the future necessarily. There will be a lot more to come.

But ABMS and JADC2 are being operationalized today. There's a lot of great capabilities out there and a lot of great systems. That's what we're going to talk about. Before we get into that, what I'd like to do is lay some foundational groundwork a little bit and just talk some terminology, because I think that's helpful before we get into a lot of the specifics. At the risk of sounding pejorative, I'll just start with just defining JADC2 and ABMS. When we talk about JADC2, this is the Department of Defense's Joint All-Domain Command and Control Program. The strategic document for it says, "The purpose of it's to enable the joint force to use increasing volumes of data, employee automation, and AI, rely upon a secure and resilient infrastructure, and act inside an adversary's decision cycle to sense, make sense, and act."

In their report on JADC2, the Congressional Research Service described JADC2 as the DOD's concepts to connect sensors from all the military services, Air Force, Army, Marine Corps, Navy, and Space Force into a single network. ABMS, the Advanced Battle Management System, is the Air Force's contribution to JADC2. It's part of the JADC2 solution. The name of the Air Force's contribution is telling in itself, command and control. It can be a very broad thing. The President of the United States executes command and control, commanders execute command control. Just about anybody can execute command and control or touches command and control at some point. Battle management is a niche form of command and control. It's the tactical level of command and control. It's the employment, it's the engagements, it's the battle level of command and control. Just by naming the contribution Advanced Battle Management System, the Air Force has said that it's focusing on the tactical level of C2. Not necessarily the operational level, not necessarily the strategic level, although there's, of course, implications and tangential relationships, externalities, but battle management is tactical command and control.

Specifically, ABMS, is uniquely focused on the kill chain. The kill chain isn't really a joint term. I'll talk about that just for a second too. When we talk about the kill chain, we mean the F2T2EA process, finding, fixing, tracking, targeting, engaging and assessing. When we think about ABMS, we should think about it as ways the Air Force can advance its ability to execute F2T2EA faster, more resiliently, and at scale. That's what this panel will focus on. Each of our panel members has been an important part of the ABMS community. Each of them and their companies have made and are making critical contributions towards our ability to operationalize ABMS to our ability to execute the kill chain faster, more resiliently, and at scale. Chad Haferbier serves as the vice president of Leidos's multi-domain operations division.

In this role, he drives the corporate strategy that positions Leidos as a leader in the MDO paradigm with meticulous planning, technology disruption, and collaborative execution. Previously, Mr. Haferbier was a senior material leader at the Department of the Air Force Rapid Capabilities office. His team led the advanced panel management system to acquisition, delivering advanced all domain capabilities to Airmen and Guardians. The RCO's done great work for us and continues to do great work. Lance Spencer

is the client executive vice president of AT&T's global public sector. He leads the AT&T business portfolios for the U.S. Department of Defense and Global Defense. In his capacity, he is responsible for identifying, aligning, and developing AT&T and partner capabilities to meet DOD joint and coalition global operating needs to improve operational availability, cybersecurity, resiliency, and cost. Mr. Spencer spent 26 years in the Air Force retiring as a colonel after serving in several key positions, including commander of an expeditionary group and two different squadron commands and serving as a joint task force J6 and on the half-staff.

Joseph Sublousky is the vice president of SAIC's Joint All-Domain Command and Control campaign responsible for developing and implementing corporate JADC2 strategies. He works across all SAIC sectors and business units to ensure coherence and synergy around capabilities for Department of Defense imperatives. Digital engineering, artificial intelligence, machine learning, multi-level security networking, and cloud-based on-prem DevSecOps. He also has 28 years of active duty Air Force service, retiring as a colonel in 2014. As an airman, Mr. Sublousky commanded several C2 and communications organizations around the globe, including the 56th air communications squadron in Pacaf, the 1st combat communications squadron in USAFE, and the 609th air communications squadron, an AFCENT near and dear to my heart. He also served as the AFCENT A-6. Gentlemen, thanks for taking the time to be here on our panel. Over to you now for some opening comments and we look forward to having this discussion with you, Chad.

Chad Haferbier:

Thanks, Colonel Coleman. Super excited to be here with you all today to talk about two of my favorite topics, delivering operational capabilities to war fighters rapidly and then ABMS, and how we can mechanize the open architecture non-proprietary framework to drive best-of-breed solutions that will stay ahead of those threats. How do we expedite that kill chain? How do we make that kill chain more resilient? I think ABMS is laying the great framework to be able to do that under General Cropsey's leadership. Very excited to help General Cropsey as a performer on the digital infrastructure consortium, as well as driving Leidos' corporate strategy to help stay with that non-proprietary open architecture solution base that we can help work across the industry as well to bring the best-of-breed for war fighters around the globe.

