

## Four Star Forum

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Lieutenant General John A. Bradley, AF Reserve  
General Bruce Carlson, AFMC  
General Kevin P. Chilton, STRATCOM  
General Paul V. Hester, PACAF  
General William T. Hobbins, USAFE  
General Ronald E Keys, ACC  
General Arthur Lichte, Air Mobility Command  
General William R. Looney, III, AETC  
Lieutenant General Craig R. McKinley, ANG  
General Duncan J. McNabb, VCSAF  
General Victor E. Renuart Jr., NORAD  
Lieutenant General Michael W. Wooley, AFSOC

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**Moderator:** Welcome to this next session which will be I think a ground-breaking session. We've done this in the past and it's proven to be exceptional. It's the Four Star Forum. Rarely do airmen, enlisted officers, civilians and outsiders have the opportunity to meet and interact with the top leadership of our Air Force all at once. Well, it's going to happen right now.

Let me turn the microphone over to the Air Force Chief of Staff, General T. Michael Moseley.

[Applause].

**General Moseley:** Mike, thanks. Thanks for setting this up for us and thanks for the opportunity to get all of us on stage so we can have a reasonable dialogue. I've asked Mike to humor me and let me reduce my prepared remarks to something less than two hours so we can get on with some reasonable discussions.

We are all glad to be here because it offers us a chance to listen and to think and to address the issues that are on you all's mind. I think without much further ado, we've captured most of the major moving parts of the things that concern us and I think you know all the folks that are here from General McNabb, who did a great job last night with the 12 Outstanding Airmen Dinner and who was attempting to sit down there on the front row and duck the opportunity to be up here, but we unfortunately saw him so he's up here with us. General Hester, General Keys, General Looney, General Carlson, General Hobbins, General Chilton who I'm led to believe has his confirmation hearing to become Commander of U.S. STRATCOM coming up on Thursday, so we wish him the best. General Renuart, Commander U.S. NORTHCOM; General Lichte, Air Mobility Command; General Bradley, Air Force Reserve Command; General Wooley, Special Ops Command; and General McKinley, our Air National Guard partner. So all of the

leadership of the Air Force through all of the MAJCOM commanders and all of our activities are here, looking for a chance to have a dialogue with you and address the things that concern you.

Mike, thanks again for this opportunity. We'll turn this over to you as the flight lead so you can moderate this, and thanks again.

**Moderator:** Let me tell you about the rules of engagement today. We're going to ask you to write down your questions. I've got people roaming up and down the aisles. Write them down on the cards provided and we'll pass them to our airmen in the aisles and they'll be brought up here and I will then pose the questions so everyone can hear. Also to provide more time for some of the questions.

To start off the discussion this morning I'm going to pick on General Keys. General Keys, you have called for an increase in fighter production in a number of our systems, and I'd like to have you elaborate on what you mean by that and what you hope to see and need in terms of money.

**General Keys:** This is the last time you get to pick on me. [Laughter].

Here's the problem that you have in any force, and it's not just fighter production. It's across my force. You're trying to do things efficiently, so you're trying to buy things in efficient order quantities. We've got a huge fleet out there that's averaging 24 years probably in fighters and 40 years in my ISR and bomber fleets. If I buy those things one at a time every month, the cost goes up. I need 381 Raptors, I'm getting 183 Raptors. That translates to 126 combat Raptors for my brothers in the CAF. As we look at JSF to replace ultimately the A-10 and the F-16, and we'd like to buy those at a rate that's efficient because that means I can buy more for less money. That's the big issue.

The issue is also, the timing. As these airplanes age, every year they're getting older and older. They're breaking in new and unanticipated ways, and we're pouring more money into the modernization account which is not just modernization and making them relevant to the threat, but to sustain the logistics kinds of accounts so that the brakes work and the hydraulic piping works and I don't throw a blade in the engines. So we're getting into a square corner there that if we don't start recapitalizing then more and more and more of our money goes into the Bandai fixes for old airplanes. So we have got to buy in efficient order quantities or we'll get to the place where my F-16s and my A-10s -- My A-10s, for example, I'm already rewinging 132 of them just to keep them flying. They will get to the point that

they are not sustainable and I don't have the production built up to replace them with new airplanes.

