

"Cyber Operations in Combat"

Brig. Gen. James Jaeger and Maj. Gen. Richard E. Webber

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Brig. Gen. Jaeger: Okay, this should be a great way to kind of move into the afternoon, moving out of some of the big sessions that we've done during the symposium and now kind of really getting down into the operational level of warfare. Many of you, hopefully, had the opportunity to hear Vince Cerf and get some perspective on how the internet originated. Certainly I don't think any of us need to be told how important it is to us today and hopefully some insight into where it's going.

Now we're going to take that and move directly into the Air Force and where the Air Force is going with cyber. Certainly a lot of visibility over the last two years, but we are now fortunate to have with us Major General Dick Webber, who is as Sandy just said, the new commander, the first Commander of 24th Air Force, to talk to us about where 24th Air Force, where AFCYBER is going, where it fits into the joint world and how we're going to make all of this work.

So, with that, I'd like to turn it over to General Webber for a few opening remarks. We'll start this as a guided discussion, and I'll cue up the first couple of questions and then as I see the itch rising from the floor, we'll open it up to questions from you all. Thank you.

Maj. Gen. Webber: Thank you very much.

I want to keep my comments short. I am struck by a few things. First of all, we've got Major General Brad [Hidehold] down front here. I can't do my mission without him. In fact, I asked Jim why wasn't he up here for the discussion. But he certainly, he certainly is mission essential for what we're about to embark on.

Number two. My change of command was on the 18th of August. When I left Washington, DC, with my wife and pets and towing a car behind the RV, I asked the guys, how many folks do I have in 24th Air Force? And the number was 28 real people permanently there. [Laughter].

I checked again and, in fact, I think I'm going to stop asking this question. [Laughter]. I asked last week, because last week was movers on Tuesday and then all the contractors that you have running through the house for the coms and the TV and all that kind of stuff. And I think the

number was 37, so we are still in this process of standing up.

We still have not stood up the Combat Com Wing. We are really still in the processes of getting our arms around this. I'll share my candid thoughts with you of the challenges we've faced, but there's much more to go here. So how's that for opening remarks?

Brig. Gen. Jaeger: Good. Well thank you, General Webber. You know, I think probably the first and obvious question is, now that 24th Air Force has been stood up, I know you're almost solo with that small staff, but what are your initial goals for the organization?

Maj. Gen. Webber: Okay, let me kind of step through it, and to me it's kind of a back-to-basics, it's a basic blocking and tackling kind of approach to this.

First of all, I have to stand up a CNAF, a Component Numbered Air Force that is going to be our first cyber presentation of forces, and so I'm going to be focused on that. Getting our processes right, getting our tasks right. Kind of intimately tied up with that is our Ops Center today is at Barksdale.

I go to visit that Ops Center for the first time on Wednesday. But I already have been told that it's kind of a com centric manager of switches so, as I move that to San Antonio, the basic things when you're standing up a warfighting capability, building a weapons system, you have to start off with a situational awareness. Do you have a common operational picture?

We probably don't have that picture in kind of the form you would want for something operational. We need to go back to basics, I think, in terms of configuration control of what we allow on the network, how we command and control.

For instance, if I have a patch that we need to get out quickly, how we do the basics of the command and control of sending those out.

So you're going to see really kind of a crawl, walk, run approach here as we start to get our arms around that mission area.

Brig. Gen. Jaeger: Good. Now one of the things you mentioned is that CNAF role. As I understand it, you've got a number of different hats that you're either wearing today or will be wearing. Can you describe those for us?

Maj. Gen. Webber: Today, two hats. Tomorrow, hopefully, a third hat.

The two that I have now are that I am the commander of a component command, so we have all of the Air Force capabilities needed to create a capability in this domain.

I am also, and this is a Title 10 responsibility that, if I understand it right, comes through the Secretary of the Air Force. I'm also the Commander of AFNETOPS, and so with that hat I can direct, you know, deploy this patch, get it in place; these are our techniques, tactics, and procedures.

