Brig. Gen. Luke C. G. Cropsey:

All right, good afternoon. I'm actually reminded of a Colin Powell quote where he said something to the effect that, "If people aren't following you for your leadership, they should at least follow you out of curiosity for what you're going to do next." Here we are. So I actually have the benefit of leading off a number of ABMS-specific DAF Battle Network specific topics that are coming up here over the next really day and a half. If you looked at your schedule, at least the original ones that you had, I can't count for the times now, but at least the topics, we've got five different sessions that are related in some form or capacity specifically to ABMS, and where we're going with the DAF Battle Network.

So just anecdotally, if you show up to things like Moving Target, Kill Chains, et cetera, et cetera, those teams could also not figure out how to get through their topics without having a conversation on C2. So it's everywhere. C2's everywhere. Show up somewhere and C2 will come find you, and that's a good thing because we're collectively figuring this thing out as a team, collective team, and I have up on stage with me three individuals representing three different companies that are all directly engaged with my team on the PEO side of this actually trying to get capability delivered. So we're going to do something a little different today because I'm going to ask them basically to comment on where we're getting it right and where maybe we need to think about changing the way that we engage on a few things based on their direct personal experiences working the problem. So this isn't going to be an abstract conversation, we're going to have a conversation about the actual practical details around how we get after this thing that we're calling the DAF Battle Network.

So let me tell you who we got. So I've got Tyler VanSant here from Lockheed Martin, goes by Steely. I have Elaine Bitonti who is from Collins Aerospace, and I also have Joe Sublousky from SAIC. Now, like I said, all three of them are doing engagements directly with us on different aspects of the C2 problem, and so what I've asked each of them to do is just kind of start out, give you a quick rundown of where they sit in their portfolio and their engagement with us, and then we'll get right into it. So Steely, over to you.

Tyler VanSant:

All right. Thanks, sir. Thanks for the opportunity to have me represent Lockheed Martin on this panel. So where we play in the space with the ABMS or C3BM program office is we're on contracts with the ABMS, more specifically distributed battle management node, more specifically than that, the Tactical Operations Center-Light. So on contract to deliver 14 prototype kits, we started with an Increment 0. We've now are going to deliver Increment 1 to the 729th ACS and 726 ACS, also the 752nd OSS next month. We've exercised the Tactical Operations Center-Light kits up at Northern Edge TAC-1 and TAC-2, plan on going out to PC next. So we've used it in the field, we have great partners on the government side and I think we learn the most when we're in the field with the capability on certainly size, weight, and power requirements. We're not a part of the DI Consortium, but we certainly subscribe to it and take things from it. We also were just notified selection for award of airbase air defense, and it kind of folds in a lot of the TOC-Light software underpinnings.

Brig. Gen. Luke C. G. Cropsey:

Awesome. Elaine.

Elaine Bitonti:

Good afternoon. Thanks for the opportunity to be here. My name is Elaine Bitonti. I'm from Collin Aerospace. I run our Connected Battlespace and Emerging Capabilities portfolio and we really look at how do we pull together capabilities across C3BM. So Collins Aerospace, we are one of the contract

holders on the ABMS DI Consortium. We also are a contract holder on the Common Tactical Edge Node Consortium, which is looking more at the networking part of the equation. And so my focus is really in the intersection of C2 and communications, really on C3BM, how does that affect the war fighter, how does that affect the system of system problem that we're looking to solve, and then how do we go test and experiment on that in activities like Valiant Shield Northern Edge project convergence? So we're very focused on not only developing the capabilities on Program of Record, but also testing them early and using that to inform our IRAD and our eventual delivery to the customer.

Brig. Gen. Luke C. G. Cropsey:

Great. Awesome. Joe.

