

## The Aerospace Advantage Podcast – Ep. 195 – The Rendezvous Transcript

**Heather "Lucky" Penney:** [00:00:00] Welcome to the Aerospace Advantage podcast, brought to you by PenFed. I'm your host, Heather "Lucky" Penney. And here on the Aerospace Advantage, we speak with leaders in the DoD, industry, and other subject matter experts to explore the intersection of strategy, operational concepts, technology, and policy when it comes to air and space power.

And this week, it's time for The Rendezvous, our monthly installment where the Mitchell team digs into stories that you've seen in the headlines. So, with that, I'd like to welcome Lieutenant General Dave Deptula, Dean of the Mitchell Institute, back from his travels.

**Lt Gen David Deptula, USAF (Ret.):** Hey, great to be here, Heather.

**Heather "Lucky" Penney:** Thanks so much, sir. And we've also got Jeff Rowilson, one of our Washington experts.

**Jeff Rowilson:** Thanks for having me.

**Heather "Lucky" Penney:** Thanks Rowley. And we've got Todd "Sledge" Harmer with us.

**Todd "Sledge" Harmer:** Great to be back.

**Heather "Lucky" Penney:** And Lazer Lazarski.

**Anthony "Lazer" Lazarski:** Also great to join everybody.

**Heather "Lucky" Penney:** Jen Reeves, one of our Senior Fellows for Space Power.

**Jen "Boots" Reeves:** Always happy to be here. Thanks.

**Heather "Lucky" Penney:** Great to see you, Boots. And last, but definitely not least, Mark "Gonzo" Gunzinger of our Mitchell team.

**Mark "Gonzo" Gunzinger:** Thanks, Heather. Hi, gang.

**Heather "Lucky" Penney:** Before we dive into the topics for [00:01:00] this month, and let me tell you, it's packed. First, I'd like for us to pause and remember the incredible life and service of Senator James Inhofe of Oklahoma. He served our nation in Congress from 1994 to 2023, nearly three decades. Laser, we were talking earlier about how impactful he was to your career. And Sledge, I know he was a foundational relationship for you, too.

**Anthony "Lazer" Lazarski:** Thanks, for taking the time during the podcast to honor Senator Inhofe and allowing me to say a few personal words about him. Senator Inhofe repeatedly said, there are two things that we should be doing in Congress, infrastructure and defense, and he lived by those words. As Chair and Ranking Member of both the Senate Armed Services Committee and the Environment and Public Works Committee, he worked closely with Republicans and Democrats in the House and the Senate to accomplish those goals.

In 2016, I remember Senator Bernie Sanders was on CNN doing a Democrat presidential town hall. And he was asked what Republican member was closest to him, but he disagreed [00:02:00] with the most. And he said, well, despite their political differences, he values Republican Senator Jim Inhofe as a good friend that was, and is Senator Inhofe.

He loved our service members and their families. There wasn't a day that would go by that he wasn't working issues on their behalf. And when bills were brought to him requesting his support, the first question was always, "how does this impact our national security?" And for those lucky enough to travel on a Senator Inhofe led congressional delegation trip, you know, how hard he worked typically traveling to 12 countries in 10 days, made possible by amazing job by our air crews.

And Africa held a very special place in his heart. And he visited more African countries than any member of Congress since the United States became a nation. While Senator Inhofe served in the Army and was co chair of the Army caucus in both the House and the Senate, he was an airman at heart with over 12, 000 flight hours.

He loved flying. It was in his blood and we never tired [00:03:00] of listening to him and talk about his solo flight around the world, including across the Soviet Union, recreating Wiley Post's flight. Each staffer who worked for Senator Inhofe was not only expected to read the book, A Message to Garcia, but we were expected to deliver that message every day.

Senator Inhofe was a friend. He was a mentor. He was a person of strong faith who loved for his family, his friends, and his country were limitless. And I was very, very, proud to be welcomed as part of the Inhofe family. So thank you.

**Heather "Lucky" Penney:** No, that's an excellent honor and memorial to his legacy and impact.

Sledge?

**Todd "Sledge" Harmer:** Yeah, I certainly don't have the relationship with him that Lazer did, but traveling on congressional delegations with him and then sitting behind him many hours during Senate hearings. The few things that I would take away there is he was a complete and total gentleman, and you could always count on him to do the right thing for America.

And I would say, um, you know, based on current politics more senators like Jim Inhofe are desperately needed. The Senate is a [00:04:00] lesser place without him.

**Mark "Gonzo" Gunzinger:** Hear, hear.

**Heather "Lucky" Penney:** Absolutely. He was a good friend to the Air Force, a good friend to the military overall. And I know from a general aviation perspective, he really cared about that as well.

He will be missed. Turning over to news of the day though, General Deptula, the Air Force recently announced it has a path to move forward on the E 7. And as we all know, that aircraft, that program has been held up by high cost numbers and the Air Force's need to get it down. So, can you explain what the aircraft does? What does the E 7 do and why it's so important?

**Lt Gen David Deptula, USAF (Ret.):** Um, sure, Heather. First, cut to the chase, E 7 is a very powerful battle management aircraft. It's got its own moving target indicator array, but can also pull sensor data from off board sensors as well. The crew on board makes sense of this data, interprets it, and then directs air assets in a defined space in the battle area [00:05:00] regarding how to best employ to net the mission objectives, while obviously avoiding points of undue risk. Now it's not just intelligence, thinking about enemy deployments in the span of months, weeks, or even days.

These are battle managers making real time calls focused on what's happening in the battlespace in a matter of minutes and seconds. Now, the E 7 is on track

to replace the E 3 AWACS, which today is old, fragile, and the numbers have come down significantly. As the Air Force seeks to free up resources and bodies to on ramp the E 7.