The intent is that I also would be the service component to USCYBERCOM when that is set up, so that would be my third hat. Hopefully, that answers your questions.

Brig. Gen. Jaeger: One of the things that certainly came through clearly right from the standup ceremonies of 24th Air Force and certainly in our discussions today is the importance of teaming. That seems to involve teaming with multiple organizations and almost multiple dimensions. I know that that is very high on your priority list. Can you give us some insight?

Maj. Gen. Webber: Absolutely. And maybe a few vignettes might be useful here. Much like the space domain, the cyber domain is inherently born joint. It's inherently born interagency, and we ride on a commercial civilian backbone that we really don't control or own.

So from the very beginning, we have to be thinking joint and interagency. Absolutely no way to approach this than to keep that as your focus.

If I am defending the Air Force network and somebody pings me for some reason, if I reach out and try to start to figure out who was that, where were they, if it's in the continental United States, I'm right into law enforcement right off the bat. If it's outside of the United States, I'm into Title 50 and intelligence functions. So that's why you have to have such a close teaming with our interagency partners.

Brig. Gen. Jaeger: Good. I was fortunate to have lunch with Brigadier General A.J. Stewart from Air Force Recruiting, along with a number of commercial companies that are really doing business in this cyber arena ops site, and we were talking about recruiting and growing cyber talent, because industry is competing, I think, with the Air Force and competing with you for that very same cyber talent.

How do you see growing the cyber warriors that you're going to need? What kind of backgrounds? What kind of training?

Maj. Gen. Webber: Interesting that you would ask that question, because I've been able to visit two of my units so far. One was the schoolhouse at Hurlburt, and the second was an operation at, I'll just have to say an undisclosed location.

But without any briefing, so this is before they give me the unit briefing, at the operational squadron, I said, why don't we just go around the room and you tell me who you are, what your background is, and what specialty you come from.

These are extremely young folks, highly technical. They were all lieutenants or first-term Airmen. I think I had a staff sergeant, one staff sergeant and one tech sergeant. As they go around the room, they are obviously, as you would expect, communication background, but equal numbers of intel, equal numbers of engineers, equal numbers of acquisition, all of whom had a predisposition for this activity. You need all of these walks of life.

And so, to get to your question about how do you develop that cyber warrior, I think you're probably going to -- and I know that Air Force Space Command is considering a version of a cyber professional, just like they work a version of a space professional. But I think you're going to see that you have a foot planted firmly in the communications world and a foot planted firmly in the intelligence world, and you need to have folks that work, that kind of flow back and forth.

Today, although we're working this in our schoolhouse, there's an extensive what I would call apprenticeship in this training. So if I were to take somebody at the basic initial qualification level, right out of the schoolhouse, they're not combat ready for me yet. And they are going to take a period of time where they get comfortable and certified in their weapon system. And when that training is done, I as a commander, so this is a squadron commander or a flight commander, or a group commander, or a wing commander, they need payback.

If it took us let's say hypothetically 12-18 months to get this person to the point where we are now ready to let them do that operational mission on the console, I can't let them leave in six months because I spent so much investment to get them there. And so now we're already talking with our personnel folks and also working with the various stovepipes to say once you put 12-18 months of training into somebody, you probably need to get, I don't know, 18-24 months of payback. And wouldn't it be nice if we could also get, perhaps, a back-to-back assignment.

So if they started off in one of my wings, and I'll just pick one, the 67th Net Warfare Wing, in one of my squadrons and I go through this extensive apprenticeship and I get them to a certain level, wouldn't it be nice if they could be used maybe in Brad's organization or up at Fort Meade in the various things that they have up there? Or maybe they could start with him and transfer to us. And I think if you keep your mindset within about a two-tour perspective, you can probably do this with our various functional stovepipes, whether that's com, or intel, or the 61, 62, the engineering, or even the acquisition folks, and you can keep them at a point where they will still be able to have a promotable, identifiable career path.

