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A CONVERSATION WITH
THE CHIEF OF STAFF OF THE AIR FORCE

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Keynote Address:

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P R O C E E D I N G S

MR. O'HANLON: Good morning, ladies and gentlemen, and welcome to Brookings. I'm Mike O'Hanlon with the Foreign Policy Program, and on behalf of President John Allen of Brookings and the whole team here, we are thrilled to have General David Goldfein, the Chief of Staff of the Air Force, with us this morning. And thank you all for being here as well. I hope you had a good President's Day weekend.

Our basic order of procedure for the morning is that I'm going to give a brief introduction for the General, but I know many of you know him well. He has now been in his job as Chief of Staff for two and a half years and before that had been Vice Chief of Staff, Director of the Joint Staff. So I'll just say a couple of more words, but I think many people know and are grateful to General Goldfein for his service and his steady hand in these difficult times internationally and in Washington. And so after that the General will have some opening remarks, then we'll talk a little but up here ourselves before bringing you into the conversation.

Just a couple of more words about General Goldfein. I think many of you know he's an Air Force Academy grad, many of you, but not all of you, know he's also an accomplished musician and took a little time in his life to pursue that passion at one stage. So for all of you who think that the military career is always regimented and has to be by a certain path, he proves otherwise. He's also a fighter pilot. And at this stage in a career, after so many important jobs in Washington, I think generals like David Goldfein like to think back to their operational and tactical command positions. And so I will simply note that in the late '90s and early 2000s he commanded squadrons or wings in Idaho, New Mexico, Germany, and Italy, and ultimately wound up as the commander of U.S. Air Forces in Central Command in the 2011-13 period, before the long slog now that you've been making here in Washington.

So if everyone could please join me in welcoming General Goldfein to Brookings. (Applause)

GENERAL GOLDFEIN: Thanks, Michael. That may be the first time I've ever been introduced as an accomplished musician. (Laughter) And let me just say that whole starving artist thing is way overrated. That's why I came back to the military.

So let me just start off by really saying thanks. Thanks for hosting this for you and for General Allen. And we've spent a lot of time in some really bad places around the world and I have great respect for you. I tend to get as much out of these as I give, so thanks a lot for hosting these.

What I thought I might do is just give you some anchor points for where Secretary Wilson and I are right now as we approach budget submission and posture hearings going in and then jump right into Q & A since I know you want to get into some discussions.

And really there are sort of three key elements of the way we have built this budget going in and where our strategy is as an Air Force right now.

Anchor point number one is the National Defense Strategy. You may know that the last version I think I saw before Secretary Mattis ruled it out was version 67. And one of the neat parts about how we did that, both as Joint Chiefs, Service Chiefs, with the Office of the Secretary of Defense, was it was very transparent. And we had folks that were inside the team that were not only submitting portions to the National Defense Strategy as it was being written, but we were also able to adjust our budget real time to make sure that we had alignment, because it was really important, and it's really important now, that you are able to find, and those who are looking at our budget, can find the strategic alignment between what we are doing as an Air Force in our strategy and the National Defense Strategy.

And, you know, the commission that took a look at and reported out on the National Defense Strategy, one of their findings and statements in their report was regardless of the scenario, regardless of the threat, the Air Force is going to be central to any operation as we go forward. And so anchor point number one is you're going to find

very close strategic alignment with what we're proposing in the National Defense Strategy and the air and space and cyber component to that.

Second is the answer to the question that congress asked us last March, which is given that we now have a National Defense Strategy what Air Force do we need to be able to successfully execute the missions in the NDS. And there are five. And we're told that we have to simultaneously, first, be able to defend the homeland. And as we are defending the homeland we must ensure that we have a safe, secure, effective nuclear deterrent, and on our worst day as a Nation get the President where he needs to be when he needs to be there and stay connected to his leadership team and forces in the field to execute the nuclear deterrent. While we are doing that we are expected to defeat a peer threat and ensure that while we are in a fight to defeat a peer in a return to great power competition that we're also able to deter a rogue nation that might choose to take us on because they see that we're anchored.

And so we have to do those four things simultaneously while we do the fifth, which is to maintain momentum against violent extremism as a global campaign. So the National Defense Strategy says that we have to do these five things, and the question from congress was what is the Air Force we need to be able to accomplish those. And so we took the latest -- I call them fully burdened global campaign plans, because you have to look at the Russia plan, the China plan, not through the lens of just what the EUCOM and PACOM commanders are thinking about -- but what the fully burdened campaign plans are going to require to be able to execute those plans, but what will happen with the nuclear plans, what will happen with the homeland defense, and all of those.

So we look at those latest plans that the combatant commanders have and the global campaigns that we've been working at joint chiefs, and we took the latest intelligence estimates from all of the intelligence community in the '25-2030 timeframe, and based on that being the snap of the chalk line, we then ran about 3,000 iterations of different force elements to produce what we are now submitting as the Air Force required and the Air

Force we need to be able to close on campaign objectives to a moderate level of risk. And that's as far as I can go in an unclassified setting. In a classified setting I can give you far more granularity on what moderate risk actually equals relative to campaign objectives and timelines in the operational plans.

And so the Air Force we need is anchor point number two. This is our best assessment of both capacity and capability that are required to put a close on campaign objectives.

And the third anchor point for our strategy going forward is to ensure that we are restoring the readiness of Force coming off of 10 years -- 9 years of continuing resolutions. We still haven't completely recovered from the last round of sequestration. And so how do we restore the readiness of the Force so that we have the equipment and perhaps most importantly the people, the trained and ready airmen that we need to execute the missions that the air component is going to be asked to execute.

