

Ep. 53: Competition in cyberspace

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Welcome back to the "Sword and Shield podcast." I'm Colonel Rick Erredge, 960th Cyberspace Wing Commander. And today we have a very special guest, Lieutenant General Tim Haugh, 16th Air Force Commander. - Excited to be here, thanks for having me. - This is going to be really exciting for us, for our Airmen to hear from you. I pair it, some of your messaging with our staff and try to translate it for them. And it will be good hear them, having to hear from you directly. As we continue to build this I call this wing an experiment or the toddler. We're two and a half years in and we're still trying to figure out who we are and where we fit. And we're certainly trying to meet your expectations as a Wing and a force provider as well. - Well, at 16th Air Force, we're 18 months in. I'm not sure what that would put us on the maturation scale but really excited with the progress that our team has made, our staff and then all the wings, both within 16th Air Force and our component partners. - Yeah, we're really we're appreciative of you to spend your time. And I know you're busy, you got a lot of things pulling at you and it's exciting time in Cyber ISR and kind of the space realm and the IW business, for sure. So we're really excited to be part of that. And as things continue to grow and evolve. We want to be there for you and fill those gaps. We're where you need us. And I think you've done that really clearly with your requirements document, where we can fit. Can you talk a little bit about how that came come came about and where we are with filling your needs? - Well, I think it starts Rick with what was 16th Air Force asked to do by the Air Force. So if we roll back to October, 2019 when the secretary gave us the guidance that said integrate across ISR cyber, weather, targeting, Recce, electromagnetic spectrum, information operations, the idea was to create something that we now be able to leverage the power of information and really to be able to leverage the authorities that were unique to them, what became 16th Air Force, in a way that started to meet what our nation needs us to do. And I think that's the beginning, which is at that time, we were also still trying to figure out what the National Defense Strategy meant by competition. And I think in some parts of the department defense and the Air Force we're still struggling to understand what competition means. I think our Airmen are now providing facts of what it can be. And as we are getting smarter of how that integration is occurring, it's also now allowing us to really understand where do we need capacity? Do we need capacity today in terms of meeting the demand from the multiple combat commanders we're integrated with and also what it will look like if our nation needs us to search. And we've seen some examples where we think both of those are going to apply. - And those are really great. I love the examples cause it helps us understand, maybe that's something that we can

build towards or that something maybe that's not within our capability as a reserve and force, it doesn't make a good fit for us and helps us focus maybe on somewhere where you do need us. And I know you've been on the road quite a bit. You're going to be on the road a lot with the message. And I know you've talked about this, the competition what it means to the Air Force and help us define what that means. I've struggled as well, to try to get our Airmen on board with really wasn't mean and when you're an Airman down in the unit, as you know, doing an operator like you focus on this particular task and what you're doing and trying to bridge that gap between what you're doing to really what we really need has been a struggle for me, personally. - And I think it's natural like with what we're all a product of our experiences and what we're familiar with. And the idea for most of us is we grew up a red flag. And red flag was red and blue, meeting in conflict in the air over a battle space. And that's good that we're competent in that. And that's a really traditional view of air power and what our Air Force presents and what our Air Force has to present, to be able to meet the demands of every part of the joint force. But that's our frame that we start from, and that's not necessarily what the National Defense Strategy is asking us to do against the gray zone. - Sure. - And so what we're trying to now, is work on a narrative and you're, and whoever listens to this can you give us feedback as to whether it works. It's to draw a distinction between conventional deterrence, which is really military on military deterrence. We just watch this inaction in the real world over the last month, which was Russia threatening Ukraine on their border. And as a nation, and as a coalition, we had a traditional military response to new conventional deterrence. We saw you safely doing bomber task forces and dynamic force employment exercises. Use or moving capability around the theater, partnership with allies to show resolve in support of Ukraine and their territorial integrity. That's deterrence that we're all comfortable with and understand, and we all grew up with it, so it's natural. The idea, and we can see that, right. You can take a picture and you'd see a border and you can see military forces. We're comfortable with that concept. Now, think about what is the tangible example of a Chinese hacking unit, attacking our industry, which was first identified publicly in 2012. Taking intellectual property from an element of US industry inside our borders. That is an area that's identified in the National Security Strategy and the National Defense Strategy, that there's a role for the department of defense. What did we see in the 2016 and the 2018 elections? We saw another nation's military attempting to do disinformation directly against our population. Again, difficult to see, difficult to discern. And it's also not visible in front of you in the same way as that image. - Sure. - And so I think it's natural that we have to spend some time as military practitioners, thinking our way through. What does that mean for us as a department defense? And when we talk about examples, for us one of the very clarifying examples is election security. If you would've said to Lieutenant Erredge, at some point in your future, that you would be defending the elections integrity and the systems executing an election and that people voting, you would've said that that's not our job. We're the outside the borders force. We're not the inside. We're not focused on those things. Well, that changed following 2016 and Secretary of Defense saying election defense is a mission an enduring mission of the department of defense. That's an example of what we're talking about for the future. And it's one