To get to your bottom-line question, though, I do think we will be competing with industry. And like you saw in the early days of space, we will probably be in many ways their training ground, and we've been through that before and we understand how to deal with that.

Brig. Gen. Jaeger: Good. Thank you.

You mentioned Fort Meade a couple of times, and at almost the precise moment that you're trying to stand up and shape 24th Air Force, now suddenly the joint world is trying to create itself too. How do you see those relationships coming together?

Maj. Gen. Webber: It's going to take time. I think that what will be helpful is as we settle this out at the national level, which we quite frankly are still working our way through, General Alexander and his folks are now putting together -- we already have an OpCon relationship between JFCC Net Warfare and Joint Task Force, Global Network Ops, JTFGNO, and so they're already kind of operating as a team, and that will be the foundation that morphs into the new USCYBERCOM.

The plan is that 24th Air Force will be the Air Force component, the presenter of Air Force capabilities and forces to USCYBERCOM. But it's going to be a growing experience.

The only thing I can tell you right now that I am absolutely positive of is that when all of these things have their initial operational capability, which you'll probably start to see maybe sometime in the fall with a USCYBERCOM and a decision on the service components, I guarantee you that what we are at IOC is not what we are a year later or at our full operational capability or even five years after that. I see that this will rapidly spiral and we really --

I don't think we can really see where this is going to go right now.

Brig. Gen. Jaeger: One of the things that you've mentioned is that a lot of this is shaped -- it's born joint, it's born interagency, and certainly there are a lot of players there in defending the US cyberspace; DHS and the US-Cert and all of those organizations. But I guess one of the things that makes the Air Force and our Army, Navy, and Marine counterparts a bit different than that joint arena is the warfighting. How do we work cyber into our op plans and war plans?

Maj. Gen. Webber: Well let me kind of go back to my experience for six months in the Air Operations Center and doing exactly that kind of planning for the air component during the first six months of OEF. And then I was back for roughly the first three months of OIF on General Tommy Frank's staff, also doing information operations. On both of them, I did space and information operations. And information operations were probably 80-plus percent of what I did, rather than space.

If there is one lesson that I think we could all come away with, that is you need to build an integrated op. And I think that this will really resonate with folks in the audience who have a special operations background.

If you build me an operation and then you hand it to me and you say I want to have you spread some of that space stuff on it or some of that cyber stuff on it, it's just not going to work.

If you build that operation as an integrated op from the ground up, that uses air, land, space, maritime, and cyber capabilities that are mutually reinforcing, where you're putting sometimes two and three of these capabilities together to create the effect that you desire, then you're going to have the kind of operation that you really need to be driving to.

So build it from the ground up as an integrated operation. Again, my compliments to the folks in the special operations community, because I think they do that well. They really do get it. Build an integrated operation.

Brig. Gen. Jaeger: Thank you for those perspectives. I suspect that that has probably triggered a number of questions, and so I'd like to open it up if we could to questions from the floor.

I think in this room we can probably hear you just fine without a microphone, so if you'd just raise your hand -- Yes, please, in the back.

Question: [Inaudible] association. You mentioned continuing resources. Instead of [inaudible] those ITT folks, [inaudible] those folks, [inaudible]. Is that something that [inaudible]?

Maj. Gen. Webber: Absolutely. And I'm glad you raised that issue. I have already met with both of my ARC advisors, the Reserve advisor and the Air National Guard advisor for my initial meetings. I've had a very extensive briefing from the Air Force Reserve Command already.

And I do have several thoughts on this. We need to build capacity fairly substantially. I see the missions kind of bending into what I would national missions. Another one where I would call it kind of your service core competency mission that you do in support of a combatant commander. And so we have to build capacity in both sides of that.

With the limitations that we face on resources and what's going on with aircraft iron in our Air Force and our other weapon systems, I really think that that's going to be where we grow the quickest. I really, really -- that's going to be my absolute priority is to get at that.