The same thing across the bomber force. It is a solid bomber force now but it's going to be old in 15-20 years. So as we start getting into the next generation bomber and the bomber after that, we've got to buy those at a rate that we can replace the things that are getting old.

**Moderator:** Thank you.

I'm expecting a tsunami of questions from Air Command and Staff College and from the Global Chiefs, but I'll ask the second question. This one to General Lichte. One of the newest commanders, General Lichte took command two or three weeks ago at Air Mobility Command.

General Lichte, what are your priorities for Air Mobility Command?

**General Lichte:** Thanks, Mike.

First of all, it's been a very fast and hectic two weeks. I would tell you, once I got out to Air Mobility Command I kind of found some good news, some better news, then maybe a little disappointing news which will help me set my priorities.

The good news is, there really is life outside Washington, D.C., Chief. I think you should come join us sometime, at least for a couple of visits.

The better news is that Air Mobility Command is out there every day doing amazing things. The Chief talks about how a bit T-tail of Air Mobility Command aircraft rolls down the runway about every 90 seconds. Chief, in the first week I was there we got that down to once every 85 seconds for you. It's pretty amazing out there how it continues to go.

The disappointing part for me is, quite frankly, we're not modernizing as quickly as I would have liked. Some of you may know that I was the Director of Plans and Programs out at Air Mobility Command in about the year 2000. I was planning on what the Commander of Air Mobility Command would have in the year 2007. Now I am him, and quite frankly, we haven't delivered everything that I thought he was going to get, and more importantly, we're not getting things quickly enough for the out years that we need to really have right away.

For example, the C-5 RRP program has been much slower than I would have expected. The tankers. When I was there we were expecting to deliver the first one in December of last year. We still don't have that. So it's slipped out. And of course the

competition is ongoing and we look forward to the results of that. But we really need to get on with that. If we don't, things are really going to start slipping.

Even if everything goes right, we don't retire the first KC-135R model until the year 2018 and the last one doesn't retire until 2048. So if we have any delays, any protests, or anything that drags out the process you start to see the impact because if we just had a three year slip and then let's say we didn't get enough funding to do the 15 per year, we don't retire the first R model until 2027 and believe it or not, we wouldn't retire the last R model until 2082. So we really have to get on with modernization.

As I look at my priorities out at Air Mobility Command, it's really the same as our Air Force priorities. WE have to fight tonight. We have to be prepared for the next war. We have to take care of our airmen and their families. And we have to recapitalize and we have to modernize and we have to do it quickly.

Thanks, Mike.

**Moderator:** Thank you. My next one is for General Hobbins.

Department of Defense has stood up a new Africa Command and clearly USAFE's got to play a big role in that. What do you see in the future of the Air Force contribution to Africa Command?

**General Looney:** AFRICOM is in fact about to stand up in its initial phase in October. From an Air Force viewpoint there are several constructs being worked, but first of all let me say that the headquarters initially will stand up in the Stuttgart area and then we're looking for a location to put it up on the continent itself. Clearly that has to be a priority for us.

We have in fact asked the African Air Chiefs, many of which are in the room today, if they would come to Ramstein and ell us exactly what they see the new air component putting emphasis on and how we would formulate it. Of course many of them talked about air security, many of them talked about air sovereignty issues. So those are the areas that as airmen I would be interested in building into the new AFRICOM and especially the United States Air Force's contribution.

I see it as a numbered air force, perhaps 17<sup>th</sup> Air Force. Of course these are all still in the discussion phases. But 17<sup>th</sup> Air Force, a small numbered air force, perhaps in the 150-man range with a separate and tailorable Air Operation Center located with the headquarters.

And in the process I also see these regional groups, regional teams being set up -- north, central, south, east, and west -- where they're additive basically to the U.S. embassy structure and helping us with the partnership building capability that I think all of us believes needs to happen in AFRICOM.