that now it's very different. Instead of where USAFE was teamed with USR and UCOM and NATO we were partnered with Homeland Security who led, the nation's cyber security efforts. And FBI, leading the efforts for the nation, all malign influence. We were their teammate and we were in support of them. That's a different team doing different activities and things that are largely very difficult to communicate because there's no image that captures that. - Yeah, that's fascinating to me and super exciting, especially the way technology is moving nowadays and having these discussions with my own kids and my family and my parents. And then you got the spectrum generations and everybody trying to understand really what we talk about. You know, I've heard you say that, Gen. Nakasone thinks Air Force is got it right for right now we're headed the right direction and this concept of convergence. And what does that really mean? And we're converging effects like that, to me is something that I can get my hands around a little better, like thinking about how we use weather to influence or make decisions, and then put it all together. We really helped get after an operational, either connect or non-content effect is really exciting to me that like, there's tons of capacity and capability here that our reserve is and things that we haven't even figured out yet, that we can do to bring more impact to our nation's leaders. - Yeah and I think in there, Rick, the one area that I think everybody can get their arms around is how do you build a team. And what the Air Force has authorized us to do in general, Nakasone has authorized us to do as our joint force commander and the director of National Security's team, is now leveraged all the parts of our team. So, whereas one of the first things that we spent time in 16th Air Force was just a simple question. How many of our 178 active duty units, were working on Russian air defense? And took us a little while to figure that out. But we had over 20 units that working on behalf of someone, whether that be doing intelligence work or thinking about electronic warfare, whether it was our 16th team or Recce team, really thinking and planning about Russian air defense. And up until that moment, all of them were independently working, for an air component, a national agency, for 16th Air Force. And now for the first time we unified them in one enterprise under one command structure, but we're not changing where they're getting their task, but we can now create communities of interest, communities of practice, collaboration to attempt to make each one of them more effective in the mission they've been assigned. Whereas in the past, that would have been organized by a tech sergeant, captain finding their friend in one or two of those units. Now we can do it and we can organize it. And then I think once our Guard, Reserve teammates see that, it's much easier to fall in on a team. And I think now that we've built a lot of those teams and we've seen what it looks like in terms of their output. When you have a successful team it's also a lot easier to grow that team. And I'm really proud of what our headquarters have been able to do, to really unify it. And I think that's what you're hearing from Gen. Nakasone. Is that the ability to take COCOM and 10, translate it into integrated planning for multiple COCOMs, leveraging the authorities and the access to the data we have. It's really powerful in the opportunity and we're just scratching the surface. - Yeah, and again, I'm really excited for a number of reasons. I talked to some folks at DIU, that are working on a project, the spill of fine critical industry skills, make a quick connection with the requirement and be able to provide that person kind of on demand to a