What I learned in the space business, and I'll go back to the 50th Space Wing, which when I commanded it flew most of the Air Force satellite systems. What I found in that environment was that you didn't want to take a one-size-all cookie-cutter approach and say this is my template, and so this is how I'm going to approach my ARC relationship, because it just doesn't work.

The Reserve guys who back up our weather satellites, that squadron is 24/7 on a two-hour recall, and they beat it every time that no one needs help. They beat it and if they have an outage in their ops center, they pick it up at Shreever.

GPS OpsFor. They have a Reserve relationship. They decided that they wanted to train people for individual crew positions, and then they would roll those folks in when they could during the month and kept them essentially on a combat-ready footing, and they were just, you know, when Crew 52 came up, they were going to say, okay, I'll take the NAF payload position or the crew commander position, but they were kind of onesies and twosies; they didn't have formed crews.

The 7th Space Squadron, which backed up 1st Space Operations Squadron; they took a different approach. They are the folks that back then flew our ACTD, JCTD satellites that still had operational residual value. They did the launch and early orbit checkout of GPS satellites. They came in as an entire crew. And they took over the whole weekend.

In fact, in the middle of my operational readiness inspection, the IG stopped the inspection and said do you know that you have Reserve crews that are handling this launch and early checkout, and I said yes. And they had four or five GPS launches under their belt, and I will bet my wing on that crew.

The 148th Air National Guard of California. They fly today a portion of the MilStar Constellation. They do that 24/7. They have part of the globe, and the satellites that are in visibility, they fly it 24/7.

So you can see that these are templates that you adjust to the specifics of the weapon system and the capabilities of whether it's Guard or Reserve in that local area.

The 148th folks, they were heavy combat com units that were in the part of phasing down, so exactly the right folks to come in and do MILSATCOM. And they have picked up the entire constellation on at least two occasions when we had severe snow storms in Colorado and we couldn't relieve our crew force.

So if there's one message that I could leave, it's don't try to force a template. And this is absolutely the way that we need to move in terms of growing capacity.

Does that get at your question, Sir? Okay.

Brig. Gen. Jaeger: It sounds like General Webber's thought about that went a little bit. [Laughter].

Question: Sir, could you spend a few minutes talking about the roles envisioned between Air Force Space Command, General Kehler, General Warner, yourself and the acquisitions community on how those three entities sort of work together to make your mission run better?

Maj. Gen. Webber: Great question, and it's still being worked out. [Laughter]. I would view Air Force Space Command as the lead command for cyber in our Air Force. So when it comes to the organize, train, and equip responsibilities, they are the folks that put that together based on combatant commander requirements that are funneling

through me as the service component with my warfighting hat on.

When it straddles the IT world or starts to get into the DAA decision, then that responsibility is now transitioning to, General Kehler will be the Air Force DAA, the overall DAA; and General Warner's staff will be the folks that will do the staffing. But I make a recommendation on the acceptance of risk of putting this hardware or software onto our network.

So it's still being worked out. General Kehler's staff has the luxury that they're a whole two months ahead of me. [Laughter].

So all the organize, train, and equip responsibilities that are today being done by Air Combat Command, they still are carrying the heavy water. They still have most of the faces.

The cyber provisional temporary faces have all been disbanded and 24th is starting to grow. We're all the way up to maybe 40 today. I don't know.

But since we're a couple months ahead on the Air Force Space Command side, they have now the slots, and that first tranche of faces are starting to arrive. But they're going to have to. You know, I view this as kind of a lead sled dog thing where we're all pulling on the harness, but right now ACC has the preponderance of the capability and the experience. They've been doing this for decades.

And then when Space gets the bodies there, gets the talent, gets up to speed, I mean they're both still pulling, but then Space will be in the lead.

So does that get at your question in terms of organize, train, equip, and then the requirements?

And then, I plan to be with ESC, I plan to be a demanding customer. Whether it's how we operate, how we command and control, how we create a common operational picture, how we defend.

And I think we probably need to make sure, and I know we know how to do this, but in this business I'm not so sure that you -- and there's never an all-or-nothing thing here, but I'm not so sure that you want to have everything as the massive lengthy acquisitions.