So those are the three anchor points. I'm happy to talk about any of those and any other details. We're at an interesting timeline, and I want to be up front with you that I'll go as far forward as I can on details that I know folks are going to want, but because we're weeks out from submitting the budget, I'm only going to be able to go so far. And so I just want to be transparent. I'll lean as far forward as I can with you, but if I see, Mike, I'm not able to tell you this particular number here or that particular number there, those numbers are in the budget proposal we're submitting,

MR. O'HANLON: Thank you, that was very helpful. Let me pick up on two specific points you just mentioned, and then I have a couple of more questions before we bring in the general group.

You talked about moderate risk and you pointed out you can't really get into details in an unclassified setting, but can you tell us a little bit about the nature of that risk? Is it primarily because of the new technologies, threats to our space assets, threats to undersea cables, threats to cyber systems that mean that we don't even really know if our

overall command and control infrastructure is even going to hold together? Is that the nature of the risk? Or is it more the numbers of assets? Can we deliver enough munitions on target? Sort of old-fashioned Force requirements versus campaign objectives. So is it more on the qualitative or more on the quantitative realm?

GENERAL GOLDFEIN: Yeah, and it's actually a little bit of both. And I'll offer you this, so let's say that we do end up beginning some elements of a Russia plan, my red switch on the phone in my office is going to light up, and there are two lights that are going to light up on that phone as soon as we start any working towards any execution kind of combat operations. The first light is going to be from the NORTHCOM commander, General O'Shaughnessy. And he's going to tell me based on the fact that we are engaged in this campaign or planning, there are certain Force elements I'm now required to up my level of defense of the homeland, and I'm going to require the following number of fighters, the following number of bombers, the following number of tankers, the following number of command control elements to be able to execute my portion of the campaign to defend the homeland. And then as soon as I hang up that phone I'm going to have a call from General Hyten and he's going to say in order to execute my portion of this global campaign plan, because it's not just a EUCOM plan, I'm going to require the following to change my Force posture and execute my portion of the plan, and I need to now have the following number of fighters, the following number of bombers, the following number of tankers, the following number of C2 elements. And as the guy who is responsible for organizing, training, and equipping and presenting ready Forces to the combatant commanders, I have to know what that demand signal looks like. And that's what you will see in the Air Force we need. We now have an understanding, based on some analytical rigor, that we can stand behind that says to be able to execute plan A, which always will have elements of plan B and C, here is the quantity I'm going to need.

And then to be able to execute those plans -- to your point about what's the C2, what's the command and control that allows me to knit together these capabilities, not

only from the air component and space component, but also from land, maritime, seas, cyber components as well. What you're going to see in our budget going forward is all the work that we've been doing on the multi domain operations element of this and multi domain control piece, which is the hardest nut to crack. It's how do you take all the things that we do, sensing the globe and all the domains with all the components, plus allies and partners. How do you fuse that information together into this common operational picture that allows me to understand more than you do or for us to understand more than our adversaries so that we can make better decisions and then we can bring forces to bear from all components, all domains, and our allies and partners that absolutely overwhelm the adversary.

And if they believe that we can do that, it actually defines deterrence in my mind for the 21st century.

MR. O'HANLON: And thank you, I wanted to pick up on that too, because you also talked in your remarks about the kind of worst-case scenarios that we all dread. And you and I and others in the room who are in our 50s and above, we learned about and lived about in our early career in the Cold War. Then there was this period when the specter of nuclear war wasn't as much part of the conversation, but now, unfortunately, it's come back, which underscores then some of these great power conflict scenarios that we all, again, studied and practiced for early in our careers.

War termination was seen as just as high a priority as victory. Frankly, you were better off if you could stop the war early, even if you did not defeat the adversary, as long as you didn't get to nuclear exchanges, because at that point it's harder to talk about victory anyway.

I realize this is a conundrum because we do have to be able to win the all-out fight, but our war planners increasingly think about conflict termination, a short of victory, as an essential part of the overall task here so that we don't wind up -- even if we start in a skirmish with Russia or China, that we don't wind up in an escalatory spiral that leads to

nuclear war.

You know, for me, I'm a proud graduate of the 43rd Senior Seminar of the Foreign Service Institute in the State Department. I spent a year with my diplomatic colleagues and I learned a ton about just what goes into the business of diplomacy. And I'm a believer that military power, at the end of the day, we're there to arm the secretary of state with credible military options that the adversary believes we can execute, so he and his diplomatic corps can negotiate to a better peace. And so absent the diplomatic political framework from within, we are using military force. What I'm doing is I'm presenting options.

I've also come to believe that military force also have to live with an economic framework of what it is we're trying to achieve. And there's no place that's more important than in the Pacific, for instance. So an end state that you're talking about is not just a military in my mind, it's how do I produce credible military options for the secretary of state to be able to negotiate to that end state so that we're at a better place than we were when we started.

MR. O'HANLON: Yes, that's great. Makes good sense. You mentioned sequestration too, and I realize I'm building off your remarks in a few different directions, but you covered a lot in three or four minutes and a lot of topics that deserve some more attention. And you criticized sequestration, rightly so, nothing good to be said about sequestration, but I wondered if you were using that as shorthand for all the different budgetary shenanigans, as I call them, that Washington has been perpetrating for the last decade, because sequestration as such hasn't really happened since 2013, and it was just for that several month period. But what has happened, as you know better than I, is many years of delayed budgets and continuing resolutions and an inability to start your year on time and do proper planning. Has that been just as much of a problem for you as sequestration per se?