provider. Like, say you have a really hard problem and you need somebody that works at some company in the cyber business. And we have a reservist there. Like, how do we access them? How do we get them in, get them interested and taken, you know, based on their job maybe it's a two-week, maybe it's a day, maybe it's a month. How do we make that connection for you to solve those really hard problems? And I think that's where we feel we can be of value to you. We're just not quite there yet. So I feel like we're in this bridging stage where we're kind of stumbling a little bit, to try to figure it out and then help not just you but all the force providers to joint team, with some really critical capability that specifically maybe around SCADA and industry systems that we have people that we don't even know yet, that are working out there in the business. - Yeah, and I think those are really good areas as we think about where is their unique skills that we normally don't train. I think we're gonna see some transitions in technology within the 688 Cyberspace Wing that are also gonna drive us in ways that we have to play catch up on the active duty, that you may be able to have Airmen show up on day one, ready to do things like zero trust at scale, how we are now leveraging our data in really cloud one, and the larger cloud instances that we're trying to consolidate our data so we can get power from it. As we think about what is a NOC SOC look like for one of the largest networks in the world that's what we've asked the 688 to do. They're building that. And now what does that mean for us in terms of bringing in more and more best practice for them to be able to leverage? - And people don't think about that, the size of our network, it's not just a DOD scale. We're doing something that nobody else is trying to do. And then multiple security levels at that. Like it's fascinating to figure out where we can help and plug in. And certainly there's going to be opportunities for us to do that and we appreciate your team kind of always being there for us. And that's, I want to kind of transition maybe to the competition discussion here. And so Cyberspace Ops is what we're primarily focused on and Expeditionary Com. across the continuum of competition. And where do you see the focus for like a reserve wing, like us where we fit and plug in to best utilize these things. We talked about our industry skills and maybe some continuity in some of our the term legacy seemed to go out of favor, but the legacy weapons systems that we have deep experience in. - So I would first if I put them in bins, then the first bin is we are going to be short in Expeditionary Com. capacity. If we're an execute agile combat employment at scale as part of our design, there's no way the limited active duty force is going to meet that demand. That is clearly an area that is, it will be a part of what ACC builds is their strategy is how do we meet them to capacity need, to do what we're going to try to do in multiple theaters simultaneously. And we know that that Colonel is obviously not going to have that capacity. The second component is one of the areas that we are now getting much more comfortable with is how do we train Airmen? But now how do we grow the capacity to train Airmen, on systems that we can now have access to for in regards to reserve Airmen. Because that has been one of our challenges is being reliant on external partners to train. I can also see us growing capacity of experts, inside of our reserve component to be that continuity on training and bringing expertise and areas that maybe we need to jumpstart. An example would be one of our cyber legacy weapons system constructs that's hurting us today, is we divided up our weapons systems and we

never really accounted for the thought that we would have things that would be common to all. And we have two things right now that are common that we are now having to play catch up. One is, how do you operate and defend in the cloud? And how do you use a big data platform, that doesn't belong to any weapon system, but belongs to all. That expertise to generate analytics, we have used that data that's relevant all the way down to a weapon system, to the enterprise solution. It's relevant to everybody. And so how we're building that together as now, instead of independent parts but now a whole built on our data, there's expertise that there will be companies and Airmen that have already done much of that. And we're playing catch up to some of it but we also have pockets that we could start to build on. The third component is the search capacity. That is it's clear. So when I talk about election security I don't think that's a one-off. I think our nation is gonna be asking more and more of the department of defense to be a teammate in the inter-agency to defend our nation in cyberspace and in the information environment, if that is true what does that mean for the capacity demands on US Cyber command, the National Security Agency and all of its components. And that would likely say you could see scenarios where, I could anticipate surge of when elections are gonna be but now the constant becomes what's our role day-to-day, in defending our critical infrastructure and countering disinformation attacks on American or allies might be our steady state but we search and really can anticipate those surges based off of activities in our nation. - Yeah, that's, you know that's certainly an area that we'd love to be able to plug in and support all three of those areas. At my graduation ceremony at Eisenhower. I know you're an Eisenhower grad as well. The Deputy Sector Defense, Bob Ward was there and he talked about what's the next significant offset from a strategy perspective that America is going to present first one being nuclear, the second one being self, what's the third one? And so I don't know if we sell it in anything, but you've kind of touched on it. Is it AI? Is it? I'm putting question marks after these, I'm not trying to lead you down somewhere. Is it just concept of the vhy-w convergence and being able to bring these things together, in a way with sensors and AVMs and being able to speed that decision loop and targeting or is it just simply the concept of innovation? Do you have thoughts on what's going to, so we're in this competition phase now, what's gonna be the next thing that gets us back on top as the leader in a free world. - So there are, I'll give you, there's common threads across each of those. So whether it be AVMs, be the approach we've taken either ITV, convergence, or AI and ML. And that's being able to get value from your data. So data and speed are the two constants. And so the activities that we're doing today that bring us value from our data, at speed are the things we should be investing in. If they don't we should be considering what do we do with that capability? Is it legacy? And should it be retired? What I spent the week last week, this is was a great opportunity for me to go see what Airmen are working on in new capabilities and an AIML. And I came away really optimistic. The work FRL is doing to build a horizontal framework for AI ML built on our cloud. One capability that's been deployed for our Air Force to be able to combine where our data rests with compute power algorithms, smart Airmen, and a user interface, is something that we can grow across any number of capabilities to take advantage of. The other thing that I saw last week was that I went to the AI accelerator at MIT and the other