There's a piece of this that has to spiral. There's a piece of this where I may need -- you know, working with Brad's folks -- I may need to develop a patch, and I have to do that in hours or days. I can't do this in years. Just

like you see today in the IT community. So I think spiral development and some agility in those acquisition -- whatever those acquisition vehicles are, I've got to probably do a little bit of both.

Now when you're developing the backbone for your command and control system, that's a big weapon system acquisition that goes through normal channels.

Does that get at your question, Sir?

Question: Yes.

Question: You mentioned earlier about cyber [inaudible] inherently joint and inherently interagency. I was wondering if there's any talk and if there have been if you care to offer your opinion on it, [inaudible].

Maj. Gen. Webber: We have -- I'm so new that I don't have the full picture, but you would be surprised in how many places we have done exactly that. When I went, and I was first getting my exposure to it when I was in the reception line after my change of command on the 18th of August, these folks had come in; I'm the liaison from X, I'm the liaison from Y, and we do the same thing.

So I think that is a very good idea, and when you look at, for instance, the places where we touched, the touch points, you really have to have those kinds of relationships so that you have the proper authorities and the proper capabilities and the proper training and the proper relationships to be able to do the things that we're going to need to do.

Question: General Webber, [inaudible] definition of IO, offensive cyber weapons, for instance directed energy, falls under the 24th purview?

Maj. Gen. Webber: I don't think the Department has really made all the decisions yet.

There's a fairly new definition of cyber and what falls into cyber, and it's basically what we all know. You know, operate, maintain, exploit, and attack; the standard definitions. But when I saw that cyber definition come out approved, I asked the question, does this in any way impact the broader IO definition? And I have not heard and I have not seen any indication that that broader umbrella has changed.

My mission statement though, is very specific towards the cyber responsibilities. So there is nothing that I'm

aware of that would get me into the other weapon systems that would come under the broad definition of IO.

Does that answer your question?

Question: Yes, Sir.

Question: Can you share your thoughts on how we're going to balance the integration that you talked about and so forth with the compartmentalization of our [inaudible] professional [inaudible] about 13 years, and [inaudible] Fort Meade and through CENTCOM [inaudible] the capabilities that we've had to bring to the fight because that has to filter down to [inaudible] technologies. So can you share a little bit about how we're going to bridge that gap? [Inaudible] the professionals [inaudible] inherently [inaudible].

Brig. Gen. Jaeger: That's a question that I think is better focused for General Kehler and his Air Force Space Command folks as they start to chew on this cyber professional. But what I was briefed on last week, they are looking at a complete change to the schoolhouse at Kiesler for the com folks that changes kind of fundamentally how we train our officers and our enlisted corps. It will beef up the attention of the , but the intent is to not lose the radio and the data link stuff and the SATCOM stuff out there, so he has got to do both, but they need to probably beef up the cyber piece.

I have heard discussion of perhaps two shreds, AFSC shreds. You know, one would be kind of the basic shred that you start off your career with after you've come out of that schoolhouse. Then if you at anywhere in your background like you had described for you, picked up some of those very specific cyber skills, they would have a separate shred in the AFSC for that.

Another thing that I think is important, though, is the whole concept of this cyber professional. And I think their intent, General Kehler's intent, is to start to mirror kind of the intellectual approach that you see in the space professional concept. And you're probably aware of that from your time at Malmstrom.

General Kehler is accountable to develop a combat capability in the domain of space and now in the domain of cyber. In space, which is more evolved, and they've been wrestling with this for some time, but I think you'll see the parallels. But I'll talk about the space, because that has really already been decided. To create a combat capability in space, you need operators, you need maintainers, and you need intelligence. You need

acquisition, you need engineering. And you should probably see some parallels with cyber.

So when somebody comes into Space, even if they're a 1-4 on the officer side, Intel, or a 6-X in the engineering or acquisition, or a 3-3 now in the communications world, or a 1-3 in the space, when they come into that community they pick up a shred that identifies the capability, the background, the experience that they are picking up.