GENERAL GOLDFEIN: It has, because it's the combination of the two. You know, no enemy on the battlefield has done more damage to the United States military

than budget instability, from a service chief's perspective. My ability to plan for the future is dependent on budget stability and being able to look at finishing something we start, because the worst thing that happens to a service chief -- and then I'll talk a little bit about what this does to industry -- is that when the throttle is going from full afterburner to idle -- from afterburner to idle, right, because now I've got to be able to look and project in the future and look at that '25-2030 timeframe and determine what is it that the air component -- what does the Nation require of its Air Force. And we're the service that operates from leaflets to nukes and everything in between. We operate from 65 feet below the surface in a missile silo to the outer reaches of space and everywhere in between. And so when you look at the diversity that the mission set, that the Air Force is responsible for -- back to the National Defense Strategy Commission that says in any conflict the Air Force is going to be central to what we have going forward.

My ability to build the Air Force we need is 100 percent dependent on budget stability and be able to plan going forward. Because the worst thing that happens -- and this is where, you know, for industry teammates, imagine the conversation that I have to have with them when there's budget instability and I have to say listen, this year, I need to buy this number of sophisticated munitions, I have no idea how many I'm going to buy next year. And somehow you need to keep this very sophisticated workforce with high level of security clearances occupied and be able to produce what I need this year, and next year I have no idea what I'm going to buy. Without any of that kind of stability how does a CEO manage the kind of industrial base we need to be able to produce the Air Force we need and the Army we need and the Navy we need and the Marine Corps we need. So it absolutely wreaks havoc.

And I will say that -- I mean huge appreciation to the leadership in congress that was able to reverse and stop those trends, because when we got a budget essentially we were able to stop the bleeding and be able to really just sort of stop the downward spiral that we have been in for years on readiness.

And then in '19, now we're able to really start climbing back out of the trough we're in. And if we can just maintain stability in the budgets going forward, we're going to be able to achieve a level of readiness that we know the Nation needs and deserves.

MR. O'HANLON: But, of course, now we have a more complicated political situation with a divided congress and we don't really know whatever the President might request for national defense, which you're not going to tell us today, but we've heard the number could be anywhere between \$700-750 billion for the overall national defense function for 2020 -- probably, I'm guessing, closer to the higher number that I just said, but we don't really know and you're not going to tell us.

But I will ask, in terms of what's important to you, I'm sure you would prefer towards the higher end of that range, but from what you just said it sounds like being sure of what's going to happen for the next two years would matter almost as much as the number itself. So if you could get a two year deal done by September, even at a slightly lower number, that might be preferable to you to getting a slightly bigger number but not having the budget until six months late. Is that a fair statement, without wanting to overdo it?

GENERAL GOLDFEIN: It is. I was trying to think as you were framing the question, I was trying to think of what song and musical terms I could give you back to describe the way forward. (Laughter) But I think you've captured it right. I mean more than anything what we need is stability.

You know, I'm the 21st Chief of Staff. In 2030, Chief 24 will go to war with the Force I built. If we go to war this year, I will go to war with the Force that John Jumper and Mike Ryan built. Such is the nature of lead time for building Air Forces. And so the question is, what kind of an Air Force can I build for Chief 24, who, by the way, if the normal timeline applies, Chief 24 has just made brigadier general. So what Force is he or she going to fight with in 2030? That's my job today, is to make sure I build that.

If I have no idea what the budget looks like and if I'm forced to spend only in the last two-thirds of every year because I'm in a continuing resolution year after year after

year, then our ability to be able to plan and build the Force we need is significantly affected.

MR. O'HANLON: So I have two more questions, if I could, General, and then we'll let others share in this privilege. Thank you again for being here and answering so many questions.

I wanted to talk about your plans and Secretary of the Air Force Heather Wilson's, as you unveiled last fall at the Air Force Association convention and have spoken about publicly since, to grow the Air Force quite substantially, which I realize will be a function of a budget that you can't divulge the details of yet. So we don't really know just how much of that plan you're able to request, but last fall when you gave your vision, you wanted to grow the Air Force by almost 25 percent, from about 312 operational squadrons to 386. And, without getting into specifics about just how much you think you can do given the budget that's about to be unveiled, as you to describe the priorities within growth. So we know that there are different elements to the Air Force, there's command and control, there's cyber, there's tankers, there's fighters, there's bombers, there's jamming, space. Out of those different categories, and others, are there two or three that matter to you most that you need to advocate for growth sort of with the most passion and hopefully the most success?

GENERAL GOLDFEIN: They all matter because, again, remember the way we went about this is we took all of the Force elements across all the missions we were responsible for and we ran 3,000 different computer iterations to determine what was the Force mix to be able to close on campaign objectives to a moderate level of risk. This is a different dialogue that we've not been in in the past decade that I know of. Normally, right now approaching rollout of the budget, we would be posturing to advocate for the Air Force we can afford. And very often, because of all the iterations we would do and because we were looking at all the budget uncertainty, we wouldn't really have a conversation of the Air Force we need. That was budget unconstrained, if you will, and analytically rigorous against a strategy.

And so it's an uncomfortable conversation for many because if you're used

to year after year after year having Air Force leadership roll out and say this is the money we've been given, and based on this amount of money we've built the best Air Force that we can buy. And here's how we've laid this forward, and we're going to now advocate for the Air Force we can afford. And we have not had the discussion that we need to have, which started when we laid out the National Defense Strategy and congress asked us, okay, with the Strategy what do we need.

So this is a different kind of a discussion going forward and it's a really healthy discussion because the American people and the congress ought to know that, they ought to know the answer to what do we need to be able to accomplish this to a reasonable level of risk.