Joe Sublousky:

Hey, sir. Joe Sublousky. Thanks for having us here for SASC. Certainly excited to be at AFA. Working with you, sir, we're working a lot of different areas. We're on the consortium for Advanced Battle Management Systems Digital Infrastructure. So driving the architecture, it's going to deliver the infrastructure for the future of air operations and beyond. We're also working cloud-based command and control with you. That's an area where we're working for NORAD NORTHCOM and we're driving the discussion around how do you build an architecture and then basically build the capabilities and support of that architecture, and bring them in at speed and scale in a cloud architecture to do command and control. So that's another area we're working in.

Air operation centers obviously fall within that, maybe not within the ABMS portfolio, but certainly it plays a part within the AOC. We're the prime for the sustainment and then also some modernization with AOC, trying to move it towards a cloud architecture as well, working with the airbase air defense piece that we're working with you as well. But I would just say that from an AVMS perspective, SAIC is focused on an enterprise approach. It's really the portfolio approach that brings capabilities to your needs, and so we're not building a one-and-done solution, we're building an architecture to support the overall needs of the Air Force.

Brig. Gen. Luke C. G. Cropsey:

Okay. All right. So now you have some context. So let's peel the onion back here on this a little bit. Elaine, I'll start with you. You've had some direct experience over the last few months with intelligent gateway, flying that in a number of different exercises, different venues. Can you comment and provide some perspective around how well you think we're leveraging those experimentation venues and then moving that into something other than pretty charts and operation?

Elaine Bitonti:

Yeah, sure. I'd be happy to comment on that. So as General Cropsey mentioned, over the past two years, specifically in my portfolio, we have a focus on large force exercises and taking our technology there to really, in this case, put it in the air and see how it works for the war fighter. So I think from a how is the DOD leveraging exercises, there's been really three areas of success. One is really seeing how the technology is or is not operationally relevant, and we've gotten some very great feedback. We've had real-time examples of how we can change things or make them different to close operational gaps, and I think it's also allowed the DOD customer to see is there technology that is ready now that can help me make incremental progress towards closing our gap. So I think those have been successes.

We've also seen success when we take things to these exercises, many of which have joint components. We may have taken a technology or a capability there to solve one specific problem or operational gap,

but we have seen a lot of success when other commanders see that concept of operations. They see, "I can apply this technology with small modifications to my problem set too," and so I think that helps us go faster as an industry government team. I think the area where we have seen struggle is when we have taken things to exercises, it's been clearly shown it's operationally relevant, it's been shown that the technology is ready, it's at a TRL level of six or better to transition. I think the acquisition system has still struggled to receive those things that haven't come up through the traditional JCIDS process. And so it's being asked to go faster to do things differently, but the acquisition system is not yet ready to accept those differences and move out on them, and I think that's costing us as a joint team time and something where we need to continue to focus together.

Brig. Gen. Luke C. G. Cropsey:

Yeah. No, great feedback and I think that's something we're going to continue to poke at as we're moving forward and collectively how do we get inside of the palm the funding cycle, the requirements process so that we're taking the things that are coming out of the knowledge that's gained from these environments and these exercises that we're doing and then direct injecting them straight into the pipeline for getting capability out quickly. So let me pivot over to you, Steely, with regards to that aspect of it. So you're working a number of things from the digital infrastructure standpoint. You mentioned the TOC-L, you mentioned where you've shown up with some of that capability. Walk through from your perspective what you've learned with regards to that work, the relationship with the government, and maybe in the broader context, the commercial aspects that you're also engaging with as you're building that capability out.

Tyler VanSant:

Yeah, sure. Thanks for that. So we started with prototype software just a short time ago and we're already on our fourth instantiation of what that would look like and we actually have that on display down in the booth. So on contract to deliver Increment 1 kits, like I said. I actually see our program major back there. So how are you, sir? So we just had a PMR last week and we have a great relationship with our customer. Very open. They tell us when our stuff's in the street and we tell them that maybe the rapid requirements document is a little bit too big to be quite as agile as you hope it would be.