You will see a lot of civilian involvement, I think, in the new command because there's a dire need for emphasis on renewable energy sources, as I see it. Lots of capability in Africa and I've talked with some of the Air Chiefs, Jefferson Tikwani is here from Botswana. We looked at that when I was down there visiting. You can see us opening up HIV/AIDS testing centers. We're doing 12 of those, the Department of Defense is opening them up in the southern part of Africa, helping with the disease problem. And of course we're going to be interested in our number one priority which is the war on terror. Formulating to fight the war on terror, formulating to help them with the disease issues, as well as working on these partnership capabilities where we can help them with what we see as very important future and stabilization of the regions.

Thank you.

**Moderator:** This next one is for General Moseley. As you all may know, the Deputy Secretary of Defense made a decision on UAV executive agency. The question is, is his decision the last word on this, or is the decision a deferral? Will the U.S. Air Force continue pushing to be the executive agent?

**General Moseley:** That's a great question. Let me start by saying the things that we've identified from experience in Central Command's AOR, in Europe, on the peninsula in Korea, and in the Pacific lead us to conclude that there has to be a better way to do this. Y'all know and I know we have none of these systems deployed on the peninsula in the Pacific, in Europe, for U.S. SOUTHCOM or for General Renuart's U.S. NORTHCOM. Everything we've got, and we have triple surged the capability in the Central Command's AOR for General North to be able to fight forward.

Having said that, I believe there are still four chapters to this book. There is a chapter that addresses an operational concept to a ConOps that is a full theater ConOps from space to the atmosphere, manned and unmanned. That particular document is in work. Our A2 is working that, our A3 is working that and we are partnering with Air Combat Command with General Keys, and I'll offer him a bookend comment on this in just a minute, as we work this through Joint Forces Command.

The second chapter is on acquisition, on streamlining acquisition, on standardizing, on ground stations, linkage, bandwidth, connectivity, et cetera. That is one of the concerns

that I've had since I was Commander of U.S. Central Command air forces, and then as the Vice Chief, and now the Chief. That part is what we've addressed with OSD and with the Deputy Secretary, Mr. England.

The third chapter of this is airspace control, deconfliction, and how to operate manned and unmanned systems in the same airspace to get maximum effect, maximum desired effect from all users, but also maximum effect from the assets that are deployed. And to have each and all of the systems deployable to meet the capacity and the demand.

The fourth chapter of this is air defense. The Global Air Chiefs and we over the last couple of days have had an opportunity to talk about some of these things, but the proliferation of systems creates a little bit of a challenge which will grow to be a much bigger challenge in the world of defending the airspace against known and unknown systems that operate. Whether they are manned or unmanned. So you've got a ConOps challenge, an acquisition challenge, an airspace control and deconfliction challenge, and an air defense challenge, all emerging into the future as we begin to get more and more and more systems that are more and more capable into the battlespace.

So as we've identified those we think there should be the ConOps; we think there should be standardized tactics, techniques and procedures. From three or four years ago we began a journey that takes us to a Center of Excellence which is only focused on those tactics, techniques, and procedures. That now, we've all asked that that be moved to Joint Forces Command so Air Force Air Combat Command and Army TRADOC can work with Joint Forces Command and the entities, as I said, A2 and A3 for us, to get our arms around this concept of operations.

The notion of the ConOps being written now. You have the Center of Excellence moving the Joint Forces Command and you have the ConOps now with oversight of Joint Forces Command, so those first couple of requests are being met.

The decision that the Deputy SecDef made recently on the proposals in the studies and on the Joint Requirements Oversight Council's recommendation to make the Air Force executive agent, what Secretary England did was take the steps in the right direction. I'm not unhappy with the decisions that he has made in these first steps. There are more steps to go. There are more opportunities to partner. There are more opportunities to understand the defining of the requirement and the defining of the demand signal on things like full motion video. There is more work to do on orchestration of the ConOps and how that applies to General North's world or General Sipe's world or General Woods' world on the peninsula in Korea, or General Utterback's world at 13<sup>th</sup> Air Force in the Pacific.