While much of the battle management job is supposed to move to space, we need to be really careful to not create a single point of failure. All one has to [00:06:00] do is take a look at Russia's postulated, hint, hint, real nuclear ASAT that could take out a huge swath of space capability. So, we need redundant and resilient capabilities, not just one capability in one domain.

That's key to deterring aggression by giving us multiple lines of mission redundancy. Now, while at this, while some question, the survivability of the E 7, we also need to ensure we don't assume that every mission, is going to be executed over downtown Beijing. Not to mention that the vast majority of the time, I mean, I'm talking, you know, upwards past 95 percent of what we normally execute and how we normally operate is normally at far less threat levels.

So, the [00:07:00] real issue here is ensuring battle management crews have mission assets. This is a whole nother issue. And if we're not careful, we'll collapse the human capital if we don't give them the tools they need to operate. We've already sunset the E8 JSTARS, for example, and it's follow on years away from operational capability.

Meanwhile, the E3 AWACS inventory has been reduced, so the E7 is a key bridge for the community. We simply cannot repeat the mistake of decimating the EW career field as the Air Force did in the 1990s. So, this is a highly complex skill set that can't be rapidly regenerated. So, the Air Force needs to look at ways to maintain these folks expertise.

**Mark "Gonzo" Gunzinger:** Absolutely, and force size will be uh, absolutely critical to that, given the [00:08:00] Air Force's inadequate budget. We have to build enough E 7s to really meet operational requirements globally. And to maintain a healthy career field.

**Heather "Lucky" Penney:** Yeah. And we've got to be able to get them to the field as quickly as possible because having that gap, we'll lose that expertise. We'll lose that experience that is so critical, to having that combat advantage.

So, Jen, let's start with Sentinel and some big news there, right? DoD committed to sticking with the Sentinel program. That's a ground based strategic deterrent, right? Despite its Nunn-McCurdy breach, which was kind of significant.

Now we here at Mitchell believe that the nuclear Triad's, the foundation of our nation's military and diplomatic power. Would you like to explain why the triad is so important?

**Jen "Boots" Reeves:** Absolutely. So, and that is the first thing we must decide that the triad is not the question that we are discussing here today, right?

That, the question about the triad, [00:09:00] has been asked and answered multiple times. We have the 3 legs of the nuclear deterrence triad. They are the ground base leg, which is ICBMs, the sea base legs, which is sea launched ballistic missiles, right? Our nuclear submarines. And then we have the air leg, which, of course, is our bomber fleet.

And interestingly, two administrations before this one, from both sides of the aisle, have done extensive studies. To ask this question, could we go to a dyad with just two legs of the triad? And frankly it's come back from both administrations uh, that we must have the triad for our defense.

And then again, in the nuclear posture review of 2022, it concluded the same, a modernized triad is vital to deter strategic attack, assure our allies and partners, and achieve US objectives should deterrence fail.

**Heather "Lucky" Penney:** Yeah, it sounds like this is a unanimous opinion across [00:10:00] both political parties. So, it doesn't really matter what side of the spectrum you're on.

There's an agreement across everybody that the triad, all three legs are super important. Now Sentinels are really big program. It's more than just a missile. So, can you explain how complex and how big this is?

**Jen "Boots" Reeves:** Yeah, absolutely. It's an enormous program. And frankly, it's the biggest program and one of the most complex programs that the Air Force has ever undertaken.

You know, if you think about acquiring an aircraft, right? We want to buy F35s. So, we buy airplanes. That's what we buy. Um, and over in a whole other process, we're going to build some hangers for those airplanes, or maybe use some old ones. We're going to make sure that runways are available, but that has nothing to do with the actual purchasing and procurement of that airplane of the F35, as an example.

But with ICBMs, that is absolutely not the case, because what is part and parcel to the missile itself [00:11:00] is the silo that all of those missiles live in, right? Those are literally on the hole in the ground, the hole in the ground. Yes, ma'am. But that hole in the ground, and I've been in countless holes in the ground, that hole in the ground is filled with equipment that keeps those missiles alive and at the ready.

And that's the benefit of this leg of the triad, right? That they are at the ready and in single digits of missiles can or minutes can be launched. So, we have to include the silos themselves. Plus, we have to include the launch control centers, which also are 80 feet below the ground, like those silos are, but they're actually quite far away.

But for every 10 silos. And there are 450 of them, there is 1 launch control center where those missiliers actually sit and control the missiles. And then on top of that, in order for all of that large complex of weapons and operators to communicate with each other, there is a robust and [00:12:00] massive communications network, right? And that also has to be replaced with this go around...

**Heather "Lucky" Penney:** Because that's physical, right? That's like literally in the ground as well.

**Jen "Boots" Reeves:** Yes, ma'am. It is. And right now it's copper cabling and all of that has to be replaced with fiber optic cables. And there's approximately 8,000 miles of that.

So, that's a huge undertaking. And once again, the bottom line is, all of that is part of the Sentinel weapon system, not just the missile.

**Heather "Lucky" Penney:** It's amazing. So, it's clear that this is a complex, it's ginormous, it's an, it's just an incredible program that's hard to wrap your, noggin around. But we've heard that the Sentinel missile itself is doing fantastic.

I mean, it it's really meeting all of his expectations and design reviews. So, why did the program trigger the Nunn McCurdy breach?

**Jen "Boots" Reeves:** Okay, so 2 big points there. 100 percent correct, the missile is doing fantastic and I want to talk about that in a second, but I want to go [00:13:00] back to what I said in my earlier comment about the complexity of the missile system. And that in the requirements piece, they did not understand necessarily how much of all of that had to be traded out and replaced

new, right? The cabling system is a great example that wasn't considered in the original requirements. And so when they went back and are starting to look very closely about this, the state of the weapon system itself and a realization that, much more had to be dealt with.