So with that, when you say, "I need all the things all the time," just realize that there's implications with that from a size, weight and power perspective, and there's certainly technology out there that can offer the same capability that you would need at the edge in a smaller form factor. So at Lockheed Martin, we certainly are very good at integrating different industry partners, whether it be MITRE's Edge Connect, we use Dell XR4000s. We're certainly radio agnostic, so bring your best of breed. And that's really what allows us to be truly open mission systems up and to the point that we protect our secret sauce. We still have to protect our intellectual property, but we also want to make sure that we deliver the most capability to the war fighter where it matters, and we cannot do that as one big exquisite Lockheed solution.

So we're the integrators and we integrate it well, and the one thing that differs from other companies I think is that we have access to data from fifth gen platforms. We're able to harness that data, strip it down to the proper levels and then promulgate that across the force. But I will tell you, and as we talked before, sir, it's difficult when you talk about this UCI standard and we have different advanced tactical data links, it's not a one-for-one swap. And how do we go out and solve the hard challenge of saying, "Okay, one, I need to trust the data that there's not going to be an ID mismatch and we're all talking the same language."

Brig. Gen. Luke C. G. Cropsey:

Right. Check. Joe, let's flip over to you and let's talk maybe software. You're obviously in a similar integrating role on the cloud-based command and control effort that we're running. What are your observations for what you think the team's doing very well and where do you think we might have some room for further improvement? And I'd also like your opinion on whether or not you think the current approach is scalable beyond what we're doing on CBC2.

Joe Sublousky:

Thanks, sir. What are we doing? Well, we're going fast. I mean, that's important and at scale, I would say, because we have moved into a cloud architecture and we built the architecture first, and then what I would tell you is that SAIC's support in that effort with your organization is definitely leaning into your support for us to go fast, right? Your chief engineer is not going to fail, I can guarantee you that. He is an individual that drives change and we absolutely can bring to bear all of the power that SAIC has as far as the history that we have been supporting the Air Force for a number of years, 30-plus years.

What I would tell you we're doing well in CBC2 is bringing on capability providers and not integrating them after they come on. So as we build the architecture and the infrastructure to support CBC2, those capability providers, we go out and talk to the needs of the Air Force and then figure out how do we bring the capability providers in to build to that architecture. Once we get past that stage, it is a matter of how fast can we get them integrated into the solutions. So what we've seen in cloud-based command and control so far is from contract award to where we delivered an MVP, a minimum viable product, within nine months, and we're going to be at IOC at one of the air defense sectors within 12, which is... That's two authorizations to operate as well as an environment we created to support the Canadians in that effort as well.

So I think what we're doing well is we're working well together and that support is critical to enable SAIC to go fast with you. Where we could do better, more iterations on your thoughts. You give us a lot of your thoughts and your team gives us a lot of your thoughts, but throw the lawn dart farther for us, and if you throw that lawn dart farther for us, we're going to be able to move faster with that as well. So I don't think there's any challenges that we're having today. I think we're doing very well working together with your team, and that cloud piece is critical to the future of what we're going to succeed in. What we're getting after next is going to be the data piece, which is we're already working hard on that. The data, getting access to the data is one thing, but being able to share it is another, and we have solutions in place that can help us do that faster too.

Brig. Gen. Luke C. G. Cropsey:

Check. So Joe, you mentioned the fact that we're working obviously very closely with Canadians on what we're doing in that effort. In order to do a number of those things, we ran over a number of major policy hurdles that we had to go figure out how to solve, and every single one of you has examples in your respective portfolios for where in the particulars of what we're trying to get done for each of these different instances of capability that you're providing, we're running kind of smack into some of these roadblocks. Just kind of across the board here, maybe just take a couple of minutes each and maybe just highlight where you think the biggest policy hurdles are that we're hitting right now with regards to how we want to try to do the future of C2, and any recommendations you might have on how we might want to navigate around that, or through it, or over it, or...