If you take a look at the growth in the squadrons that we need, it shouldn't surprise you that the longest growth are in long range aviation, bombers, tankers, intelligence surveillance reconnaissance, C2. No surprise. Because if you take a look at a China scenario, a Russia scenario, long range aviation is going to be in huge demand given the defenses and what we have. And, you know, you look at the number and say why operational squadrons, why are you defining yourself that way. And, you know, are you playing the usual game where you ask for more than you want and then have a fallback position.

Second part first. So when we ended the Cold War and a few years later went to war against a rogue nation in Iraq to kick them out of Kuwait, we had 401 operational squadrons -- 401.

MR. O'HANLON: That's reserve as well as active guard?

GENERAL GOLDFEIN: National Guard and reserve. That's across the total United States Air Force, because as you know, as we're organized you can't tell us apart. We are really one Air Force, three components.

So 401 operational squadrons as required to defeat. And from those 401 operational squadrons we had 134 fighter squadrons, just as an example, from which we

deployed 34 forward to fight Desert Storm. We had about 980,000 airmen that made up the active guard reserve civilians in the United States Air Force, so just shy of a million. So you compare that to what we're asking for and you look at 386 to do those 5 missions in the National Defense Strategy compared to the 401 we had to defeat a rogue nation, it's not gold plated. I mean we ran this iteration to a really -- and you'll see -- and for those of you who have a secret level clearance, when we roll this out, and we're going to be doing this in closed hearings with congress as well so they can see the fidelity of the analysis going forward to say, okay, this is the right Force mix that we need to be able, again, to meet the moderate risk.

MR. O'HANLON: But at the risk of asking you a question you can't answer, let me still try to get one more level of clarification and understanding. When you talk about the scenarios against which you're building this proposed 386 squadron force, we know that in the post-Cold War period we had some variant of a two-war planning framework --

GENERAL GOLDFEIN: Yes.

MR. O'HANLON: -- for most of the period in the '90s into the 2000s and beyond. And now with Secretary Mattis and Secretary Shanahan, President Trump's new National Defense Strategy, we're thinking much more about great power competition.

MR. O'HANLON: Yes.

GENERAL GOLDFEIN: And elevating the centrality of Russia and/or China. Does the scenario that requires 386 squadrons, is that fighting Russia and China at the same time, as well as a rogue state or an extremist state in the Middle East or North Korea? Or is it assuming basically just one war at a time, but then a little bit of deterrence and crisis response capability in other theaters?

GENERAL GOLDFEIN: Yes, doing those five operational missions simultaneously. So defend the homeland, safe, secure, effective nuclear deterrent, defeat a peer, deter a rogue, maintain campaign momentum. You've got to be able to do those five things simultaneously. And so the Force we need is designed against those mission sets.

MR. O'HANLON: So it wouldn't be fighting Russia and North Korea at the same time, but it would be reinforcing perhaps the deterrent of North Korea at the same time you might fight a peer?

GENERAL GOLDFEIN: Deterring North Korea while we were fighting and winning against a peer.

MR. O'HANLON: Great. Last question. Multi domain operations. You mentioned this, the Army talks about it. I think you're the two services that have done the most, but it's not exclusive to the Air Force and the Army.

I just wanted to ask you to tell us a little more about what it means. And the reason I ask -- you alluded to what it means. It means doing everything together with cyber space and other domains, as well as air, naval, ground. But when I think through the history of planning goals or sort of new concepts, new doctrines like that, I think back to air-land battle in the late 1970s and '80s, which I think was very successful and the Air Force helped drive that with precision strike technology to attack an enemy's reinforcements well beyond the battle edge. And that was applied in Desert Storm. And so there was a bit think and a big idea around air-land battle, but there were some specific technologies that really drove it and made it possible.

But I think a lot of the phrases that I've heard since, without disparaging any of them, they sometimes verge on being so big and all-encompassing that I'm not really sure what they delivered. So joint vision, 2010, 2020, 2030, or air-sea battle, you know, which is now the joint concept for operations and maneuver in the global commons and -- very proud to have remembered that, so I had to say it. (Laughter) But some of these phrases wind up being things you just work hard to remember and you don't really know what they meant operationally or programmatically.

So can you help us be a little bit more specific in understanding what is multi domain operations in a concrete way really trying to achieve, beyond just sort of changing the way we think, which could be an important service in and of itself. But I'm assuming

you're trying to also change training and battle planning a bit. So another word on that please if you could.

GENERAL GOLDFEIN: You know, I think what happens is we tend to -- because there are so many elements of multi domain operations that are a subset of the concept that you can drive down any path and get anchored on that particular path and then you lose its connection to the overall idea, which is I think where you're trying to go here.

And so here's where it is for me, and it is Army and Air Force right now primarily that are working on this, but I can tell you that the Marine Corps and the Navy are also discussing. Air Combat Command and TRADOC you know, are the two organizations that are trying to -- that we are working towards taking it from where it is today, which is really I would say described as a ConOps. It's a concept of operations, but it does not have the fidelity that I believe General Milley and I would tell you is ready to be doctrine yet. And that's where we've got to take it, and we're on a timeline to get it there within about a year.

And that's the whole dot mil pf. You know, we as planners have got to look at every aspect of this and turn it to the point where it's actually joint doctrine going forward.

MR. O'HANLON: Yeah.