Col. Frederick "Trey" Coleman:

Thanks, Chad. Lance.

Lance Spencer:

Yeah, thank you. Some of you may see my LinkedIn post yesterday. Yesterday was the 147th anniversary of Alexander Graham Bell receiving his patent for the telephone and birth of AT&T. Since then, AT&T lab scientists have gone on to invent some amazing things like the transistor, long distance phone calls, cellular phone system, invented the transistor, designed Unix, which was the basis for today's modern internet. Even closer to the military, AT&T provided the first command and control network for General Pershing on the front lines of France during World War I. We invented AUTOVON and the precedent system. We've got a long history working with the military, over a century of working in the military, solving problems, and going right to the front lines with the military, when needed, to support our nation.

Connectivity is at the heart of everything we do and is at the heart of every communication network. What is an organization that cannot communicate, cannot access their data ubiquitously? How can they deliver on their mission without effective comms? That's where AT&T comes in. There'll be private-

based, IP-based off of... Private access based off of use cases, but the underpinning is commercial networks. The fight won't happen inside the gate. The fight will happen on commercial networks wherever you go. DOD simply can't afford to build what we've already spent hundreds of billions of dollars on, and in most scenarios, they'll need to operate on this commercial infrastructure, like I said, if not for all, some of the connection. Stove pipes just don't work. 5G is a game changer in military operations. Low latency, seamless standards-based data access, and resilient edge operations provide connected platforms, interoperability, and the DOD decision superiority in JADC2.

By bringing the major network service providers like AT&T and for early planning and exercises, we can more effectively help the DOD during crisis and better align to the mission delivering standards-based solutions that meet the needs of the military. Working together is how we can deliver the right solutions. Thinking has matured and evolved with commercial 5G, private seller networking, securing those extensions of the enterprise, and how private networks interconnect for enterprise operations and scale. 5G use cases in hybrid of private and commercial 5G implementations will be critical and tailoring depending on what is needed for each use case. Delivering enterprise data access at scale will require partnering with network service providers to stitch this together, leveraging our significant investment solutions that already exists and can make this hybrid model work. 5G is the access, but it requires a massive fiber infrastructure, as well as a space layer, and service management and service assurance platforms to operate beyond niche solutions.

The DOD can't recreate that. Like Space Systems Command says, "Exploit by build." DOD often gets that backwards. But to the success of a great power competition, it's necessary to exploit and buy and leverage the innovation investment of the whole of nation. Just briefly, speaking of Space Systems Command, the next frontier space will be no different. The power of combining terrestrial and space-based mobile network solutions has the potential to provide end-to-end coverage never before available. Choosing the right trusted industry partners will be important in a national security imperative. That's just the beginning. I can also talk about maritime and other domains. For example, AT&T and partnership with the Naval Postgraduate School is expanding 5G coverage into the Littorals with our commercial radio access network on ocean power buoys in Monterey Bay. The health communications industry is redefining networking, pushing the limits of mobile communication as we know them today. Our military needs to connect to an interoperable, seamless, unified data-driven network. Networks shouldn't be different because they're in space or at sea, and the same devices should be able to connect regardless of the network. That's our plan.

AT&T is collaborating with AST SpaceMobile to deliver space-based mobility. The AST BlueWalker 3 satellite successfully launched in September 2022 and AST is completing initial vehicle and systems checkout. AT&T is working with AT&T SpaceMobile to test the integration of the AT&T mobile network with this AST solution. The satellite literally would operate as a cell tower in space and follow industry standards. We have conditional regulatory approval to use AT&T spectrum to test and this will bring the power of space-based mobile solutions, combined with terrestrial networks, to seamlessly provide interoperability in a single [inaudible 00:10:32] enterprise regardless of location. In our too distant future where DOD will be able to access space and terrestrial-based networks determined by best path with interconnects occurring as they do today in global peering and carrier-to-carrier handoffs, and with the same devices regardless of access to space systems or terrestrial mode. Just like our network and devices allow for roaming today, in the future, they'll be roaming on space. This is another innovation in our long pedigree inventing the future and our century plus long relationship with the military providing cutting edge solutions. Over to you, Joe. Thanks.

Col. Frederick "Trey" Coleman:

Thanks, Lance. Joe.