So there is more work to go, but I believe the first steps have been taken and I'm not unhappy because this is also a recognition of the environment that we have identified as airmen because this battlespace is something we are very familiar with.

I would offer from the spring and summer of 1996 is when we first deployed the Predators from the 57<sup>th</sup> Wing at Nellis and we have never brought them back. The units that have deployed these assets have never had the opportunity now in 11 years to bring the assets back to do the things that we would normally do with the normal manned aircraft as far as Red Flags, Green Flags, ORIs, OREs, the assets have been constantly deployed now for the 11 years.

So we have learned some incredibly rich lessons in doing this in the Balkans, Kosovo, in the no-fly zones, Afghanistan, Iraq, partnering with other agencies, partnering with homeland security, partnering with the Coast Guard, partnering with the Navy, partnering with the Marines, partnering with the Army, but the battlespace is the battlespace. It still takes us to the notions of streamlining the systems that we buy, operating the systems in a joint environment, providing and meeting joint requirements as defined by the combatant commander, and then worrying about the deconfliction within the battlespace and in air defense.

So long answer to a short question. There's more work to be done. I'm not unhappy with the first steps. I'm okay with the first steps. We're moving the ball in the right direction but there's more dialogue, more work to be done, more demonstrating competency to be done, better work on defining requirements, better work on defining capacity, that's ahead of us.

So Mike, let me turn it over to the Air Combat Command commander who worries about this every day inside his world of being the force provider.

**General Keys:** Thanks, Chief. I'm less happy than you are on the turn of events.

My position is this. The JROC is a committee and now we've turned it over to another committee and a committee has often been described as a cul de sac down which good ideas are lured and then quietly strangled. [Laughter].

My thought is let's put somebody in charge of this. Let's hold them accountable. Let's see if we can't sort this out. We're in a ridiculous situation now where we've probably got a thousand UAVs down-range of various kinds of systems, and the control systems are not compatible, the data systems even more

egregious. The data systems are not compatible. We need to bring order to that.

There is a lot of information out there that is going to a single person when that information would be useful in developing the mosaic that we need to see across the battlespace and we have got to move away from that kind of approach. Additionally, we're in a ridiculous situation where in fact the Army and the Air Force essentially are competing for production of the UAVs. That's not good. I think we're getting charged twice. I think we're not getting the best ideas on all of our UAVs and that to me is what an executive agent brings order to. It's not necessarily the tactics, techniques and procedures that you're going to get into, just JFCOM and the combatant commander and the component commander downrange can work those kinds of things. But we are in situations where I doubt that there's anybody at this very moment who knows where every patrol is downrange. Certainly the Air Component Commander doesn't know where it is and doesn't know which the highest priority is and where his UAVs ought to be.

Similarly, at this very moment I'm not sure we know where every convoy is and where every convoy that's leaving in the next hour is going to leave from and whether I've got ISR assets positioned in the right place to see the things that need to be seen before they drive into an ambush. That's the kind of thing, in my opinion, an executive agent works through to provide the capability to connect all of these things together so we get the right information to the right guy at the right time. That's what I'm going to continue to push for and I'm sure that John Corley who comes behind me is going to continue that fight. This is a joint problem and we've got to have a joint solution, and for too long we have got good ideas, and they're all good ideas, but they're just not compatible good ideas, and we've got to work on that compatibility.

**General Moseley:** There are a couple of other folks at the table that have useful insight on this. Let me ask General Hester from the Pacific about the notions of how we could use these in the Pacific; and General Hobbins from Europe; and General Wooley who we have done some work in transforming squadrons to be able to meet the demand in a special ops world. And let me close down there with General McKinley because as you all know, we've stood up squadrons to operate these, to provide global capacity within the Air National Guard in California, Nevada, Arizona, Texas, New York, and North Dakota. We have several of these state National Guard experts flying these in combat now.

So Mike, let's go down the table here and get kind of a global perspective about this with the Pacific, with Europe, with Special Ops, and with the Air National Guard.