ingredient was taking an Airmen that has talent and has identified a problem and then equipping them to solve it. So there were two areas in there, a tech Sergeant one Bravo four, and a one-on-one that had taken on problems after a year's worth of AI training. They're now leading MIT and how to solve the problems for a cyber problem and an ISR problem. - That's excellent. - It's fantastic. But what they would be able to do in a year would be able to use the infrastructure AFRL is deploying through LCMC to cloud one to solve that problem. It was really fascinating to watch where you could see the pieces and the tissue coming together. That should be in the hands of airman. One of the big things that we'll see inside of our world is in our big data platform. LCMC is about ready to deploy rather than using the vendors analytic build tools. We'll now be able to use a standard Docker based approach, where we can train any Airman to write an analytic inside of a container, and they can deploy that analytic against our data and in a will. In that case, we can be protected, doesn't have to be tested. The only thing we'll want to validate is whether the analytic meets our ethics requirements. And is it valid to bring back decision quality data? And as they're building out that framework, really exciting to see all that fall into place. So I'd say data and speed are the common denominator. - That's outstanding and, you know, we hear these one-off situations where we're people that have either propensity or skill or background to do something, do great things. How do you feel the Air Force when we're talking about our people, have kind of talked about mission and strategy, but our people how do you feel is our Air Force ready to like not care about your AFSE, but take for who you are as a person and the skillsets you bring and just plop them down somewhere and can solve a problem, can we do that at scale? Or do you think we still gotta find smaller opportunities to do that both guard reserve and act? - So a couple of different thoughts. So one is I think we're going reasonably well in small pockets. And what I think we have learned is the initial push to create software factories everywhere is not really a sustainable construct. You have to have some sort of home that you can sustain and build on and deploy and task the things that we need. So we've learned that lesson, we've partnered now with platform one that's local in San Antonio and we're taking developers to platform one to partner with them, giving them and the tools inside of that environment rather than recreating it. So that's how we're taking that on. I think big picture, what the chief has told us. So General Brown has said, he's not comfortable with our ability to do this. That's why he published action order Bravo to attack our bureaucracy. And I have seen in a number of places where we are risk averse to deploy capability and what we've got to be able to get to is a point where we put that risk and commander's hands with good data. So they can assess that risk to whether to deploy or not deploy but not get caught in some sort of approval process. That's not necessarily leading us to a good risk decision. I personally found that in some of the capabilities that I was really impressed with what our acquisition teammates are building. They're completely in sync with us. We've got unity of effort and we've not yet been able to feel. So that's a process problem. It's not a development problem. It's not an errand problem. It's not a training problem. We have a couple of areas that we have to attack. And I think General Brown is single bet. And there are areas I think all of us could identify that we've grown risk averse. And if you're going to go at speed, you're going to have to take some risks measure

and inform. And then a commander absorbs that risk. And then, moves out. - Yeah, it was great to hear that there's certainly some possibilities here in the future for us too certainly as a reserve. As oftentimes you really, I mean, we're not as tied to an AFC and a grade and we can certainly leverage that for you and provide somebody. If that, we've just got to figure out the access problem, of course, the money issue too about funding that. There's a lot of priorities right now. There's a lot of things, you know DOD needs to pay for and our government needs. So, really exciting, sir. I really appreciate your time. I'll leave you an opportunity with any closing words for the reserves, the gladiators, the 960. - So one of the things first, thanks, thanks to everybody that took the time to listen to us today. If there's something that you think that we should be doing, that we're not, we welcome your feedback because our goal as leaders is that every time there's identified barrier to an Airman, knock that barrier down to let them run. And we know that there are so many opportunities out there today that then challenges that we want to let Airmen run. I'm excited with the progress that 16th Air Force, the 960th, our teammates across their ISR enterprise have made thus far and meeting what the expectation is, 16th Air Force. But we also know that while we have defined this period of time as competition, China doesn't look at this as a competition. They are looking to win, on a global scale. And from our perspective, it's our job to ensure that we're presenting options back to our political leaders that allow us to now identify the things that are consistent with our norms and values. And I'm excited with the team that we have. That's been able to be very successful to date and where we're going for tomorrow. - Awesome, sir, really appreciate your time again. And we're here for you. We'll keep the communication open between us and your units. And we hope to be a provider of choice in the future. That Ghostbusters call, you call us. We want to be there for you. Fill the gap. - Awesome. Thanks. Have a great day. - All right, thank you sir. (Upbeat music)