Joseph Sublousky:

Fantastic. I can't see you but you can see me. I'm going to tell you a lot of things, but I would love to have a follow-up with you after this. I want to talk to you, because the conversation's how we're going to get after JADC2 and ABMS. This is going to be a cooperative effort. What I'll tell you about me is you heard my bio, a lot of acronyms. I'm an atypical communicator. I grew up under the likes of operators that taught me that it's not about the links, it's about the data, it's about the mission. SAIC is a solutions provider. We are working in several areas across all of the services in order to provide each service's contribution to JADC2 with capabilities, not products. JADC2 two won't be a product. I tell everybody this, "You won't buy a JADC2. What you're going to buy is a capability and it's going to be built upon an architecture that all are going to be able to share."

A little bit about me, I've commanded, like you said, at the ACOMs, at the combat comm, and it as an A-6. I saw every non-interoperable system that you could probably see. We figured out a fix for it. But in tomorrow's pacing threat, we're not going to be able to figure it out. We're not going to be able to get the data there fast enough once the person who needs it figures out what they need. We have to have a data repository that's enabling us to allow algorithmic approaches to get the data at the places at the speed of need. We always say speed of need, but the reality of it needs to be there much like you're getting your updates on your phone and you didn't even ask it for anything. What I would tell you is I'm looking forward to this. Thanks for the opportunity to participate in this discussion as a one-way discussion, but more importantly, AFA, it's been a fantastic symposium. Really have enjoyed time here.

Col. Frederick "Trey" Coleman:

Thanks, Joe. I appreciate it. Hey, I realized as you guys were introducing yourselves, I failed to introduce myself in the beginning, which was the first thing they told me to do when I walked in the door. I'm Trey Coleman from the 505th Command and Control Wing. We are the only command controlling in the Air Force. We work for the Air Warfare Force Center as part of ACC and directly for the CSAF to test, train, and develop TTPs for the war fighter. We're really excited to be a part of this panel and work closely with the C3BM team and the CFT up at half to get ABMS across the finish line or continues to deliver it. I'm not sure there is a finish line. Okay. On to the questions. I'm going to ask each of you guys a question, a question or two, and what I'd like you to do is answer the question and then I'm going to ask the rest of the panel members if they've got something they'd like to add on.

This needs to be a conversation for it to be meaningful. I want this to be a meaningful conversation so that we all learn something so the audience walks away and we're smarter and we're a little bit more aligned. I'll start with you, Chad. You've been working at ABMS for quite some time. As a matter of fact, I first met Chad when he was at the RCO and we were working CMCC together. I'd ask you, what do you think has been the greatest success of ABMS and what have we already accomplished or delivered or advanced as part of ABMS?

Chad Haferbier:

Yeah, It's a great question. The pivot from the on-ramp exercises, which stimulated the imagination of what could be, to more of an acquisition-focused, delivering operational capability, I think, has been the best shift for ABMS. I think Congress agrees. They've actually appropriated a full budget, for the first time in ABMS, since Joint STARS was canceled. That's good news for the Air Force as we're on the right track. Under the leadership of Spaniard Valenzia and General Cropsey, that early prominent war fighter involvement in everything ABMS is doing is really where we need to go. That's how you get operational capability fuel as rapidly as possible. You get that war fighter feedback, you apply DevSecOps principles

to how we deliver capability, not just software. Those are great Ws for what ABMS is doing, which will manifest in great Ws for operational advantages for our war fighters.

Another great thing that ABMS has done a better job of, over the past few years, is getting Space Force more involved. General Olson's far more dedicated in terms of bringing the Space Force along to have their story for how we, at the Department of the Air Force, delivers a joint across space and Air Force ABMS capability that is critical. We can't stovepipe within our own department. How ironic would that be for JADC2 to be stovepiped within the Department of the Air Force? Those are some really big Ws. I'll turn over these guys.

Col. Frederick "Trey" Coleman:

Lance, Joe, any pilots?

Lance Spencer:

Just a brief comment and I agree with what you said. Joe kind of touched on it in his opening comments, being in front of the pacing threat. I think it's really important that, in the JADC2 and ABMS environment, that we start exercising together on what potential courses of action might have to be executed. If we wait till the balloon goes up, it's too late. We got to do all that relationship building, getting to know each other, understanding the art of the possible together, pushing ourselves together. I think that's really important in the construct.

Col. Frederick "Trey" Coleman:

Thanks.