**General Hester:** Thanks, Chief.

I think as we go down the table you'll find, to use one of the words mentioned this morning, the mosaic to be painted because you'll find both from the acquisition and the developmental standpoint which is being worked both by the Chief and the Pentagon as well as Ron Keys down at ACC. Then as those get developed and we get those technologies built into it, they get forward deployed to people like Mike Wooley and Tom Hobbins and me.

In the Pacific we're already with a program to bring Global Hawk into the Pacific starting in '09. It's going to Andersen Air Force Base out of Guam. It also will then stretch through our program at the moment for about five years until we get fully vetted down.

The interesting part about that is, of course, the Global Hawk is intended to replace as a substitute for U-2s which are typically today flying on the peninsula. So we have them pointed for where they're going to do work, but there's a much broader array of things that we can do with ISR platforms, both Predators and Global Hawks.

Notice that we don't have a program at the moment for bringing Predators out until we get a much broader acquisition program, and we're working our way through where we might be able to use Predators as a short-range piece of equipment in the Pacific.

Currently, though, with many of the Air Chiefs and many of the countries in the Pacific we are in an ongoing discussion of about two years about Global Hawk. Where does ISR play into the performance of all of us and our desire for peace and stability in the Pacific to secure or guarantee the economies of those countries that are throughout the Pacific of which of course we are the largest economy playing in that. And how do we protect those lines of communication, both air and sea lines of communication, that we have?

For instance in the Malaccan Straits over half of the world's oil passes through the Malaccan Straits every day. So those countries that are very close around the Malaccan Straits have a very clear interest in piracy in that region. So we're in a long discussion with them about is there a way that we can use in a consortium style operation, and that word may not be the right expression, but in a way where we can in fact share information. Share information of either owning, building new sensors, having a gas and go operation so that we can take fewer platforms and extend them throughout the Pacific for longer

periods of time with that 28 hours that the Global Hawk will stay airborne.

So we find that if we can work hard in the Pacific arena with ISR platforms, that in fact on what I call the left end or the low end of military operations, that operations where we provide those eyes, ears, information for decisionmakers, both military and political, inside the respective countries that exist in the Pacific. Then in fact we find the ability to solve problems early as opposed to waiting until later when we've got our guns drawn and we're pointing them at each other.

We want to avoid the latter and do the former, which is to work closer together. I've been pleased with the acceptance of the ideas and the thought processes we have with many of the Air Chiefs in the countries in the Pacific.

Ron Keys is going to offer us the opportunity next year to bring a Global Hawk into theater and to do a demonstration, and we're working hard with many of the countries to look and see what the Global Hawk can provide for us.

That comes back to the point of if I need more rather than less. To do what we're talking about and discussing in theory with the other countries we need more platforms to look for ideas, we need the opportunity with large airplanes like Art Lichte is going to provide us with the C-17. To be able to have a rapidly deployable program with a Predator out in the Pacific so we can move that quickly with a very small footprint and be able to go to places of interest at any time that we can.

That obviously means as we cut across both our service, other services in our military and the services of other countries, you need to have an ability for it to be useful across that and that means you've got to have an executive agent who in fact can provide you a piece of equipment that is useful across all of that domain and those players who want to participate out in the Pacific.

**General Hobbins:** Let me just take off a little bit on where we are on the European area with unmanned aerial vehicles. Clearly it was a discussion topic during our many regional conferences that the Chief elaborated the four chapter book and agree with it totally. And I would tell you that the Air Chiefs also felt the same way.

In Europe a little different situation. There's 157 different types of UAVs developing. There's 17 nations that are flying UAVs. Most of those are tactical UAVs down at low altitude. But there are a large number of nations, I believe it's seven, that are flying in the medium altitude range, [MAL], there are some in the high altitude.

Clearly some co-development going on with the EuroHawk, as you know. They're interested in the Predator. In fact the Italian Air Force flies Predators in Afghanistan and we use full motion video.

We have looked at unmanned aerial vehicles from a road map, a flight plan if you will, standpoint. I am the executive director of the Joint Air Power Competency Center in KALKAR which is a NATO think organization that has published a flight plan on unmanned aerial systems to include every type of system that's being used, the types of missions, the frequencies, all of the deconfliction mechanisms we'd like industry, academia, and our nations to grab on to as they see the development.