Well, then the costs of all of that, all of a sudden with these additional things that have to be replaced, then we got the cost to the point that it breached the Nunn McCurdy triggers.

**Heather "Lucky" Penney:** So, it wasn't a sort of a failure performance here. It was really just the when they got into the nitty gritty of looking at the entire system, as a system, and doing the analysis, there were things that then were imposed upon the program that really were not anticipated.

So, yeah, like, so, what now?

**Jen "Boots" Reeves:** [00:14:00] Okay, so, first of all, I want to set everybody's mind at ease that the Minuteman III weapon system is still doing just fine, okay? Here's how I like to think about it. It's an, it's a classic car, right? And as those cars get older, they get more expensive to maintain and that's what's happening.

But everyone should rest assured knowing that their strategic deterrence is actually in place and it's actually doing what it's supposed to do. Okay, so that's point one. The second point, though, about Sentinel that's so amazing is that it's doing so incredibly well. The missile itself, man, Northrop is killing it out there.

They have done individual missile stage firings and it has performed at or above the requirements that it's supposed to. And, um, we're just, I think we're all very pleased with how that part of the program is going. So, it's all good news when it comes to the missile itself, and now we just have to reorganize and figure out how we move forward.

And this is up to the Air Force, how we move forward. With the [00:15:00] whole rest of the program?

**Heather "Lucky" Penney:** Yeah. So we, right now the Air Force is still figuring that out. So, they've passed that on McCurdy, they've been approved, and so now they'll go back and they'll figure out how they're gonna execute the rest of the program.

So, we'll just kind of have to wait and see how that goes, right?

**Jen "Boots" Reeves:** So, in the end, DoD certification and funding validates our continued confidence in the Sentinel weapon system and absolutely its critical role in safeguarding global security. In partnership with Air Force, Northrop Grumman is making important progress on this highly complex weapon system and I can't wait to see where it goes.

**Heather "Lucky" Penney:** Thanks, Boots. I mean, that's a big Amen from the entire Mitchell team here, because if you don't have that nuclear deterrence foundation, all of our conventional forces, all of our diplomatic actions, everything we do across the dime spectrum none of that matters. So, this is a must do.

So, Sledge, Lazer, how is the Hill taking this news?

**Todd "Sledge" Harmer:** I think it runs the spectrum. Boots hit all the underlying issues in the matter there, but you know, there's the skeptics, the Senator Markey's, the, [00:16:00] Congressman Garamendi's of the world. I mean, haters are going to hate. They would like to see us unilaterally disarmed for the most part or go to a dyad.

You know, that, whatever, that's I think that it's been proven. We need to have a triad. It needs to be modernized. So, that the serious students of deterrent theory realize that this is a foundational capability and we absolutely must have it. The real question though, I mean, as Boots mentioned, Nunn-McCurdy breach occurs when the, cost estimate exceeds 25 percent above the baseline.

This is 81%. This was a major breach, and the reason I bring that up is everyone on Capitol Hill is going to be laser focused on the price tag. It's really going to be about how do we pay for this, and it's not just the additional money. The Air Force, has to come up with the additional money, so then it becomes the trade off between, you know, where does the Air Force take risk or how do we pay for this?

Do we get the money from somewhere?

**Heather "Lucky" Penney:** Suck all the dollars out of the room.

**Todd "Sledge" Harmer:** Yeah, exactly. And, you know, I think that the only part that really is, I think, maybe not [00:17:00] really reassuring, but you know, keep our blood pressure from getting too high, is any of the projected costs increase or outside the FYDP.



So, we've got a little bit of time to figure this out and whether it's break up the contract and work the infrastructure separately and bring the cost down or figure out a way that the Air Force doesn't get stuck with a bill.

**Heather "Lucky" Penney:** Maybe like a separate nuclear modernization fund?

**Todd "Sledge" Harmer:** It could be very much like the sea based strategic deterrent would be a land based strategic deterrent.

But again, you know, you can authorize it. You still have to appropriate the funds for it. But I think, you know, the bottom line in Capitol Hill is, the price tag has everyone's attention. They're going to be watching this like a hawk for the next you know, the life of the program.

**Heather "Lucky" Penney:** Lazer, anything to add?

**Anthony "Lazer" Lazarski:** Yeah. I, you know, agree with everything and having worked up there, had the MilCon portfolio. Okay. We know that there are costs overruns, underruns. But no one's happy with cost overruns, and it really comes down to how do we present this from in the future? And the other thing is, and all of us on this call, on this podcast, know, bad news doesn't get better with [00:18:00] age.

I mean, I hated hearing about stuff sometimes in the media first. You know, so getting surprised. And so, you know, okay, we're restructuring. We're moving forward. But how do we prevent this? I mean, that's what Congress wants to know. I don't want to get surprised. You know, come and tell me up front, you know, give me worst case costs, so we can go forward, but they do not want to be surprised.

And as Sledge just said, and now we've got to go find the money to go get this done and it will come out of Air Force or Congress is going to have to go put it in. And I know Senator Reed and other members of voice concerns about the side activation task force. Well, how do we fix that in the future?

Was that the main problem? But in the end, you know, and again, as Sledge said, there, the Congress is committed to working with the Air Force and across DOD, they're supportive of the program but they just want to make sure that it is executable and meets requirements.

**Heather "Lucky" Penney:** Absolutely. Now Boots had mentioned like, when we talk about the triad, it's asked an answered. There's a reason why we need to

have all three legs. And [00:19:00] here's an example. China just indicated that it's pulling out of the nuclear arms control talks with the US. Not to mention, they're in the middle of a nuclear breakout, and Russia is wrapping up its own major nuclear modernization effort. And we're still seeing a lot of nations around the world pursuing nuclear weapons, as a way to protect their existential control over their sovereignty and really prevent our ability to influence their actions.