Joseph Sublousky:

Recognizing we needed to do ABMS, I think, is a success. Absolutely. I would tell you that. When I took over at SAIC a year ago, I came from a cybersecurity company and I was doing a lot of the threat intelligence piece. It hearkened back to the days of tactical data links. How do you share threat intelligence across an environment so that you actually know the threat before it actually gets to you because you can see it in another domain? You can see it in another co comm. I navigated to the guiding principles of ABMS when I first started, because ABMS is a contribution to JADC2. I said, "What are the guiding principles?" Separable C2, that says a lot. How do you separate C2 in order to actually do it? That gets to a lot of the things that we need to work on within ABMS. I believe we're starting to deliver those separable C2 constructs on how do you [inaudible 00:16:41] environment? How do you actually get the data to the locations that you need it? How do you operate within a cloud environment?that's going to enable us to do that.

Distributed debt battle management, we've known that all along but how do you do it at speed and how do you do it where you're actually doing a different kind of warfare? How do you reimagine the way we're going to do battle management at the tactical level in the future? And then integration, we all know what integration means as a guiding principle. That's the operational side. But you go to the technical side and it talks about DevSecOps in support of those operational guiding principles and open architecture. I think, most important, models-based systems engineering. We got to model what we want to do before we actually do it, because long gone are the days that we're just going to buy it and see if it works and then we get into the integration challenges that we've faced in the past. I think those are some successes to date and what we've delivered. I'll talk about in another question that you're going to, I think, hopefully, open it up for us to say. What are we doing in cloud? I'll stop there.

Col. Frederick "Trey" Coleman:

Okay. Thanks, Joe. I agree. One of the greatest benefits of JADC2 and ABMS has been this focus on C2 that I think we've led atrophy over the past few decades. That's one of the greatest benefits. I said it before, no kidding, we, this room, we are delivering and there is capability out there, but that capability requires data. It requires connectivity. General Valenzia said it yesterday on a different panel, "Data is not C2. Data is not..." Or sorry, "Communications is not C2." Command and control commands an authority and controls the communication of that authority, the expression of that authority. It's a two-way conversation, but it requires some degree of connectivity and some degree of data in some way, shape, or form. We know our adversaries are working hard on their abilities to disrupt and degrade our ability to transfer data, to defeat our ability to communicate. Is the Air Force moving in the right direction? Lance, this question's for you. Is the Air Force moving in the right direction and to ensure connectivity and access to our data, and are we thinking about connectivity the right way?

Lance Spencer:

The Air Force and Space Force is getting better at it. The conversation has changed and pivoted significantly in the last several years. I think the understanding of how to embrace commercial solutions and investment has been part of that. There's a lot of opinions on enterprise IT as a service, but I'll tell you, the network as a service, RRE that we're doing at Buckley just down the street, we're getting amazingly high marks. Buckley's about to move to a secure internet gateway, which is a multi-generational leap from the current internet access points that the DOD is using today using commercial innovation. We did it in partnership with U.S. Cyber Command and National Security Agency. We've got all kinds of proof points off. It's already migrated, it's not going fast enough.

The pivot needs to happen faster. The DOD, and the Air Force, and Space Force are working on it, but they don't quite know how to procure a commercial yet. I'll give you a great example. Later today, we're going over to Buckley to do a ribbon cutting on the 5G build that we just did there. It took five years just to get that done. Normally, it takes 18 months. There's just all kinds of paperwork, all kinds of red tape, and 5G is going to be a major enabler for data ubiquity. You're going to be using it inside and outside the gates, getting that infrastructure in place. Oh, by the way, the carriers pay for that. That's not a bill, is going to be really important. Solving those problems are still really important and I think there needs to be more urgency and effort on that.

Col. Frederick "Trey" Coleman:

Any follow on thoughts, Chad, Joe?

Chad Haferbier:

Yeah. I'd pile on a little bit in terms of where I know the Air Force is going that is right. As you go to a detailed environment, you're going to need to provision for that. You can't expect to have comms all the time. How do we ensure that we have protocols and algorithms set up, whether it be at the far edge or at an operational C2 node, where we can understand the data, understand the latency of that data, and make sure we're making the best decisions possible?

Col. Frederick "Trey" Coleman:

Yeah, thanks.

Joseph Sublousky:

I think the are we moving in the right direction? Yes, I think we are, but there's a long way to go. The adversaries approaches to disrupt. Disrupting feeds and speeds is an easy thing to do. Isolate, locate, connect, disconnect. I think as we move towards a cloud, a cloud edge environment, and we start moving in that direction, that would be very important. We're heavily dependent upon meshONE-T to come up with that answer to how are we going to actually connect and how are we going to be able to self-heal, self form those fancy words that we use that are very difficult to apply, but that's going to be absolutely critical from a connectivity piece. But I would offer that connectivity is not the only way of operating within ABMS.