Tyler VanSant:

Yes, sir. We've definitely gotten a lot of interest from the international crowd that's here on what exactly is this talk thing you speak of. So right now it's secret [inaudible 00:15:22], and I think that's because we're bringing in all this exquisite targeting data from sources that even inside the department aren't used to. You think about C2 today, a traditional command and control platform is not even allowed into the fighter to fighter net and that's a US-only network. So how do we now take all these exquisite targeting things, protect them certainly to where you wouldn't know where they came from, but then release that not only to Five Eyes, but then to outside of FVEY, and we know that we're going to fight a coalition war.

So I really think it starts with SAF/IA. Colonel Briggs up there, Booster Briggs, and bend his ear a little bit on where he sees the biggest hurdles to how we get this policy first out to Five Eyes and then past that, because I will tell you in the air control squadrons, you have co-managers, they're Canadians. So how are we going to crack that nut with them getting their Tactical Operations Center-Light kits prototypes and moving forward with that? So I think we need to work... With inside, we certainly can protect the data, but now we just have to push the policy over the threshold

Brig. Gen. Luke C. G. Cropsey:
Check. Elaine.

Elaine Bitonti:

Yeah, I think that's actually a very interesting example. So to my point earlier about we have shown operationally relevant technology that can close gaps. So actually in Northern Edge, inside of the experiment we did, we have technology that we took from a Navy Program of Record that we use to solve that gap, and we used to push data from the high side networks to the coalition partners with the data they could see because a lot of the problem is the source of the data is many times what drives the classification level, and if you can abstract the source of the data, the coalition partners can still have much of that data. There's technology that exists today inside the joint force and a programs of record that can be applied to solve that problem now. We showed it at Northern Edge, we showed it in the Navy. How do we quickly get that capability ingested over here to the problem described in TOC-L?

So I think one thing is understanding what are the technology gaps and where can we take from other places to solve problems here. That's an awareness issue. And I think again, once we identify that there is something relevant, how do we speed it quickly into what is Program of Record if it hadn't been initially envisioned to be there? I think the second thing is from a policy perspective, specifically from a communications aspect, when you want to set up different networks to communicate with coalition partners, multiple different networks, US-only networks, FVEY networks, NATO networks, the rule sets to allow the different communication between these networks have to be set up usually one at a time, pre-approved.

This is a very time-consuming process, and so I think as we look at policy decisions that can really speed our ability to interoperate with coalition partners, we need to look at those type of policies for the rule sets, particularly on the network. Because you and I talked about, sir, C2 is very important, it's critical, but if you can't communicate your decisions, you have no business doing C2. So we need to look at the rule sets, not just in the C2 element, but also in the network and communication element so that we can, I would say, cover down on those gaps, and I think those are things that can be addressed. It requires a change to our typical process.

Brig. Gen. Luke C. G. Cropsey:
Check. Joe, any thoughts?

Joe Sublousky:

Sir, lots of thoughts, sir. All right. I think I would say your requirement for specificity is critical to get to the policy decisions that have to be made. It cannot be a one over the world, kind of I need blanket policy. There are no such things as blanket policy. There is no single approach that will solve a secret releasable environment. That would be probably number one is be specific. If we're going to go talk about policy, be specific. I would say number two would be around the data piece. We're moving from a network-centric environment to a data-centric environment. There's education that's needed in there even at the levels of the process policy deciders, and so we have to educate them.

So I know SAIC is working on that very hard with your team and as well as the ISRMC and the DSAWG, et cetera, is you have to educate on hardware in the loop slows things down sometimes, but it doesn't always have to be hardware in the loop if we can kind of educate you on how we're actually doing that in a different fashion, and when we move into cloud capabilities and cloud-orchestrated environments, there are opportunities for us to move fast, but you can't go faster than the education is. So trying to talk people into it, that doesn't happen. When we get into conflicts, as I've seen before, I know we do waivers, "It's got to happen, waiver it. We're going to move." We should be working those right now, and we are, and I know that SEIC has solutions in place that we're trying to educate on before we just go out and say we need a blanket approval. But I would just say that that specificity bar none helped us get through that CBC2 struggle that we had in the beginning to get to where we're at today with it.