GENERAL GOLDFEIN: So here's what it means to me. It's about using our asymmetric advantage as a joint team to be able to bring all of our capabilities to bear on an adversary so that we can overwhelm them and cause so many simultaneous dilemmas for them that they either (a) they would choose not to take us on -- i.e., we have effectively deterred. And if deterrence fails we are able to win because we can bring capabilities to bear that they can't counter.

And so I'll give you a visual to give you an example of what that means to me. If a China or a Russia or another adversary on the globe ever were to see an F-35, for instance, inside their air space I would love to change, you know, all of their -- send them all a message with two words, we're here. Not I'm here, we're here. Because if they ever do see an F-35, which is highly unlikely, it will never be alone. It will be part of a penetrating

joint team. And in the we're here message, the message is we're here in space, we've been here for a while, we've been watching you, we know what's going on, and we have already penetrated whatever defenses you think you have. You cannot put a block of wood over your country, you can put a block of Swiss cheese over your country, but like Swiss cheese there are holes there and we know where they are and we can exploit them and we can get in, we can hold targets at risk. We're here. We're here with high altitude penetrating ISR. We've been here for a while and we've been watching you and we know what's going and there's nothing you can do about it. We're here on the ground, we have special forces. They've been on the ground here for a while and we know what's going on, we've been watching you, and there's nothing you can do about it. We're here, but below the surface with tactical submarines, and we're here with -- so the whole idea of this penetrating joint team is that we're here. And what I just laid out for you is not an Air Force joint team, it's this is a penetrating joint team.

You'll see about \$135 million in our budget -- I will give you that as an example of investments we're making across the portfolio of penetrating capability. There's only one weapons system that we have designed to be the quarterback of that penetrating joint team that fuses information from all sources, that can call audibles real time inside enemy air space, and that is the F-35. And so if we get multi domain operations right, what I've just described to you in a penetrating joint team will also include a standoff portion of the joint force and we'll be able to attack an enemy's weaknesses as opposed to attacking their strengths.

And so it is a fundamental change for us as much culturally as technically because we have in the business of building platforms, weapons, and sensors, and then once we field them, we then ask after the fact how do we connect them. How does this penetrating joint team you just described actually work? Well, if we built all the trucks and we haven't thought about the highway, that's going to be really hard, because we're going to find that this was built by Boeing and that was built by Lockheed and that was built by Ratiel,

and this was -- oh, and by the way, we wrote the contract so that they own the proprietary rights to the data and now it's going to cost us double the amount of time and money to be able to connect them.

And so central to this whole idea of multi domain operations is the C2 part of it. And that is how do we build the highway and then the trucks will come, because the trucks of the future that we're going to be talking about are going to be old and new, manned and unmanned, penetrating, standoff, conventional, unconventional, attributable, unattributable. All the elements of the joint team coming together.

And so if we can get that right I believe that's our asymmetric advantage against our peer competitors. And if we can harness that going forward and build that into doctrine called multi domain operations, then we can move this joint team forward.

MR. O'HANLON: Thank you. Very helpful. Let's open it up. So please wait for a microphone after I call on you. Identify yourself please and question for the General.

Do you want to take one at a time or should we take two or three at a time? What's your preference?

GENERAL GOLDFEIN: I'm probably good for one at a time.

MR. O'HANLON: We'll do one at a time; keep the focus. So the gentleman here in the red shirt please. We'll start with you.

MR. HOST: Hi, sir, Pat Host from Jane's.

GENERAL GOLDFEIN: Hi, Pat.

MR. HOST: What exactly is wrong with the gun in F-35A? The DOT&E report for a second straight year was critical of the accuracy and made it sound like a problem still remained. I was wondering if you could give us some insight into that.

GENERAL GOLDFEIN: Yeah, no. Actually to be honest with you, I have not seen reports on significant problems with the gun. But I'm not sure that given what we built the F-35 to do, I'm not certain that the gun is going to be the first place I would focus on.

When I'm thinking about the F-35 -- you know, when we talk about fifth generation, stealth is actually only a small part of that. When we talk fifth generation, it's about information fusion and being able to have displayed for you information that was not available.

You know, I'll tell you as a former F-16, F-117 driver, when I was a mission commander as a red flag, right, my job was to take about 100 aircraft and choreograph them through different time slices and get them into a battle space and fight against a heavily defended adversary and then be able to get everybody back home and do all those missions. And in my cockpit, basically what I had displayed for me was what I had on my radar and what I could hear in my headset, and that was it. And other than that my job was to try to figure out mentally in this 3D god's eye view what was going on in hundreds of miles of battle space with hundreds of different airplanes. And then I would come back to the debrief and try to piece it all together.

Today's F-35 driver is getting that information -- by the way, the aircraft is getting the information before the pilot climbs the ladder. As soon as you power that airplane up it's already starting to fuse and collect. And so mission commander now is taxiing out, hasn't even taken off yet, already getting input from what's going on in space, what's going on in cyber, already getting ready to start calling the audibles of what's going on. It's no longer for the fifth generation a matter of trying to choreograph, you know, an air strike, if you will, and try to mentally visualize. It's all there. And so when I talk about being able to call audibles, I couldn't call audibles in my F-16 because unless I was listening and I could hear something or I could see something on my radar, that was the only information I had available to me. Now, think about it, if the information is all there in front of you, you can call audibles. And so when I call up the quarterback of the joint team, it's because that's what we designed it to do.

MR. HOST: So you're not really that concerned about the gun's accuracy?

GENERAL GOLDFEIN: No.

MR. HOST: Thanks.

MR. O'HANLON: Let's see, the woman over here in the sixth row or so on that side please. Yes, yes, ma'am.

MS. WILLIAMS: Hi, Lauren Williams with Federal Computer Week.