It's about not just the networking side, but it's a data-centric approach put into a cloud architecture. That is absolutely, because once you get to that point, no matter where I go with this phone, or that iPad, or anything else I've got, I can get to all of my data. The data is what we need to get to. When you talk about redundant communications in the past, I would offer that, more importantly, it would be resilient communications to that data is what I'd focus on.

Col. Frederick "Trey" Coleman:

Yeah. That's a great point, Joe. Somebody asked me recently what happens to the Takl or the Ford Edge when they're disconnected? I think we're at the point where degradation isn't necessarily a binary thing where it's you either have it or you don't. I think, my assumption, and the way when we talk about this, I think there's always going to be some degree of data that can get through. If there is, no kidding, you're entirely disconnected, I think it's a very short period of time when we can get reconnected. We've got the systems to do that in the multiple pathways to do that, but I don't accept that it's a binary thing, either you have it or you don't have it. Because we do have multiple layers and very resilient comms, and you guys are helping us build those out.

A key part of this construct is, today, the Air Operations Center, and Joe, you mentioned that you've got some pretty good experience in our AOCs. Clearly, how we think of the AOCs today in the big monolithic buildings needs to change. I'd argue that there's still, and in fact, there's probably an increasing need for those operational level C2 decisions at resource management that decides where the assets need to be, and at what time they need to be there, and what they're doing. We still need that, especially with our limited force. You still need that operational C2 function. But the question is what does it look like? How does it change in the future? Joe, in your opinion, what does the future of the AOC look like?

Joseph Sublousky:

That's a big question.

Col. Frederick "Trey" Coleman:

You got to solve though. You can figure it out.

Joseph Sublousky:

I think there's a lot of people in there that would know what the AOC is supposed to look like in the future. I've been out for a little while, but I can give you my opinion on and what I think it is. I've seen an example of it in SAIC. It's cloud-based command and control. SAIC was selected to deliver a cloud-based command and control for customer number one, NORAD NORTHCOM. Nominally got started in November, December timeframe. The focus was on cloud and the focus was on data. It was not on the edge, it was not on the network connectivity or any of those things. In a DevSecOps environment, we've been able to deliver in two months an unclassified CUI level capability that connects all the air defense

sectors and all of the radars that they're looking at, unclassified-wise, to a single pane of glass using an application.

Now you would think that that's critically important to have, which it is, but I think the most important thing that I would say for the AOC in the future is something that the commercial industry does today, which is a continuous update. It's a continuous update to that app based upon the threats that you are actually getting into. Because we've all known it, your plan is just about as good as the first contact with the adversary and then it changes. How do we get continuous updates? Well, the way that you do that is through a DevSecOps environment. You can update that CBC2 app today and it actually is automatically available to everybody that's connecting to it. I think it's the first time in the Air Force that we've seen those feeds be connected into a cloud architecture that's displayable, not only on a laptop but on your phone, because once we get the data and the access to the data in a cloud environment, the edge device is, I don't want to say it's simple, but it can be realized pretty quickly.

Col. Frederick "Trey" Coleman:

Chad, any thoughts on the AOC?

Chad Haferbier:

I'll take a different angle. Some things that many probably assume already is that AOCs are on a common baseline. I think that'll be in the future is, as Kessel Run, cloud hosts their applications will have a better ability to cross train across AOCs. Folks can come in and be familiar with the AOC as they sit down in whether they be in Hawaii or in Germany. That's one thing, I think, in the CICD pipeline that Kessel Run's leading is very important to realize that vision and be able to rapidly update. How do we break down the data between test, and training, and operations to quickly evolve our TTPs to stay ahead of threats? I think the AOC will be very involved in that as we break down those stovepipes of data and start to throw them black through the shotgun and other applications to work on those things in a more iterative process.

Col. Frederick "Trey" Coleman:

Yeah. That's a great point. Systems like Kreios and CBC2 cloud-based systems allow you to distribute your control. That's how you do it. We're excited about these systems. Lance, any thoughts?

Lance Spencer:

Yeah. Just a couple thoughts and an open secret. Joe and I worked together once upon a time. I was the F4 A-6 for Europe in Africa for a few years, and I've slept on the AOC floor a few nights myself. When we'd finish the operational planning as a staff, the boss would say, "Oh, you all get on planning the next thing. Lance, you come with me to the AOC," because they understood what comm meant and what the Sixth World looked like. A lot of people talk about cloud. I think what Joe talked about especially is a great prototype and proof of concept to innovate. The ability to scale it is really important, and it sounds like you've maybe solved some of the problems from what you're describing. My experience and my observation, as I engage across the Air force, is the biggest stovepipe is the network.