Brig. Gen. Luke C. G. Cropsey:

Yeah, check. So I'm going to tie together where you're going here on the data-centric view of life and then the comment you made on partners. So from this, and I'm doubling down here, feel free to take this wherever you want to, but where and how do we get to an environment, from your perspectives and what you've seen to this point, where we move off of I'll say the network-centric view of life, which provides a fairly high barrier of entry when you're trying to pull new participants into your network and into your C2 systems and over onto a data-centric view of life where you're now network largely agnostic and it's a role-based kind of a thing, and you have the ability now to be very specific for each persona that's on the network and what they can see? Where and what do you think we need to do to energize that conversation and do you agree that moving from the one to the other is a prerequisite, or do you think there are other ways that we could potentially get around some of this constraint that we have with the current approach?

Tyler VanSant:

Can we get rid of the DoDIN and go to a Netflix model? No, look, I've lived the life of having three different tokens to get on one machine and you got to go on this computer, and I think that whether it's a card access or login access, that whatever your level of specificity and allowability on that system is, that's the highest the system can go. We have smart technology to do that and I think we could do that intra TOC, if you will.

Because if we're going to be in these coalition countries, we should probably have our coalition partners with us. They're going to know the ins and outs of what needs to be done. So I think that if Netflix can protect its movies, and I know it's a very simplistic sort of comparison there, but if they're able to protect their intellectual property and movies, I think that we certainly have shown at Lockheed, we have the technology to protect that, but will the policy allow us to do it? And I go back to Joe's point, it just has to be very specific from your office and that's what we would be looking for is that specificity to go out and solve that problem.

Brig. Gen. Luke C. G. Cropsey:

Check. Joe, do you want to tap down on that anymore?

Joe Sublousky:

I've build network-centric approaches before and they end up with a lot of monitors and a lot of computers and a lot of capability that I can't fit the keyboards on your desk. What I would tell you is I don't think we're ever going to go from a net-centric to a purely data-centric approach. There's going to be some kind of an understanding that there are times when you need a network to do things and there are times when you don't need a network to do things. At the data centricity piece, it's really we have capabilities to tag at the element level today and then apply access-based controls for that access to the data element, and it doesn't have to be an all or none, it doesn't have to be this paragraph is a certain classification, therefore can't share any of it.

That I think is important, and again, it goes back to what we need to be doing with all of the data, not just data at respite, but data in motion as well. There are capabilities out there that exist today. SAIC is working very, very hard at making sure that we can apply those to data in motion as well as data at rest because the retrieval piece is equally as important when you're got to go back and re-look at what's happened in the past. So I think element level, data attribute level, those are important to move to a data-centric environment for the future of the Air Force.

Brig. Gen. Luke C. G. Cropsey:

Elaine, you mentioned the fact that you were able to go snag a CDS that was already out there and available and make it work, and building off of that conversation, do you think there are viable ways of getting to, I'll say, interim solutions for specific use cases that doesn't require us to figure out how to get rid of the DoDIN and go to the worldwide web on this?

Elaine Bitonti:

Yeah, I do think there are, and that was going to be my comment is there is a future fleet that may be more data-centric, but I think the thing that's important to remember is we also have a large amount of our mass and a legacy fleet that is going to probably have the systems that they have, and we need to make them as relevant as possible. There is technology today and I think the timeframe to do it. When we did it at Northern Edge using the CDS from the Navy Program of Record, TAC-1, we were able to communicate with Five Eyes. We were able to modify that to communicate in TAC-2 with non-Five Eyes' additional partners in a month, and most of that was policy time to get rule set approved. It wasn't technical time. So there are solutions today I think we can move pretty quickly and offer an incremental progress for the legacy fleet while moving maybe more data-centric for the future fleet. The majority of the time though is, again, in rigging out the policy, not the technical hurdles.