Rowley, I'd really love to hear you dig in on this, what these trends are and what it means for ensuring our nuclear triad deterrent is modern and capable.

**Jeff Rowlison:** I think the only thing really to add to what Lazer and Sledge added to the conversation was just the realization that our budgets reflect our priorities.

And so if we don't start articulating how we're going to modernize the triad across the board, we really have our answer in and of itself. So, the budget really has to start reflecting that. And I think unless the Air Force and the wider nuclear triad architecture [00:20:00] decides to do that, I think we're going to be stuck.

And that's not a good message for those that are in an adversarial capability, right? If China wants to withdraw. Russia does the same thing. If we're not putting money to show our commitment to where we're really leading from behind.

**Heather "Lucky" Penney:** If we don't have that umbrella, what does that say for our allies?

**Mark "Gonzo" Gunzinger:** Yeah, let me add a point here. DoD's next nuclear posture review must assess the need to increase the capacity of our triad. To deter two peer nuclear adversaries as recommended by the Congressional Commission on Strategic Posture of the US. Now, we're going to have a policy paper rolling out the door pretty soon that discusses why that's necessary and why increasing the size of the planned B 21 bomber force would be the most cost effective way to do that. Given that Raiders are both nuclear and conventional capable.

So, it would be a two for one deal. It would enhance nuclear deterrence [00:21:00] and our conventional deterrence posture.

**Heather "Lucky" Penney:** Peace through strength. Speaking of bombers and speaking of two adversaries, we just recently in late July, saw Russia and China collaborating. They're cooperating with two Russian bombers and two Chinese bombers flying near the Alaska ADIZ.

And oh, by the way, they were also escorted by both Russian and Chinese fighters.

**Lt Gen David Deptula, USAF (Ret.):** Yeah, Heather, that's a great point to bring up and what is so dangerous about this event, is that it indicates that, you know, look, we've talked about, it's been in our national defense strategy since back in 2018. And those of us who are paying attention to more than just the counter-insurgencies in Iraq and Afghanistan for decades now, have been watching China growing as a threat. Russia you know, resurgent [00:22:00] capabilities and new aspirations. Iranian aspirations for nuclear weapons. And then obviously the North Koreans as well.

Okay, we've been talking about that, but we have not seen until recently, this alliance of evil coordinating and planning with one another, to threaten the United States, and this is a very clear evidence that is now going on.

**Heather "Lucky" Penney:** I agree. I mean, we're seeing them make these cooperative or coordinated actions.

I don't think we're seeing Russia and China yet having a level of integration, um, that we have with our coalition partners or our allies, but I think this is a first step and it's a very clear signal. So, to that end, I think it's great that F 35 deliveries have actually resumed. Sir, you know, what allowed this to occur?

What enabled it to occur? And why is it such a big deal?

**Lt Gen David Deptula, USAF (Ret.):** [00:23:00] Well, the short answer is the Joint Program Office restructured how they're looking at TR3 and Block 4. Instead of moving forward as a major entity, they're breaking these two particular issues into smaller bite sized elements. First and foremost, the TR3 upgrade mainly focuses on hardware.

That being a new central processing computer required to run all the upgraded systems. Block four mainly consists of software upgrades. So, TR3 needs to be there first, and it is. That's foundational. Block four upgrades can then be spiraled on progressively. Given that they're mainly software. Now, it's much

more complex than that, but that gives you the overarching view that most lay people will understand.

Now the jets will [00:24:00] not be combat coded at first, but that will come shortly. The bottom line is we need more fifth gen capacity. And these jets are vital for filling slots that we need to recapitalize, because as I've said for decades now, we've got a geriatric Air Force. And we've got to modernize it. Especially, as these legacy forces continue to retire. I know it's frustrating for a lot of people, but at the end of the day this program needs to work because too much is on the line for any other course of action.

And fundamentally, at the end of the day, the Air Force will get to its F 35 inventory objectives and that's all good news.

**Heather "Lucky" Penney:** We've got to get those F 35s and the sooner we can get them to the squadrons, the better. It's gonna cause, I think some perturbations regarding the, how we transition those squadrons, [00:25:00] but it is more important to be able to get those fighter jets, that recapitalization operational, even though they might not initially be combat coded. But I think we can all look at each other and say, you know what, if the balloon goes up tomorrow, it's better to have these Block 4 TR3 aircraft and fighter squadrons and then just sitting, parked in plaques.

**Lt Gen David Deptula, USAF (Ret.):** Yeah. There's an analogy there to those Block 20 F 22s.

**Heather "Lucky" Penney:** Which we also need to keep in the inventory. So, Sledge and Lazer, I'd like get your thoughts on the Hill from this and how they're receiving it. Cause it's been a really an emotional issue, but the fundamentals that General Deptula highlighted, those are still real. That's the facts.

**Todd "Sledge" Harmer:** Yeah, and I think Lazer hit on it earlier when we were talking about Sentinel the, you know, Congress really cares about the cost and doesn't meet the requirements. And I don't think anybody on Capitol Hill questions the capabilities of the airplane. Um, in fact, the more they know about it, the more impressed they are and the more they appreciate it.

Um, but much like to Sentinel, it's going to be very difficult for many of the members of Congress [00:26:00] to get by the price tag. I mean, this is the largest DOD acquisition program ever. And I think underlying those, there, there seems to be a little bit of frustration, I think with the way the program is

being managed and fielded. A lot of members of Congress are getting, um, you know, I hate to say it, vendor fatigue. Or they're concerned about vendor lock there.