Everybody goes and gets themselves some over their own network and it's not ubiquitous. It doesn't connect. There's a myth that the DOD doesn't write on commercial networks. Almost all of the DOD writes on commercial networks. It's just not done the right way. Figuring out how to procure that. As you go to the cloud, how you going to get there? You got to connect. It doesn't just magically hop in the cloud. Thinking through, that's important, I think, when we're thinking through, especially distributed AOCs, and distributed operations, and C2 that the AOCs will bring forward.

Joseph Sublousky:

That's a great point. I mean you brought up PTSD for me back in Third Air Force. Lance would always decide where we were going and then I would go there and figure it out. But the plans are important, they're absolutely critical. I mean, coming up with what you're going to do is important. I guess what I would offer from the AOC's perspective is, as a combat comm unit, we needed 17 pallets to take connectivity to the field, and then we needed 48 to 72 hours to connect that connectivity to some kind of a source where then we could start bringing up our servers and bringing up... That cannot happen in the future for an AOC.

It has got to be something where you can actually deploy a very light capability and sometimes use existing connectivity that's available to you in order to get back into a cloud environment that has the data that you need to get access to. The Air Force is working in those realms, but that is going to be critical for the AOC in the future. The logistics trail that has to happen in order to actually establish some kind of a presence, even at the smallest of presence. We have an answer for that. The challenge is we just need to get through a policy discussion around how we do it. I think that's going to lead into my next, hopefully, discussion. But I'll stop there because we can go forever on policy.

Col. Frederick "Trey" Coleman:

Thanks, Joe. Hey, a great example of distribution is AFCENT, just a couple weeks ago, you may heard me say this in a panel yesterday morning, but they pushed their ATO from an apartment complex using sipper tablets, and the map team stayed in their apartments in Sumter, South Carolina and pushed the ATO out to the field. That's distribution. That's what it looks like. They did that because they're using Kreios, and it's a cloud-based system, and they don't have to have the servers in their apartment complex. It's a great example. Okay, question four. This is for each of you, and I'll start with Chad, and we'll go down the row here. As a senior corporate executive, what is one of the biggest challenges you see when working on the ABMS portfolio from the industry perspective? What one thing would you change in the Air Force bureaucracy, if you could, to help us operationalize ABMS?

Chad Haferbier:

The value proposition for ABMS JADC2 is China. There's no secret there. The secretary's talking about it, chief of space office is talking about it. With that comes, we're going to be leveraging our most exquisite capabilities across the joint force. To me, one of the challenges that I understood, but now I really understand it on the industry side, is our ability to communicate, at a classified level, with the war fighters and with the acquisition entities so that we can better position our IRAD spends to skate where the puck is going, and be ready for them, and have capability ready for when they want to get there. To me, that's one of the biggest challenges. It's something I'm not just going to throw over the fence and hope somebody fixes it. I'm willing to help fix it. I've had many conversations this week about it actually. To me, that's one thing that I would hope that the bureaucracy within the Pentagon can get together and solve.

Lance Spencer:

Thanks. Lance. I think that something to consider with that is how to better embrace the whole of nation. Because if a fight happens, the whole nation's going to be involved. How do we bring all that to the table? I will echo what Joe finished with a minute ago about policy. One of the examples I used was building cellular networks on bases. It should be just as easy building outside the fences, inside the fence. The signal doesn't stop at the fence line, but we have to do an 18-month spectrum study. By the way, for spectrum that we already own and are licensed to operate on. There's a lot of things that put

sand in the gears to keep that kind of stuff from happening. I was talking with Lauren Knausenberger last night for a while and I mentioned the secure internet gateway.

It's an amazing capability, but it took her personally working for three years to get a temporary exception to policy to do it. She's the CIO and it took that much to get that work through the building. I think being able to address policy, be nimble, and be able to take risk. I had an opportunity to talk with Secretary Kendall not long ago. He says, "What question would you pose to me?" I said, "You've accepted the risk of operating off department complex and people operating from their sofa on the same systems with the same data, but you can't bring that on the base. Why is it harder to bring it on the base to do the exact same job?" That's what my thoughts are.

Col. Frederick "Trey" Coleman:

Thanks, Lance.