Brig. Gen. Luke C. G. Cropsey:

Yeah. So I think what I'm hearing collectively we need to be specific about what we're trying to get done because doing it in the abstract doesn't work. We need to be specific from the standpoint of it's not everybody all the time everywhere. So if you want to control costs and complexity, you need to be very specific and targeted about what you're trying to do, and then there are viable ways of getting those things done in the here and the now, and if we can kick the not invented here syndrome and actually go rip stuff off from the Navy, why wouldn't we? I mean, that's what I heard. Is that... Okay. So I think as we're kind of moving the conversation forward inside of this, there's a lot of conversation around IP.

You mentioned it upfront, there's a lot of concerns around, "Hey, if I go to this data-centric view of life, if I push modular and open, I'm going to expose myself to the world here and I'm going to lose all my ability to leverage the intellectual capital that I've built around the product that I'm selling or write the algorithms that I've built, whatever it is." Can you collectively, maybe just a perspective from each of you around how your specific companies view the IP challenges that come to play out when you're trying to have these kinds of conversations and you're trying to build these kind of systems and you've got guys like me banging on you for, "Hey, why are you locking up the data here? I want more, I want more, I want more."?

Tyler VanSant:

Yeah, sir. As I mentioned before, we recognize at Lockheed Martin that open systems isn't just a tagline. We truly have to strive to get to that and we have, all the way up to the software service level. We want to offer you a software service level and we're not going to have all the solutions and that's to allow the best in breed to come into the show. So I'll use the TOC-L as an example. We use the Raytheon Solipsys TDF frontend. They were the best in breed. They're what's used in the field today. So an air battle manager sits down and already holds a form eight, they're current and qualified, checked out. So the capability gets to the squadron, they're able to go day one.

Now, I say that to say that we integrate all these disparate companies together, but we still, like I said, hold that intellectual property of what makes that all work together, and we're happy to do that because it provides the best in breed capability to the war fighter. So with our government partners, we just need to keep working back and forth. And at some point, sir, as you said, you're going to bang on the door and we're just going to throw another lockup because we have to protect what we have to protect, but the ultimate goal is to deliver the best product to make the war fighter more lethal and survivable.

Brig. Gen. Luke C. G. Cropsey:
Check.

Elaine Bitonti:

Yeah, I think from Collins Aerospace's perspective... So I don't know if many of you in here know, Collins Aerospace is 75% commercial company. So one of the things that we do is take a lot of the core nuggets of technology developed on our commercial side and then in the business unit, where I reside, we militarize those things, and so we have a lot of experience on, I'll say open systems from the commercial side. We were some of the first people on the ARINC 661 standard for open flight decks. We know how to do that.

I think the bigger challenge we see is not around protecting the IP, it's around when we want to bring in commercial technology as a FAR Part 12 item into a larger system of systems that has military end use. Again, from a policy perspective, we see a real problem being able to do that and we see the government requesting data that normally would not be given on a commercial item, but I think we need to look at, again, specificity. What is the data you need to perform the mission? Do you really need this kernel of data, if it's open and we can integrate? And I think as we look to go faster, look to leverage things from the commercial side, the ability to have FAR Part 12 commercial items inside of FAR Part 15 contracts is something the DoD really needs to look at how they do that. We've seen a lot of delay in moving technology over because we couldn't agree on the contract type.

Brig. Gen. Luke C. G. Cropsey:

Yeah. Yeah, I think that's a great observation and I want to actually come back to the commercial piece to this as soon as we hear from Joe.

Joe Sublousky:

So open systems, right? SAIC is working on open systems dramatically with CBC2. I mean, the architecture approach and the infrastructure approach is allowing 15-plus capability providers to bring their capabilities in. I stayed in this hotel last night, but I'm not an engineer. So I use simple approaches, which is black box analogies. It's I need an input, I need an output. Within that black box, you can protect your IP, but these are the things that I need you to build into the architecture and the infrastructure. So I do think that you can protect your IP within an open system through modularity or any of those other aspects of digital engineering.