So, there's going to be a concerted push for the Department of Defense in general and the Air Force in particular, to focus on government purchase rights when they negotiate future contracts for major weapons systems. So, are you buying the intellectual property, the technical data packages that allow you to compete the subsystems or even, you know, the full system to add capabilities as you go on?

And then the last thing I would say is, you know, one of the biggest supporters of the F 35 has been Congresswoman Kay Granger from Texas who headed Defense Appropriations in the House. With her retirement eminent., it remains to be seen who's going to step up and be the supporter. I'm sure it'll be somebody. I know Tom Cole and Ken [00:27:00] Calvert, respectively, have supported the program in the past, but her presence in Texas or absence, rather, in the Texas delegation is going to leave a hole for the F 35.

**Anthony "Lazer" Lazarski:** Yeah, the 35 program. I mean, ever since, you know, I've been working it and then being on the Hill is the program that everybody loves to hate. I don't always understand why we read it in the online papers all the time, but I just say Congress is frustrated with DoD acquisition as a whole. F 35 happens to be a poster child on how not to run a program.

Um, but as Sledge says, despite the naysayers and those questioning the F 35, Congress is going to continue to support, but with caveats. And Sledge was saying this, you know, we need to start moving forward as we've been trying to do, but progress on time. Continuing to field aircraft, continuing to get our upgrades on time, holding onto the costs, getting the supply chain, and then mission capability [00:28:00] rates up.

I mean, the same members that are concerned about buying the numbers of F 35s are also concerned about the low percentage of mission capability rates and decreased flight training time. So again, there's a frustration on DOD as a whole, and then of course, frustration on F 35, but I do not see Congress backing away from it. And I don't believe it's because it's too big to fail, but they understand the need for the F 35.

**Heather "Lucky" Penney:** We certainly need to get F 35 to the field as quickly as possible, and in the numbers that we need, and we also need to replace some of those earlier blocks as we get more capable aircraft, the Block 4

aircraft operational. We need to also then consider how do we replace the earlier versions to make sure that not only do we have a common configuration, but we're maximizing the capability of all those aircraft.

You know, we didn't fly around Block 5 F 16s in Iraqi Freedom, right? So, this kind of gets back to the F 22, that we never bought as many as we needed. And I think that we can all agree that the decision to terminate, [00:29:00] prematurely terminate, the F 22, was very short sighted because everyone's thinking, that they need to have, they wish that they'd had the full program of record and maybe more than 381, maybe up to 443 or even the whole 750. Especially, given the delays and the softening commitment to the Next Generation Air Dominance.

General Deptula, we recently hosted, ACC Commander General Wilsbach and he made some news regarding the F 22. Would you mind sharing your thoughts on that?

**Lt Gen David Deptula, USAF (Ret.):** Um, yeah, first, let me offer a comment on F 35. I just got back from Israel the day before yesterday and spoke to the Israeli Air Force leadership.

And they love the F 35. They're also generating extremely high mission capable rates. So, you know, the reality is this isn't a PowerPoint Air Force. This is an Air Force who are actually using those F [00:30:00] 35s in combat. They're proving themselves to include maintainability. So, with that, let me move on to answering your question with respect to General Wilsbach.

Um, I had some very good discussions with him and frankly, applaud General Wilsbach for his candor and transparency. There needs to be more of that, not less across our military. Because what he said, every warrior worth their salt already knew. The position to cut Block 20 F 22s was purely budget driven, not strategy or combat requirements driven.

So, what he said simply acknowledged what we already know and it's also why the Congress is prohibiting early retirement of these Block 20 F 22s. Bottom line is the F 22 remains the most advanced combat [00:31:00] fighter in the world. Period. Air superiority is the foundation for every successful military operation.

And as you mentioned Heather, we bought far too few F 22s and we've flown them hard, meeting overwhelming demand. Now, the F 22s in question for divestment are an older Block, the Block 20s, but they're still enormously

capable and could also be upgraded. As a matter of fact, it's the cheapest way to get an additional squadron of 5th gen capability into the Air Force that exists.

They're currently in training, in a training role. If we lost them, then the newer Block F 22, Block 30s, and 35 jets would have to pick up that training load. That then would wear them out faster and prevent our combatant commands from [00:32:00] accessing them. We all know that NGAD, I shouldn't say we all know, I should say the supposition is that NGAD's now on the rocks due to surprise, budget restrictions.

So, we can't cut both ways. This is all about budget and it's time we be honest about what we need. If the Air Force has insufficient funding, then say that! The Air Force leadership needs to articulate their resource shortfalls in public. Otherwise, we're being set up for a 21st century Pearl Harbor.

Congress can't fix the Air Force's deficiencies in capacity and capability unless they know the Air Force requirements that are necessary to meet the needs of our defense strategy. I hope that came across loud and clear.

**Heather "Lucky" Penney:** We never bought as many F 22s as we needed to. And as a result, we had to maintain F [00:33:00] 15Cs in the fleet for so long.

And now we're at risk of really losing our ability to execute the air superiority mission at the scope and the scale that is necessary because we just don't have the capacity.

**Mark "Gonzo" Gunzinger:** And the Air Force must ask Congress for the resources it needs to build the Air Force the nation needs.

**Heather "Lucky" Penney:** Absolutely.

And looking at the threat, saying that the threat is advancing, is not a reason to retire the capabilities that we have in hand right now. And it's not a reason to defer capabilities that are currently in development. We need to accelerate those instead to the field, to the warfighters, so that when they go into bad guy land, they can do their job successfully and come home safely.

**Mark "Gonzo" Gunzinger:** Yeah, because you can deter today with capabilities that are going to be delivered sometime in the distant future.

**Heather "Lucky" Penney:** Yeah. And if we defer any of that development, that, that capability is going to be what 2050? That'll be too late. Thoughts from anyone else on this?