Joseph Sublousky:

I would say the one thing, get rid of the word bureaucracy. I mean, it is not just a bureaucracy on one side. The bureaucracy is a two-way street. "You need to do it this way. No, I can't do it that way. You need to change your mind. I can't change my mind." I think partnerships are important. Experimentations in partnerships between industry and the Air Force are critical. Just during this conference, I was asking a general officer I worked for about starting back in your day kind of approach. I can say that now, "Back in my day..." because I remember it. JFX was a great opportunity for us to experiment in how we were going to do joint task force operations. We do that in some terms today. But the challenge is I think there's not enough partnership discussions because we're bringing capability and technologies that may not necessarily meet the needs that you, the Air Force, has or the DOD has.

That'd be the first one. The second one is it is around test and certifications. It is around how do we get to the person that can say, "Yes, which I'm going to take that home with me, sir, and find that person"? It is about not trying to convince the people that say no all the time, but getting the person that can say yes, because when the nation goes to conflict, bureaucracy falls away. Because those folks that can say yes, come forward and say, "We're going to do this." I've been in that road before and we've been able to accomplish a lot of capabilities that we didn't think we could in a very quick fashion, but we needed a conflict, the forcing function. I think, at this stage, partnerships and identifying clearly who can say yes to those challenging tests and certifications.

Secret releasable is a classic example. That takes a long time, but it's not really a long time once you get to the right person and explain what you're doing. There are technologies out there to allow us to do things in a different way. Today, in a more agile environment, you can't apply hardware to a cloud environment. It just doesn't scale. I would leave it at that. I got to mention, we talked about cloud. I just want to make sure everybody understands. Air Force Cloud One, it's DOD Cloud One. SAIC is well-versed to support every Department of Defense entity into Cloud One. It's not one service provider. It's not just I have to go to one service provider. It's a decision that says, "I need to move my on-prem or my capability sets into a cloud environment."

It's walking into that and saying, "Can you help me do it?" Number one. There's a bureaucracy, I got it. But if you form a partnership, it can go very quickly. But more importantly, I think that when you start making that road to the cloud and you recognize it's not one service provider, the next thing you'll recognize is that it's taken three plus years to put a zero trust environment in that cloud. I mean, why would you not want to go there? When you looked at solar winds, and Log4j, and all that, Cloud One was not impacted by any of those. The cost of moving to cloud may be expensive, but the cost to not

move to cloud, I would say, would be something to take a look at because it's very expensive to address those impacts, vulnerabilities that exist on a network-centric approach today.

Col. Frederick "Trey" Coleman:

As former A-6s and ACOMs commanders, how can the Air Force incentivize today's ACOMs commanders to move their data to the cloud? Or the A-6s. The right person, the right air component. This is a surprise question. They weren't expecting this one, but it's a challenge we face because nobody wants to let go of their data. You got your data center, you want to hold onto it like it's a teddy bear. How do we incentivize them?

Joseph Sublousky:

Incentivize them. You could say, "Do it," because we do that. We do that. I mean, when it comes down to it, we get to the incentivizing way of just do it, but there's a better approach to it as well. Today, when you want to move into a... Again, I'm going to take one minute to talk. But when we want to tell people to move to a cloud architecture, we don't understand that... We don't tell them the other part of that, which is, "Keep doing what you're doing. I funded you to do what you're doing, so keep doing that. But by the way, go find additional funds, additional resources, additional expertise, additional talent, and move." And then operate it a period of time where you've got to keep both up and running for some semblance of a time before you're assured that cloud architecture's going to support you. I think that there's an opportunity where the services can look to earmark or do some investments to get that data to the cloud to reduce vulnerabilities that exist in existing legacy systems today.

But I don't think it's going to happen if you're asking the match comm A-6s, the NAF A-6s, to take it... "Go ask for an unfunded budget in order to move your architecture." I would venture to say that there's... I don't want to be so pejorative to think that it is this, but I would say that if I were to express the benefits of cloud over the benefits of architectures living in a 19-inch rack, that there would be very few people that would say, "No, I want to stay here." Now. There are some occasions where you have to stay there, but the benefits once you get into a cloud architecture with the reach, the capabilities, and then the security pieces behind it, what we've seen an industry, from a Cloud One perspective, primarily, the industry is moving into a cloud architecture for security reasons, because I can control the access to it, but more importantly, I have a configured environment that I can actually keep people in.

Col. Frederick "Trey" Coleman:

Nice. Lance.

Lance Spencer:

I think building on that, a couple thoughts. One is empowerment and having a solution available that does meet their interoperational needs and to allow that to happen. We reflected back on Ramstein and we did a lot of stuff people said, "You can't do that." But when things are happening, you can do a lot, but we can't wait for that. I think there's a workforce issue as well, and maybe a revisiting of roles. Companies like us up here on stage bring great things to the fight. What do we want our Airmen and Guardians doing?