GENERAL GOLDFEIN: Hi, Lauren.

MS. WILLIAMS: How are you?

GENERAL GOLDFEIN: Good.

MS. WILLIAMS: Good. I wanted to talk a little bit more about the C2 systems. Secretary Wilson mentioned --

MR. O'HANLON: Try that microphone. It's not -- sorry about that.

MS. WILLIAMS: No problem. I wanted to talk --

MR. O'HANLON: Much better.

MS. WILLIAMS: Oh, gosh. (Laughter) I wanted to talk a little bit more about the C2 systems. Secretary Wilson mentioned recently that a memo was sent to acquisition executives regarding interoperability. Can you talk a bit more about that and what the Air Force plans to do with that?

GENERAL GOLDFEIN: You know, when I was serving with General Allen as the Air Component Commander in Central Command, you know, I went into the job thinking that my job was going to be -- because we has surges going on in Afghanistan, we had a lot going on -- like 170,000 soldiers, sailors, airmen, marines on the ground and two rather mature campaigns when I was there as the Air Component Commander. And I thought my primary duty as the Air Component Commander, as the space coordinating authority for then General Mattis, was going to be to make sure that I understood the ground force commanders' scheme, maneuver, and intent, and then I would provide General Allen and his team what they needed with the right attributes.

That was part of my job. But I learned pretty quickly my real job was I had the only headquarters in central command to do regional level operational command and control. I didn't just have a small liaison element of soldiers, I had 60 soldiers in a battlefield

of coordination attachment who ensured that we had exactly what the soldiers on the ground needed to be able to prosecute their campaign. I didn't have just a small Marine Corps element or a Naval element, I had a team that worked for me as the air component commander. And it was the only headquarters where I had allies, I had members of the IC that were all part of this headquarters. And there was no parallel in any other component.

So what I really did day to day was produced a product that was almost misnamed. We called it an air tasking order, but in fact it's an integrated tasking order. It was the only place where you brought C2 command and control to bear to be able to prosecute this mature campaign against an enemy.

And so given the fact that that's what the C facts do for the combatant commanders, air component commanders, that we do regional command and control, it makes perfect sense that we ought to be the thought leaders on how we take this to the next step, which is multi domain command and control. Because what I would tell you about my headquarters at Al Udeid was it was absolutely state of the art and far too slow for the future, and far too vulnerable for the future.

And so where we're approaching this is through the levels of what are the echelons of command that need to rapidly go forward -- established basing where it doesn't exist, defend that base through integrated base defense, receive follow on forces that will be both joint and allied, prosecute a campaign when you may be cut off from higher headquarters due to cyber threats and cyber-attacks, and be able to prosecute that campaign in a contested environment. That's the fight of the future that we're preparing for and it makes perfect sense for the air component to think through the intricacies of how that looks going forward, and that's what we're doing.

MR. O'HANLON: The gentleman over here in the blue shirt in the fourth row please. All the way over on the side. Please wait for your microphone. Then we'll come over here.

QUESTIONER: General, very wonderful to see you.

GENERAL GOLDFEIN: Thank you, sir.

QUESTIONER: It's very unlikely that -- John Osler -- it's very unlikely that the United States would confront a China or Russia directly. It's always some other campaign, like we're in Syria and so on.

You mentioned North Korea. Have you integrated into your planning strategies and budget say the upgrading of the forces of South Korea and Japan in order to have them at a level significant in which you can assist them?

GENERAL GOLDFEIN: Absolutely. So one of my opening weeks some years ago when I first took over as Chief one of my first meetings I had was with then the deputy secretary of state. So I set up a meeting with him and I said I think as the Chief of Staff of the Air Force I have three hats I wear. I organize train and equip, and do the traditional build of service and present those forces to a combatant commander. I'm a joint chief that needs to provide the congress and the secretary of defense and the president with military advice, with my joint chief counterparts, and I'm an international air chief that has to speak on behalf of my fellow air chiefs around the globe and what they need to help us prosecute future campaigns. And the reason I met with the deputy secretary of state was I said, you know, I think in the air component I have a special role to play because if you take a look at military options that a coalition partner will offer, they have the same challenges we have of offering boots on the ground. I mean you think of the number of debates that we've had in just our country on this many soldiers, that many soldiers. There is political vulnerability here and there's political vulnerability elsewhere to offer boots on the ground. And unless you have access to ports, you don't buy navies.

And so the one military component that almost every country buys, because it helps them protect their sovereign borders and their sovereignty, and they can offer it without the political discussion, is they can offer an air component. And so the question I ask him is in the building of military coalitions, is there a special role for the Air Force, and therefore the Air Force chief, because a coalition will come together in the air and then will

stay together the longest.

And so building our relationships with allies and partners and strengthening the relationships we have, and building new, I think is central to where Secretary Wilson and I are going in the future. And we have a number of different actions.

So, to your specific questions on South Korea, yes, South Korea, yes, Gulf countries, yes, NATO, yes, South America, yes -- and we do that through our components, through the components that lives within that combatant commander to be able to make sure that we're working moving forward with both air and space.

Interestingly enough, by the way, in the space -- because I also see myself as the -- you know, today I'm the lead Joint Chief for Space. And so in April we're going to host the first ever Global Air Chiefs Conference for Space at our Space Symposium. And right now I think we've got about 16 countries, the air chiefs that have committed to come together. It will be the first time that we sit down as air chiefs and talk about the future of space.

MR. O'HANLON: Just a quick update on that before I come over here, space command, space force. Space command, is it already in the works or do you need congressional action to make that possible? Space force I know you do need congressional action, so is that going to be a central part of your budget presentation or is that something that's sort of separable? Important but sort of separate from the main budget deliberations?