**Anthony "Lazer" Lazarski:** Yeah, I mean, talk about the numbers. And I think Sledge may have [00:34:00] been down on the floor with me, but we had Senator Inhofe, Senator Chambliss, Senator Hatch and Senator Cornyn were down on the Senate floor.

We were debating the Defense Authorization Bill, and I can't remember what year it was. But we were fighting to have a multi year procurement authorization for the last 60 aircraft. And we were getting fought so well, we don't need to, you know, you know, we have future Congress obligated for these 60.

And the point was, we're either going to buy 60 or not. And everybody said we were buying 60 and we were going to save with the multi year \$250 million. Bottom line is, those members that I you know, led by Senator Inhofe got the multi year in there and they weren't allowed to cut additional aircraft.

And again, we would have liked to have more, but at least we got those 60. From a Congressional point of view though, Congress agrees with what the GAO report said about, we shouldn't divest. They understand the capabilities of the F 22, um, and they understand the need for the Block 20s for training and the fact that they'd be [00:35:00] relevant in a future fight.

However, and I'd say not on the negative of keeping the 22s, Congress just doesn't have confidence in the Air Force's ability to procure follow on aircraft to replace the F 22, based on its history of acquisition failures and the uncertainty of NGAD. So, that's why Congress isn't going to back off.

Um, you know, it'll get debated again next year. But as of right now, they understand that the Air Force needs to go and budget for these aircraft when we, when they bring over the next year's budget.

**Heather "Lucky" Penney:** Lazer I share a similar concern, right? The Air Force has proven its inability to either move from R&D into actually executing a program of record because it's slowed down the ramp rate, it's continued to cut quantities of his programs of record. So, why should we have confidence and divest what we have now when really all we have is R&D, right?



**Anthony "Lazer" Lazarski:** We call it the whimpy syndrome, you know, if you buy me a hamburger today, I'll gladly pay you tomorrow. Right? [00:36:00]

**Heather "Lucky" Penney:** Okay. So I've got to like, bring my blood pressure down. So, Boots, let's go back to you. Okay. Let's talk some space.

Um, Assistant Secretary of the Air Force for Space Acquisition and Integration, Frank Calvelli. He recently announced plans to integrate the three space acquisition offices, SSC, SDA and Space RCO. So, what does this mean? Decode those for us. And why does this matter?

**Jen "Boots" Reeves:** Okay, cool. And let's do this one nice and quick.

All right. SSC, which is Space Systems Command, has a long history, heritage. It is traditional acquisition of generally large programs that have, you know, this way we do it has been around as long as we've been acquiring systems. Now, the Space Development Agency was stood up only about five years ago. To go after, um, the small satellite mission, right? With the advent of the Space Force, we are doing things differently. A major shift in the way, a major paradigm shift, if you want to call it that. And, um, so we have a development agency, the SDA, to actually go after satellites and the small systems in a new way. And they're [00:37:00] actually, people are singing their praises at how well they're doing it.

Space RCO, right? The rapid capabilities office, that was stood up a couple of years before the space force was even in existence, to rapidly get after war fighting critical systems in space. Okay, so a very specific mission. Now, here's the thing. We have 3 different acquiring organizations. They do things differently and they also do things really well.

So what can we share across those lines to take advantage of the good stuff and fit into the larger mission? Because also what's happening is sometimes, depending on the system that we're bringing on that we're talking about, 1 or 2 of these agencies will have pieces in the same system, right?

So, they actually have to be able to work together and you know, the operational systems. And so we've got to ensure that they are brought online and acquired all the way back from the drawing board through to actually getting hardware up in space. We've got to make sure [00:38:00] that everybody's talking to each other.

So, really, for the purposes of effectiveness, they must be integrated. And then for the purposes of prosecuting resources that we continue to talk about, they must be in lockstep. And so the bottom line is that a new position of the chief space systems engineer will actually provide recommendations on budgetary priority to Mr. Calvelli. And then he actually makes those recommendations to the CSO and to the SECAF on what to do about the programs.

The bottom line is, having a leader and supporting offices be cognizant of the systems being built by three different organizations and making those organizations work across those seams, brings only goodness to the space acquisition enterprise at large. Both operationally and technologically. And fiscally, and that's the bottom line.

**Heather "Lucky" Penney:** So, are they going to keep the, is SSE going to continue, SDA going to continue, and Space RCO going to continue as more tightly integrated, [00:39:00] or are they getting merged and, so that they're one thing?

**Jen "Boots" Reeves:** Nope, they're not getting merged. They are going to be working in a more integrated manner with a high level leader across all of them and supporting staff to her that will help ensure that we are talking across those lines. Because again, what they each do is pretty differently and they do well.

**Heather "Lucky" Penney:** Okay. No, that sounds like a very rational and effective response. So, Rowley, the CSO is hiring Air Marshal Paul Godfrey is his assistant CSO, for future concepts and partnerships, which I got to tell you is pretty unconventional, right? Um, bringing someone over from the RAF. So, what are your thoughts on this and what do you mean? Like why is he doing that?

**Jeff Rowlison:** Yeah, I think this is, like you said, this is a pretty bold move. And Salty relayed this in a C note to the force that he didn't believe a foreign officer had ever been assigned to a [00:40:00] service staff at this level before. So, so to get to your point that they're trying to do something a little different and that's that integrated by design function. There really is a designation demonstrates the Space Force's commitment to cooperating with arguably, you know, our most important ally. General Saltzman described the hire as exemplifying the kind of partnership we need to internalize as a service, adding that Air Marshal Godfrey's integration into a the senior staff is unprecedented and pushes the boundaries of what it means to be integrated by design.