Do we want them building servers under desks or solutions like that because they've got a need, and they're very creative and they know a lot of things, but it becomes a solution under the desk? Or do we want them doing more cyber kind of missions and things like that? I think that we need to think through how do we realign the workforce so that they're doing meaningful things to themselves that they feel is bringing the right contribution to the mission, and then how do we migrate what they had been doing

under their desktop to companies like us so that you can get scalable standards-based solutions that talk together?

Col. Frederick "Trey" Coleman:

Thanks. Gentlemen, we've reached a couple minutes left. I'd like to just give you the opportunity for some closing comments. Chad.

Chad Haferbier:

Yeah. We talked a lot. You started off with we're talking about battle management at the tactical level, and then we immediately fell back into operational. One thing that I really want to make sure we understand is that there's never going to be a homogeneous compute environment. Cloud One's not going to be on B-21. Sorry. But there will be operative advantages to connect to those operational C2 nodes and to have that data extraction for an operational C2 application in a cloud. Heterogeneous ecosystems for compute and how we communicate are going to be forever, just like ABMS, as you mentioned, will be forever. We need to make sure that we understand how do we drive advantages to the edge, to bare metal, as well as seize those advantages at operational level from that data extraction and redistribution and that decision layer?

My comments are really focused on, we want to work with industry, we want to work with all of you. We know it's going to be hard, we know it's going to be heterogeneous environment, but I think there's tons of advantages for our war fighters. That is the national opportunity space. We've fallen away from our soul platform technological advantage, especially with China, but there is advantage in our ability to collaborate and seize those synergies from all domain JADC2.

Col. Frederick "Trey" Coleman:

Yeah. I appreciate your point that we started talking about battle management and the kill chain and we're talking about data centers. We just got to keep reminding ourselves, I'm guilty of it, is anybody else? Data is not C2, but you need some kind of data. You need some kind of communications. But C2 can take the form of... It's taking the form of smoke, drums, flags, and today, it's taking the form of algorithms. Lance.

Lance Spencer:

Yeah. I've got to think that it's probably just the job jar of trying to breathe this to life is fairly overwhelming. I'm sure there's all kinds of people knocking at all kinds of doors saying, "Hey, take a look at what I've got. Take a look at me," and sorting through that. Separating the wheat from the chaff, I'm sure, is a challenge. I remember being in uniform, coming to events like this, you don't get a moment of peace. Actually I'm finding now in the role I'm in, a lot of the companies that are talking to the Air Force and Space Force are our suppliers also. I'm actually doing more industry meetings at these things now than I am doing government facing meetings, which has been enlightening.

But I think that a few things like the myth I mentioned that the DOD can't use commercial. You're using a ton of commercial, you're just not doing it the right way. How do we work through the understandings and awareness of how to exploit and take advantage of that, I think, is really important. Working through and how do we develop that trust and that collaborative environment. I think exercises are one of the ways to do that. Call us, we'll come participate in the war game. Let's figure out how to come together as a community and do that, because there's a lot of roles to be played and I think there's the right people to play. We just got to sort that out.

Col. Frederick "Trey" Coleman:

Thanks, Lance. Joe.

Joseph Sublousky:

Thanks again for coming, and talking, and allowing us to see the light, I guess I'd say, because I can't see anything else. SAIC is working towards, I would tell you, again, it sounds cliché, but it's enabling decision dominance at the contested edge because it covers those guiding principles for ABMS. We are working hard to make that happen. We're doing it in a number of areas, whether it's a digital infrastructure, consortium membership, whether it's cloud-based command and control for customer number one, NORAD NORTHCOM, or whether it's modernizing the Air Operations Center, all of which SAIC is intimately involved in. If not the prime, we concerted efforts in doing work there. But there's synergies around that.

I'll share with you, my intro was I'm an atypical communicator. I met an individual here that was a three Delta, which is an enlisted communicator who then became a 17 Delta cyber officer who is now an ABM, which I believe, I've listened in a couple of these symposiums and conferences, that it's going to take a different person in the future in order to operate in the battle spaces and the tactical areas that we're going to operate in the future. We got to start building those. Industry is trying to build them as fast as possible to provide the capabilities, and SAIC is working those capabilities to support the architecture. Data, cloud, edge, and transport.

Col. Frederick "Trey" Coleman:

Thanks, Joe. Thanks to each of you guys, and your companies, and everybody in this room for getting after this, for trying to solve these really hard problems, and deliver operationally relevant ABMS and command and control. Thanks for being here.