GENERAL GOLDFEIN: I think today I think it's -- I may be wrong this, but I think it's like 2:00 o'clock this afternoon. Is that right? The President is going to sign the space policy directive for going forward that will establish the space force, give presidential direction to establish a space force within the Department of the Air Force.

As we've gone through these debates over the past months, I'll tell you, first of all, I think the fact that we're having a national debate on space is really healthy, really healthy. And we ought to be having that because we know -- I mean if you were define the problem statement, the way Secretary Wilson and I define it is we're the best in the world in

space and our adversaries know it. They've been studying us and they've been investing in ways to take away that capability in crisis or conflict. That to me is the problem statement and we as a nation cannot let that happen.

So as from a war fighting perspective I will tell you that for me the most important step we take going forward, and the one that we need to do the quickest, is to establish a U.S. space command as a combatant commander. Because from a war fighting perspective then all things start making sense, because we as service chiefs know how to organize, train, equip, and present ready forces to a combatant commander. I'll use the SOCOM, special operations, as an example. I know how to take airman, given them the training they need, present them to the SOCOM commander, and have General Thomas given them a higher level of training, given them some specific equipment, and then he fights them in a global campaign. I expect the exact same model for the U.S. space commander -- will organize, train, and -- now, the difference is that in special operations command all the services have rather robust elements that they offer to the combatant commander. And when it comes to space command as the supported commander, most, upwards of 80-90 percent of the Force that we'll present, will be airmen, because we have approximately 80-90 percent of the space warriors within the United States Air Force. So first and foremost, for me, let's get moving on a combatant commander.

And now that we've completed the debate -- because the President laid out his direction and we were looking at a number of options, everything from a separate department, separate secretary, separate service, right, all the way down to perhaps the left book end, which would be more of a medical corps, JAG corps kind of a model. And we have been in a robust debate, as you imagine, as sort of where is the right place to I and that aligns with the President's direction. And what is going to roll out today is a service within the Department of the Air Force. And so now we're into the detailed planning that lays out, okay, what -- because there are 1,000 decisions now that have to be made to be able to work to the intricate details of how we move forward in establishing the service within the

Department of Air Force.

Essential to me though, first and foremost, that combatant command.

MR. O'HANLON: But with the service within the Department of Air Force, it's still a separate service, so therefore it's a separate service chief. You will not be the head of that according to the director?

GENERAL GOLDFEIN: Correct. I will have a counterpart, very much like the Marine Corps and the CNO. I will have a space force chief and I'll be the air force chief, and then we'll work for the Secretary of the Air Force.

MR. O'HANLON: Great, thank you. Over here please. You've been waiting patiently, Colin.

MR. CLARK: Good morning, General. Colin Clark, Breaking Defense.

First, a quick clarifying. The old ears in this corner weren't sure whether you said \$135 million or \$135 billion for investments across the portfolio for penetrating capability.

GENERAL GOLDFEIN: B, billion.

MR. CLARK: And that's the coming budget, correct?

GENERAL GOLDFEIN: Yes.

MR. CLARK: Thank you. And the F-35 has been flying in red flag. I assume you've gotten at least an early glimpse of the results. Can you bring us up to date please?

GENERAL GOLDFEIN: Yes. So the latest red flat we had, you know we had a 20-1 kill ratio. So I'll sort of give you the traditional answer and then I'll tell you what's perhaps more important to me from a multi domain perspective and a quarterback perspective. Because the traditional model, how did it do mano-a-mano, right, how did it do against this particular threat, and how did it do against this surface threat, how did it do against those. And operationally the F-35 I can tell you is meeting or exceeding our expectations when it comes to its ability to not only survive but able to prosecute targets and

being able to not only survive, but do what I call sort of the five Ps of future air superiority. Because it has to be able to penetrate, it has to be able to persist, it has to be able to protect not only itself but those others that are in that defended air space, it has to be able to proliferate with other capabilities, and it needs to be able to punish, because it's there to hold targets at risk. Again, we're there. So against that metric, the F-35 operationally is meeting or exceeding our expectations. And that's especially with the new 3F software that we just procured going forward.

What matters more to me than how does the F-35 do against this threat or that threat or that threat is how the team is able to prosecute its desired objectives based on the F-35s capabilities to fuse information and call audibles real time to accomplish that mission. That is where we're seeing the greatest strides. It's why you hear the Israeli air chief saying I'm not integrating the F-35 into my air force, I'm integrating the Israeli Air Force into the F-35, right. Because this is about how do you look at the entire team together going forward.

Colin, I will tell you that we had made progress on the networks and the highways we need to connect these capabilities. The Secretary's memo, that somebody else had mentioned there, that we have signed giving our acquisition authorities direction that says we are no longer going to procure stand-alone capability, it has to connect across the Army, Navy, Air Force, Marine Corps, Coast Guard, is a huge step in that direction. We've laid the ground work but we have miles to go.

MR. CLARK: Can you give us any numbers?

GENERAL GOLDFEIN: Yeah, there was a -- I looked at it this morning, it was -- let me -- can I take that and make sure I get back? Because once I throw a number out if I'm not 100 percent sure it never dies. (Laughter)

MR. O'HANLON: Right here please. First row.

QUESTIONER: Thank you. Shelly Myers, retired Air Force Colonel.

MR. O'HANLON: Wait one second for the microphone please.

QUESTIONER: Good morning. Shelly Meyers, retired Air Force Colonel, command and control specialist.