I will tell you I believe you will see the future involve linking of UAVs and UAF systems for several purposes, both communications and signals intelligence. That linking will probably be, I think we'll use simulators along the way to help us understand and define the way ahead with both medium and high altitude as well as tactical systems. We'll have to remember that these systems will be developed much like manned aircraft were, unmanned will follow the same evolution that manned did. We'll see multiple systems being flown together I think by one operator. And I also think we'll see much more emphasis on the various sensors that we're using together.

The Spanish, for instance, use UAVs in a non-traditional way to look at the congestion on their freeways. So I would see us using a layered approach in Europe, trying to put together the flood light, search light, spot light layering of systems and sensors and I think the NATO nations are going to develop along that way to make sure they use the standards they've developed. You'll find standards in every single one of the collection, process, exploit and dissemination areas for imagery right now in NATO. They have a standardization bible, 4586, that they live by. We'll see as that develops and as money becomes available.

**General Wooley:** As I've done before, I want to thank the Chief and General Keys publicly for making our UAV squadron, the 3<sup>rd</sup> SOS, a reality. When my combatant commander at the time, General Doug Brown, U.S. SOCOM, asked us to go full speed ahead on developing our UAV capability for full motion video on the battlefield which is his and now Admiral Eric Olson's number one priority for us, the Chief and General Keys came to our aid.

Let me explain why full motion video for us in the Special Ops world is so very very important. During the Cold War it was very easy to find the enemy but very difficult to engage the enemy and kill them. We're facing a different problem set now in the global war. We're looking for a needle in a haystack of needles, that one individual or that very small team of

individuals that we would like to capture or take out. So full motion video gives us that capability.

Our SOF UAVs are doing marvelous work out there once they get on a target, both protecting the ground team as they go in, able to surveil a location, give current intelligence to the team as they go in, which way do the doors open, what kind of breaching equipment will they need? Is there anyone on top of the building? Can you land a helicopter on top of the building? What's over the next ridge or what's around the next river bend? All of those things the Predators are bringing to the fight.

The other thing we're very excited about is the collaboration with the UAVs and the gunships. We're able to take a UAV, put it in over the target and look at the target solution, beam it into the gunship as it's coming in, lower its vulnerability as it comes in for the first orbit, and more often than not can take a shot on the first orbit where before we had to stay at least one or two orbits to work the target solution with eyes on target. So we're very excited.

As General Keys said, though, we have been in a constant surge since we stood up the 3<sup>rd</sup> SOS so that has us concerned and there's no letting up. So the faster we can get more UAV capability in the very small, the Predator size and larger UAVs, and more full motion video, we can get out there for our SOF teams the better off we will be.

General Craig McKinley is going to help us out in that regard.

**General McKinley:** Thanks, Mike, and I too would like to thank General Moseley and General Keys.

We're building a transformational Air National Guard of the 21<sup>st</sup> Century and part of our total force initiatives that transform us from platform based or fighter, tanker and lift aircraft into 21<sup>st</sup> Century capabilities is the movement into unmanned aerial systems.

WE have units in California and North Dakota, Arizona, Texas, soon in New York, and also in Nevada, that are now trained and are now servicing the COCOM with these capabilities. It's a nice match when you lose a platform like an F-16 to transition those pilots and those maintenance people, highly experienced people, into this new system.

My most recent trip was to the 119<sup>th</sup> Fighter Wing in Fargo, North Dakota. They have fully transitioned from their F-16 mission. A proud unit that had won three William Tells and two Hughes Trophies. Now their pilots and maintenance people are now

working in the MQ1 program and doing a great job for the combatant commander.

So like Mike, we are going to be users of this system. We are going to transform our Air National Guard. And I know General Bradley would say it about the Air Force Reserve and the Global Hawk. We're going to use places like Grand Forks, North Dakota where we can partner with civilian universities and create centers of excellence so that our citizen airmen can bring those skill sets to this very very challenging and rewarding new mission set.