On the open source side, SAIC absolutely believes in open source. We've actually put our validation tool out for download and we put our MBSE model out for download that many other companies are using, and the reason behind open source is it enables us to have a common language and it enables us to work together and an enterprise approach and build platform approaches instead of product approaches that have to be integrated later. Yeah. I mean, you can get a fast start to digital engineering and MBSE by downloading the validation tool and the things that SAIC has put out in open source. It's a good thing, it just has its place when you want to get a community to come together.

Brig. Gen. Luke C. G. Cropsey:

So on the modularity piece, Joe, are we building the right kind of modularity in our systems so that you're comfortable that the black box is actually protecting your IP? I mean, when you kind of define the modularity, you define where you're going to expose the information at those interfaces and depending on who's defining how that modularity is set up, that may or may not actually do what you are looking for it to do from that IP perspective. So do you feel like you have enough voice in the way that that modularity is getting built into the system to be able to do that?

Joe Sublousky:

We're learning as we go, we're moving fast. I believe that from an SAIC perspective, we have not heard any pushback on IP when we're working in cloud-based command control or digital infrastructure or AOC or any of those other efforts that we're working within. So I think we're on a line where we're not crossing the line, but that doesn't mean that we might be there in the future when we start moving out at a little bit quicker pace and we bring more of a commercial viable capability into the architecture. To be determined, I guess I would say.

Brig. Gen. Luke C. G. Cropsey:
Okay. Steely, what's your perspective on the modularity piece?

Tyler VanSant:

Yeah, like you said, we bring in the commercial pieces for the TOC. I mean, it's like I said, for Increment 1, it's Dell XR4000s, because they were the best in breed and that's what the requirement document calls for. Like Joe said, we are moving fast and learning very quickly as the new RPDs come out, the requirements documents, things like that. There's a lot smaller form factors available, but there needs to be more specificity from the customer. And we work with a great partner in the PMO, but then you have different communities that say, "Well, I need it smaller," and then another community says, "Well, I need it bigger. I don't need all this software processing power. Is this just one big Lockheed Martin

exquisite capability?" Well, no, it's actually commercial off the shelf. These are all different commercial entities. And we haven't had any IP concerns to this point on the DBMN program.

Brig. Gen. Luke C. G. Cropsey:

Okay. Okay. Elaine, when you and I were talking previously, so I want open the commercial piece to this up and it's like maybe a lightning round here at the end of this. Do you think the way that we're currently doing design... So I'm not talking the policy side now, I'm talking the engineering side, so I'm going to bring the nerd herd full bore here on this one. Do we have the right design methodology on the government side for being able to take maximum use and leverage of the commercial capacity capabilities, scale, cost points? Somebody's building a million to something and I need three of them, and is the way that I'm actually going out and integrating those things leveraging that scale and that capacity?

Elaine Bitonti:

Yeah, I think what we typically see is the impediment to fully leveraging that scale and capacity is specific changes to commercial baseline that drive the inability to then leverage the scale, and I think what we need to do a better job around is having a discussion around why does the government think they need those changes, right?

I mean, I'll give a very simple example from displays where we're producing in the tens of thousands of displays for commercial aircraft and we would get a bezel change for the military. Well, that requires a mod to the line, a mod to everything, and if we could work especially upfront on future programs at looking at what is already in progress, what can be leveraged and do we really need those changes, are they necessary operationally, I think we could leverage a lot more of the scale. Because we see a lot of, "Well, it has to be this way because we have this unique requirement," but if you trace back the source of the requirement, what drove that? And if you trade off the benefit of the scale, would that really be the trade off the government would make? I think we don't have those conversations frequently enough.

Brig. Gen. Luke C. G. Cropsey:

Yeah. Okay. Joe, any thoughts on that front when it comes to re-spending things on your side?