Now this does not undermine the functional area managers, the intelligence community, the communications community, the operations community. It doesn't undermine that, because by tracking that and carefully assessing each job, again, this is on the space side, they become a demanding customer and they say, I need an officer with this grade, with this education, with this kind of background, with experience in this, and then they go back, and if it's a 1-4, they say, okay, how do we grow that person. If it's a 3-3, a communicator, how do we grow that person?

So it allows you just the tracking mechanism and the analysis of how do I create a combat capability in this domain allows you to be a demanding customer. And I think General Kehler's vision is to do just that on the cyber side.

Does that answer your question?

Brig. Gen. Jaeger: I'd like to take the next one, if I could. [Laughter].

You triggered me with your discussion a couple of minutes ago about the role of 24th Air Force within AFSPACE. You've got a sister NAF in the 14th.

Where do you see the parallels between the two NAFs, and where might that -- what are the differences?

Maj. Gen. Webber: Okay. Actually right now for a short period of time, we have three numbered Air Forces and we've got 20 at the 14th and 24th. But the vision is for 20th to go to Global Strike Command.

There are some differences. The 14th Air Force commander owns several installations, so if you look at Vandenberg, Patrick, Buckley, Shreever, Peterson, I mean in all those locations the 14th Air Force Wing is actually the installation commander. So that means that his AFFOR functions, his commander of Air Force forces responsibilities are more significant than 24th Air Force.

This is going to be a unique experience for me, because at none of my locations does my wing own that base. So I'm a tenant everywhere I go. So for the first time, I don't need to worry about weeds and seeds. I can focus like a laser beam right on the mission so --

Brig. Gen. Jaeger: That might be a plus.

Maj. Gen. Webber: -- so I think that's a very important plus. So we're going to carefully look at our warfighting ops center responsibilities and the AFFOR responsibilities.

We've got the 14th Air Force list. I went to Hurlburt for their two-day course that they give to all of our component-numbered Air Force commanders. I've got their list, and my guys now are going through side by side and they're putting checks in the boxes for all of those AFFOR responsibilities to say, yes, no, yes, no.

And then I'm going to have to look at my staff and decide how we do that. Because again, I've got roughly 191 slots in the numbered Air Force for the headquarters and, if I remember right, roughly a couple of hundred, 200, in the ops center.

So we're going to have to put this together, but it's going to be much more heavily focused on current ops than most numbered Air Forces are.

Question: I wanted to ask some follow-ups about the cyber professional [inaudible]. Is there any discussion about having a weapon school course stand up that would be [inaudible]?

Maj. Gen. Webber: I have heard discussion already. No decision yet, obviously, but I have heard discussions.

They are already, you'll be happy to know, working cyber into the ME phase, the Mission Employment exercise at the graduate -- that's kind of the weapons school graduation phase. So I think it's coming but, again, no decision is made on that.

Brig. Gen. Jaeger: Okay, I think we've got time for at least one more. I think I saw a hand over here. No? Okay.

Well, first of all I'd like to take the opportunity to do a bit of a shameless plug for something that the Air Force Association is very, very proud of, and that's the Cyber Patriot, the National High School Cyber Defense Competition.

We talked a little bit about recruiting and training cyber professionals, and we're really pleased to see the AFA starting early with high school kids to capture hearts and minds and capture their attention on how important cyber defense is and how exciting it is, and the fact that they can have meaningful careers.

So I think General Webber and I are going to go out to the exhibit hall floor where there will be a demo of Cyber Patriot, and I certainly invite you all to join us.

In closing, I would really like to thank you, General Webber. I know you're not unpacked yet, and yet you took the time to come down here and give us your thoughts on some of the challenges that are facing 24th Air Force, and where you're going.

In some ways, I almost wish I was a young major again and I could volunteer, because what an exciting opportunity to shape the key dimension of Air Force warfighting.

So thank you very much.

Maj. Gen. Webber: Thank you very much.

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