Thanks.

**General Moseley:** Mike we have a combatant commander here at the table also that may have something to offer to us. If General Renuart would be willing to share some thoughts, that would be helpful I think also.

**General Renuart:** Thanks, Chief.

It strikes me as I listen to all of the comments that sort of each of those capabilities apply to the homeland. Whether it is in our NORAD hat defending the nations of the United States and Canada; now in the maritime domain as well as in the air domain, the use of unmanned systems provides us great situational awareness and tools to look over the horizon.

The duration of systems like Global Hawk allow us to sustain that situational awareness, to look into the reaches of the Pacific or the Atlantic and try to help us pin down where a maritime threat may arise.

But every day we're taking advantage of the versatility and flexibility of unmanned systems on closer-in targets, if you will. We're providing support to the border and customs, to the Drug Enforcement Agency, to alcohol and firearms agencies to help stem the flow of illicit trade and trafficking across our borders. Now they're not enforcing, they're supporting. And this concept of using unmanned systems to support a DoD effort in support of another agency is something that we've begun to mature every day in our role as homeland defenders.

Critically important in this is that we have standardized procedures, that we have standardized networks, that we have data systems that are common across a variety of domains. We don't have that today. I think, as the Chief said, we've made some steps forward to drive us towards that standardization but we have to continue that. Whether we deploy them or we keep them at home to support the homeland, we've got to ensure that the data systems all work, and I may need to push that picture to a fire chief as opposed to a fire team.

The final piece is that we've got to work in our own interagency to ensure that our Federal Aviation Agency understands the importance and criticality of the use of unmanned systems to defend the homeland. There's real hesitancy today and in many of your countries out here for the Air Chiefs, you've solved this problem, we haven't. There's real hesitancy to let an unmanned system fly around in our national aviation system. Unfortunately that's a fear based on myth, not a fear based on the reality and the ability of great airmen to control these systems and integrate them across our national aerospace systems.

So we've got a lot of work to do in that regard. That's an interagency discussion that we have every day out at NORTHCOM and with our NORAD partners.

Thanks, Chief.

**Moderator:** Chief, this next one is on the acquisition process and I think I'd like to ask General Carlson to start with it but it affects all of you. It's a two-part question. We've had a lot of the, in the middle of the acquisition process we've had a lot of hiccups with appeals and GAO reports and things like that. Is the process working smoothly? Are there changes we need to make?

The second part of the question is how is AFSO-21 Initiative, how is it working out? It's been rolled out about a year. Can you give us some feedback on how it's going?

**General Carlson:** Thank you, Mike. Let me just, if I might, talk about the AFSO-21 stuff first. I'd like to share a little good news before we talk about maybe something that's broken a little bit.

The Air Force Materiel Command I think, without getting outside my lane, is leading the Air Force and maybe the Department of Defense in AFSO-21 initiatives. I could give you a host of things. I'll just maybe list a few. We'll just take the F-16 CSIP line. That's a program where we're upgrading all of our Block 40s and 50s to the color displays and a new computer and what not. That started out at about a 142 day modification. We've got that down to 119 days now with a goal to take it down even more. We're saving about \$85,000 a month.

When I look at F-16 pylons which we have to upgrade and modify every three or four years, two years ago we had 350 backorders; we had 146 flow days to get one of those through; we're down to 18 days now and we have no backorders.

C-5 PDM, we're at 100 percent on-time rate. We just don't deliver any late any more. We're saving several thousand dollars

a month. We did that in 236 days. We're down at 174 at our last cycle.

Those are just some examples of what we're doing to increase aircraft availability.

Our next big effort, and I've committed this to the Chief and the Secretary, is to take the step beyond increasing aircraft availability which I think we've done fairly well at, and go after cost savings. We've simply got to find a way to bring down costs so that we can contribute to the huge aircraft and weapon system recapitalization problem that we have in the Air Force.

That brings me to your first question, and that was we've had a few hiccups in our acquisition system, and is there a problem. You bet there's a problem if we've had hiccups.