Now, all in all, this is a, this is another example of the Air Force making its own way within the service headquarter staff. And really, hopefully, Air Marshal Goffrey is going to be empowered and authorized to really coordinate a new level of integration, both from an operations [00:41:00] and intra service and international cooperations perspective. So, I think it's a kind of a badass move on these Space Force's efforts.

**Heather "Lucky" Penney:** Well, I really like how General Saltzman has approached his tenure so far of the Space Force. And we know we've talked about it here on this podcast, how crucial that kind of collaboration and integration with our partners is, especially in space. So, I am really kind of excited to see how this is going to work. And I'm, I'm kind of curious, do you have any insight regarding what he expects to get out of this collaboration with Air Marshal Godfrey?

**Jeff Rowilson:** Not yet. I think the proof is going to be in the pudding on how that rolls, out how he's integrated across the headquarter staff elements, and then , to get back to the previous question on some of the acquisition decisions. And some of the international engagements as we go forward.

So, I think it's a kind of a slate wide open to see how we get into implementation.

**Heather "Lucky" Penney:** Excellent. Well, so I think that kind of partnership is interesting and I'm going to merge together SpaceX and Falcon 9, because we've [00:42:00] got SpaceX both planning to deorbit over a hundred early version, Starlink satellites and they're going to use the Space Force to help monitor this.

And we also saw Falcon 9 experiencing a second stage of launch failure. So, um, Rowley and Boots, I'd really like to hear your thoughts on this.

**Jeff Rowilson:** Hey, I think clearly SpaceX, as the dominant lead in our national security space launch enterprise, is demonstrating an ability to recover quickly and despite that 2nd stage setback, they were able to resume their unprecedented launch cadence, even this last weekend, they executed 3 Falcon 9 launches in relative succession, just 3 days after getting their FAA approval.

So, yeah, this is a core component of our launch enterprise and their ability to adjust and recover is just speaks to how fast they can innovate and move forward.

**Jen "Boots" Reeves:** So, what I wanted to offer was that, um, going [00:43:00] along with SpaceX and all the bold moves that they're making the Starlink satellite, um, constellation, right?

This the unprecedented number of satellites on orbit, um, if you think of orbits as real estate. Even though they're moving, you've got to think of them like real estate. Um, we got to make sure that number 1, we keep it clean, right? There are new, there's new guidance from the FCC in there that we need to keep those orbits clear by having satellites that are defunct. Actually deorbit and clear that space within 5 years.

It used to be 25 years. So, as we proliferate Constellations in LEO, right? Low Earth orbit. That's where these are. We just need to make sure that everything is sort of tidy, if you will clean operating environments. And it's a really wonderful partnership with SpaceX that our network of sensors and reporting what's going on in space monitoring for situational awareness up there, [00:44:00] that we're getting a little peek behind the curtain as to what is actually going to be deorbited and when. So, we can also then run a full OODA Loop on our entire sensing network. Right? This is a really tremendous opportunity and everything that we're doing in space as we heard about, the issue with Air Marshal Godfrey. As we hear about our partnerships with SpaceX and the launch enterprise. I mean, it's just spectacular and I mean, the bottom line is that achieving a strategic advantage happens through strong relationships. And we have that with SpaceX. It's great.

**Heather "Lucky" Penney:** I think it's fabulous. And they've proven to be incredible innovators. I also think that it's important to have a robust and diversified space launch provider group as well as those that are manufacturing the satellites. We need to make sure that it's not, doesn't become the SpaceX force. I mean, they've been wonderful, but I still think that multiple pathways are important.

**Jeff Rowilson:** Yeah, and couldn't agree more. And, you know, ironically or just maybe timed with your question. [00:45:00] Space Force's hosting their, second iteration of their national security space launch phase 3 lane 1 industry day, later this month in LA. And as a reminder, the phase three strategy has two lanes. Lane one being designed to accommodate the new launch capabilities as they mature into their required performance envelopes.

And so in the first tranche of the Lane One Awards, SpaceX, ULA and Blue Origin, were all onboarded into that lane. And I think you'll start to see an expansion of entrance in the coming years. That expansion is important for the

industry and for, like you said, our launch enterprise to really have a robust capability of launch providers and systems that can get to the required reference orbits that are so important for our operations.

And the Phase 3 Lane One approach is to provide assured access to the [00:46:00] integrated space architecture at affordable prices, right? So the Lane One gets us the opportunity to compete on a contract over a 5 year period. And those awardees can meet, they're on boarded as they can meet a subset of the (inaudible) requirements. You know, for the opportunity, and there's going to be 30 missions over this 5 year period in Lane One.

So, as that expands, as in this industry matures, to get to your point, we're going to have other options and that's important for our Space Force and continued access to space.

**Todd "Sledge" Harmer:** Yeah, actually Lucky if I could jump in as a non space person, but as a space enthusiast, you know, I think if you look back historically at ULA's track record of performance. The fact that SpaceX successfully launched over 300 missions before they had an anomaly.

Or between anomalies within two weeks, they were able to resolve the root cause, get back to flight and launch three missions in short order afterwards. I [00:47:00] mean, that's impressive and it should make you feel good about our assured access to space.

**Heather "Lucky" Penney:** Gonzo. So we've got to get to this because you just wrapped a major tabletop exercise that was focused on Collaborative Combat Aircraft and we call them CCA for short.

So, I was there and huge congrats. That was an impressive TTX and a lot of fun. And we got a lot of great insights from it. As a matter of fact, General Minahan kicked it off and we wrapped three days later. So, can you share with us what your early insights are?

**Mark "Gonzo" Gunzinger:** Thanks, Lucky for co leading the TTX. You were great.

**Heather "Lucky" Penney:** I loved it. It was so much fun.

**Mark "Gonzo" Gunzinger:** It was good cookies too. So for our listeners, Mitchell's exercise brought together more than 60 Air Force and industry, warfighters, planners, and technologists to scope out how logistics for CCA

combat ops in the Pacific could shape the Air Force's CCA development. I'll cite just a few highlights.