Joe Sublousky:

From a commercial piece, I would say it's... I mean, from a CBC2 side, it's working perfect because as using SAIC to integrate those capabilities and we go out and talk about, "We're building a transformational C2 architecture in support of Air Force requirements," companies listen and they work with SAIC directly. One example is we had a small business that needed to bring a capability that was needed for CBC2, but it wasn't quite right and we worked directly with them and they were more willing to work directly with us to alter and change. Now, I understand on software it's probably a little easier than on hardware when you start changing bezels, but on the software side, that relationship between SAIC and the commercial sector is working very well in a number of areas that we're working with them on in support of your requirements.

So I think that relationship that says, "We need. You go figure out how to get it," we can actually start change agents, those things with the commercials, because commercial companies, they ultimately want to support. They want to work towards a transformational C2 architecture and if there's just slight changes or even minimal changes, there is IRAD dollars in there to do that on their part as well as SAIC's part and other companies' parts, I'm sure. So that's working, the relationship's working in my mind.

Brig. Gen. Luke C. G. Cropsey:

Okay.

Elaine Bitonti:

I think the distinction though between software and hardware is important, and while software is very germane to this discussion, a lot of this, especially when you put it at the edge, it goes on hardware and looking at the form factors that you need in the commonality. I mean, I can tell you we have proposals just the other week where we are responding to all of the primes for a future platform. Some are using 6U, some are using 3U. Even across the same platform, we have very differing approaches and that drives unique end items and I think that hurts us from taking advantage of some of the scale. So I think we need to keep that in mind as we go to deploy all these things to the tactical edge, there is hardware required and how are we going to want to leverage that commercial scale, not just on the software side, but the hardware side as well.

Brig. Gen. Luke C. G. Cropsey:

Yep. Okay. Awesome. So we've got just a couple minutes left. If you were to leave the audience with a takeaway when it comes to how or what we should be doing and thinking about pushing capability from a modernized RC2 kind of perspective, what would it be?

Tyler VanSant:

Yeah, thanks, sir. And once again, appreciate the opportunity to let me represent Lockheed Martin on the panel. But I would say from my perspective and what I do in the skunk works, we need to work... C2 is a hard problem and there are certainly different levels of C2. So I think if we work from the target back and we solve jus... You see the big OVs with all the lines that go across, let's just solve one of those lines, and we've done that. In different instances, you're going to gain credibility. We need to continue to listen to you, the customer, your office, what you want and deliver that, and I think on the Tactical Operations Center Program, we allow the commercial space to bring their best in breed, and that's really been beneficial to the war fighter to bring smaller form factors with better capabilities. So it's all about the war fighter, making them more lethal and more survivable.

Brig. Gen. Luke C. G. Cropsey:

Awesome. Elaine.

Elaine Bitonti:

Yeah, I would say what I would leave with is really the C2 problem is a problem that's also reliant on many other domains, and the intersection of those domains, hence the name of your PEO, I think, is really critical and that's where the focus needs to be. I think traditionally we've been focused on let's solve the C2 problem, let's solve a separate comms problem, but C2 derive things onto comms and then also at times vice versa. So I think the system of systems approach and looking at both of those together is really where we need to be focused going forward if we want to meet this speed at which we need to field these new capabilities.

Brig. Gen. Luke C. G. Cropsey:

Great. Thanks. Joe.

Joe Sublousky:

So I got 30 seconds, right? So cloud-enabled, platform-agnostic, engineer the architecture first and then enable decision advantage at the edge. Those are critical components that SAIC is trying to deliver to the United States Air Force with those capabilities we talked about before. It's absolutely critical. The systems of the system of approach is absolutely important because we have a lot of exquisite capability out there, we just got to make sure that we're building where it can actually bring to bear that capability on a problems that we're trying to address.

Brig. Gen. Luke C. G. Cropsey:

Awesome. Ladies, gentlemen, round of applause for our panel. Thank you.