GENERAL GOLDFEIN: Thank you for your service.

QUESTIONER: I'd like to just turn one minute to the personnel side. How is the input doing with our young people? Have you got enough young people? And the young people coming in today, are they able to survive and thrive in the high-tech Air Force?

GENERAL GOLDFEIN: Yeah, thanks. So today we're meeting our numbers, but I will tell you it's getting harder because we're all fishing in the same pool and the pool is getting smaller. If you take a look at the percentage of eligible youth that can meet the criteria and the standards of serving in the military, the trends are not heading in the right direction. And that's going to be a challenge for all the services. Right now, today, we're meeting our goals month by month, but where we would ring the bell because we had met our goal on the 15th of the month, now we're ringing the bell on the 29th, the 30th. And so that is troubling as we go forward.

But more important to me is what are we doing to make service in the United States Air Force as rich and a rewarding experience that we can make it so that all those things that you look back on in terms of why you stayed as long as you stayed exists for the young airmen that are serving today, for my daughter, who is serving today. How do we make this rich. That's something that you can't actually -- that's harder to measure.

But here's what we're doing about it -- you may know that one of the central themes where Secretary Wilson and I are focused is on revitalizing the fighting formation of the United States Air Force, which is a squadron. It's also why we're presenting forces in the Air Force we need through operational squadrons. That's the fighting element of the United States Air Force. It's also where the culture resides. And I would imagine, if you think aback on your career, you're like me, and when you have that kitchen table conversation about do I stay, do I go, is it time for me to transition, we want that to be a hard decision because one of the recognitions on that conversation is, you know, I don't know that I'm going to have the

opportunity to make a difference at the level I can within the United States Air Force. What I'm doing here really has value. I'm defending the Nation and I'm doing it with people to my right and to my left that are unbelievable that I may not find in the civilian sector. And the culture of this organization, I feel like I'm part of a family.

You actually can't -- that's hard to measure. But I'll tell you, that is where Secretary Wilson and I are focused. And I truly believe that of all the things we're doing, that's going to have the most lasting effect, and it's going to be the command team at the squadron level that's going to build, that's going to help us reinforce that culture.

I was really happy to go down to Maxwell Air Force Base a couple of weeks ago. We had just started -- so flight commander schools are back. Remember those?

QUESTIONER: Yes.

GENERAL GOLDFEIN: Right? We used to take our young task element of command. We've got a couple of young folks in the crowd and so at the wing commander level, we'd have a flight commander school, we'd talk about this business of command. And so now what we're doing is we're telling all the wing commanders, hey, take those flight commanders that you think that have the highest potential to serve as a squadron commander some day and you send her to Maxwell, and we're going to put her through -- now we've had our third course and we're about to start our fourth. We have 16 courses a year, about 60 folks in each course, led by a three-start retired mentor, and they focus on the elements of what it means to be a courageous and inspiration leader at the squadron command level.

And they may never become a squadron commander; that's okay. This is about the journey, this is about the campaign of learning and lighting a spark. Then they think, okay, this is what it's going to take. You know, we're not going to see the benefit of this maybe for a year or two, but if we can get the squadron command team, that commander and the senior NCO and a volunteer spouse, if we can get that command team right and build and re-enforce the culture of what it means to be in a high powered

organization that has a value, that's probably going to be the most important work we could ever do to keep folks in.

MR. O'HANLON: Let's see if we can sneak one last question. Let's try to go to the back of the room this time, where I haven't directed my attention previously. So the gentleman way in the back. Yeah, just to your left. The second one in. Yes, please.

MR. RAINEY: Hi there. Carter Rainey from George Mason University.

GENERAL GOLDFEIN: Hi, Carter.

MR. RAINEY: In August of 2015 General Welsh announced a change to Air Force doctrine, that would include the Civil Air Patrol, the Air Force's auxiliary in the total Force. In those now three and a half years since then, many of the CAP's airmen have been questioning how are they supporting the Air Force.

Going forward, what is the Air Force's strategy to ensure that those volunteer airmen are helping to support the Air Force's mission?

GENERAL GOLDFEIN: Yeah, great. So we've worked to strengthen that mission in a number of different ways. One of the most important ways is to look at the pilot shortage through a national lens. Because it's actually not just an Air Force problem or an Air Force challenge, it's a national challenge. We as a Nation -- and here's the problem station -- we as a Nation don't produce enough pilots to be able to adequately support the demand for commercial business and military aviation. And the airlines -- there is worse things than a growing economy and an airline industry that needs about 4,500 pilots a year for the next 10 years. And so we need to get America flying.

And one of the ways we get America flying is through the Civil Air Patrol. One of the ways we get America flying is by, again, sort of lighting a spark in America's youth through Junior ROTC. And so we have a number of programs that we are working on, and we're working with industry, we're working with the Hill, we're working with Think Tanks, we're working with others to say how do we produce the incentive structure to get America's youth flying, to get them focused on the business of aviation and the beauty and the wonder

of flight. And our Civil Air Patrol is key to that.

And I still find folks or airmen, when I talk to them -- you know, my common question when I go out and I see airmen is, I say, hey, tell me your story, what brought you in. Because I love the answer to that question. And as you might imagine, I hear across the board different reasons. Increasingly, interestingly enough, I'm finding more and more that say I was in Junior ROTC and I got to get my private pilot's license or I soloed in the Civil Air Patrol. And so what you'll see in our budget is a continual increase in the amount of resources we're putting towards those programs. So we're doing our part to get America flying.

MR. O'HANLON: That's a great way to finish. Please join me in thanking General Goldfein. (Applause)

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