First, our TTX players agree that the Air Force's CCA development efforts [00:48:00] must be informed by the realities of logistics. Again, to operate them at scale in the Pacific. And that means experts from across the logistics, mobility, career fields, fuels, handling, equipment, ability, and so on should engage in that process now.

Next, logistics challenges to support those distributed CCA ops are not insurmountable, if they are assessed early in CCA development and steps are taken to mitigate them. Such as understanding where we might base CCAs, developing the host nation's agreements to supply food, water, and fuel required to support people operating and so on. That should happen before a conflict begins. It can't be a pickup game in a crisis.

Third, our TTX operational experts overwhelmingly recommended designing recoverable CCA in ways that would minimize their logistics required to [00:49:00] turn to their next sorties. Like reducing people needed to refuel, rearm, and then launch them. And as one operator observed, the more that CCA designed to be fighter like, the more the greater their logistics tailoring and vice versa. That's just common sense.

Another cool insight was that our operators are willing to base CCAs closer to the fight than crewed fighters. Why? Well, because CCA or they have a smaller logistics footprints on the ground, and they're also lower value aircraft that they're attrited and they also preferred using more expendable CCA than exquisite reusable fighters. Because they wanted to use them in ways that would disrupt and detonate the PLA's air defenses instead of trying to match them mass for mass.

So, I'll cap this off by citing one, one quote from one of our logistics experts who played the game. And I quote, "Yes, the Air Force must go fast, but a [00:50:00] CCA development must also include all organizing, training and equipping elements needed to develop a CCA force and then sustained its operations in combat.

**Heather "Lucky" Penney:** Absolutely. Amen. Um, you know, and I can't wait till we get that, this report out, because I think it's going to be so impactful for how the service thinks about approaching Collaborative Combat Aircraft or that entire family of systems of autonomous aircraft capabilities.

And so, the final, actually the final thing, General Deptula. You just got back from Israel where you met with some top military leaders. And we'd love to hear some of your initial thoughts and takeaways from an airpower lens regarding your Israel trip.

**Lt Gen David Deptula, USAF (Ret.):** Well, um, you got four or five hours? The bottom line is, let me try to be as brief as I can about one of the most complex war fights in history, that the Israeli Defence Forces are dealing with. I mentioned earlier and discussed a bit about how the Israeli Air Force is extraordinarily pleased with their F [00:51:00] 35s and how they're using it very effectively. Obviously, that was demonstrated, in their most recent strike on the Houthis port, where the Houthis rebels received weapons from Iran.

But let me shift quickly to a pretty unique event. Last Thursday on 25 July, I traveled into Gaza, crossing at the Qumrim intersection of Israel, Egypt, and Gaza. And then drove to the Mediterranean Sea through the suburbs of the city of Rafah and back. Um, it was a really unique opportunity, and there's a lot to unpack from this trip.

But let me summarize some of my observations from the military perspective. The Israeli Defence Forces are doing some really remarkable work in Gaza in an extraordinarily difficult adversary environment. And what I want to highlight is the fact that [00:52:00] their integration of effects from all domains, as well as other means to achieve their objectives, is really exemplary, very impressive, and worthy of additional study.

Unfortunately, there's a really wide gap between the reality of how the IDF are conducting their operations and the negative public narrative that perceptions are rampant on social media and elsewhere based on a combination of disinformation, ignorance, and anti-Semitism. Now, once I arrived at the shore of the Mediterranean, I had the opportunity to discuss operations with the IDF Deputy Brigade Commander in his area of responsibility.

He was confident, but he was realistic when asked about how long it would take to break Hamas, answering that it'll take time, but it can be done. He emphasized that this [00:53:00] was a war, not a counter-insurgency operation. There is a lot to unfold in that statement, but from one aspect that I think it's important to our listeners, it became very evident to me during this visit, that the Israeli military is competently integrating all means to accomplish their objectives. From air, sea, ground, space, and across the electromagnetic spectrum.

As we talked, the commander pointed out an Israeli Navy ship about a mile and a half off the coast, and he spoke to how it was providing valuable effects to the immediate fight. And, you know, as machine gun, and as we're going off in the north of our position and other explosions occurring, we could still hear the Israeli Air Force drones flying overhead and occasionally fighter jets, also tied closely to the actions of the Israeli Army on the ground.[00:54:00]

Um, effective telecommunications connectivity and command and control, were allowing and enabling multi domain effects to be incorporated all the way down to the company level. Now, this isn't simply due to Israeli Army units owning their own multi domain capabilities, as is the approach the US Army is taking, but it was through true integration of the lethal and non lethal effects from each of the traditional services. Informed by the assessment, integration, and distribution of the various means of data collected by intelligence organizations.

That was then turned into situational awareness and actualized by means across the electromagnetic spectrum. Bottom line is, it was very evident that the IDF has achieved a level of integration and honest understanding of how really to apply jointness. [00:55:00] That's using the right force, at the right place, at the right time, regardless of the service components sourcing those forces and to a degree that generally we just talk about in PowerPoint.

So, lots, much more to impact, but that's a brief summary.

**Heather "Lucky" Penney:** Thank you, sir. And I hope that we have the opportunity to have a longer discussion and dialogue on that because you also recently visited Ukraine and had those mill to mill kind of conversations again with really crucial insights. And I'm concerned because we're seeing from both political parties increasingly isolationist kind of perspective, but we're going to have to hold that conversation for another day.

So, thank you everyone for your time. General Deptula, Gonzo, Rowley, Boots, Lazer and Sledge. It's been great catching up.