I think there may be some disagreement amongst those in industry and those in government. In fact those in contracting in government and those in legal in government and those who are program managers also have different views on this. But there are several initiatives underway to correct some of those problems.

The Chief and the Secretary have put Ms. Payton and Don Hoffman and I in charge of what we call DNSWS, that's develop and sustain warfighting system, which is everything from the requirements process through the development, acquisition, test and sustainment that we do in the Air Force.

We held our first, the first-ever what we call life cycle management executive forum here a couple of weeks ago, and we addressed for the first time in the Air Force the 50/50 problem with the acquisition and sustainment people in the same room. Out of that came some changes in policy and direction and the way we will handle future acquisitions to ensure we don't have to continually work the 50/0 problem.

We're working also on the requirements process to streamline that. We're working hard with industry, in fact we'll have a CEO Conference sponsored in about three weeks with several of the major CEOs in industry to focus on what we can do better in the RFP process. We are not doing that well. They're complex. In some cases they're almost unreadable. We have a series of rules that have been put in place over the last few years as a result of some of the legal problems that the Air Force has in the past that make that process very difficult to navigate through for those who are trying to service our contract. So we're working hard on a number of those issues and I think we have begun to make some changes but many more are needed.

**Moderator:** This next one is for General Looney and also General Bradley and General McKinley. It's focused on recruiting, not just in the actual recruiting side but also in the training and education of our new folks coming in. Are we having any problems with this process, and are there any issues with certain skill sets such as pilots, engineers, technical specialties, doctors, medical, et cetera?

**General Looney:** No. [Laughter]. Thanks for that question about recruiting because I want to tell you that I could not be more proud of the way we are engaged and involved in the recruiting business.

First let me just tee up the environment that our recruiters are working in. I'm not sure I've got my number exactly right but it's very very close. If you take the entire American society in the 18-24 year age group, over 77 percent of them, or 76, something like that, are not qualified for military service. Not qualified. They either have academic issues, they have moral and character issues, their tattoos are not acceptable, whatever the case may be. But what that tells you is we're operating in the area of about 23 to 24 percent of the American society in these age groups are qualified for military service.

Of that group not only the Air Force is after them, but so is the Navy, so is the Army, so are the Marines and the Coast Guard. And let's not forget the commercial sector. After all, they want people with a work ethic, they want people who have a desire to succeed, drug free, criminal free, et cetera, et cetera.

I guess what I would tell you is the environment is pretty competitive out there. What's encouraging is that we are doing so very very well in recruiting. This year in April we made our goal for '07. We already have about 25-40 percent of the goal accomplished for '08. We have reservations, as they call them in the recruiting business, all the way through February of '08 to get the numbers we need into the United States Air Force.

I think there are a couple of reasons for that, to be very candid. The first one is that we've got a great product to sell. And let there be no doubt, that's what you do in recruiting. You're selling a product and you're competing with everyone else that is selling theirs. The United States Air Force and the way of life that we enjoy, along with the opportunities that we present to young people, are hard to beat. That's why we're bringing these folks in.

The second thing I think is very very impressive is our recruiters. We have the smallest number of recruiters assigned to the mission of any of the services. If you go to one of the strip malls and visit the recruiting organizations -- the Air

Force, the Army, the Navy, the Marines, all lined up -- you'll find about 13 to 14 Army recruiters; you'll find around eight to nine Navy, maybe ten; seven or eight Marines; and one Air Force. We get our goal every month. We get our goal every month.

So we've got some great individuals out there, great airmen pounding the pavements with great initiative, figuring out how to get the numbers. I think another caveat to add is we are not lowering our standards. You heard the Chief I think two years ago state unequivocally the United States Air Force will not lower their standards, and so we're bringing in the same quality of airmen we brought in when all of you joined. As a matter of fact it may even be a little higher quality, to be very candid. [Laughter].

So I am really pleased where we are with that. You've heard this before about the things we're doing with regard to the training and the education of our new airmen that are coming in, both on the officer and the airman side. Today at Lackland, just to give you an idea, when an airman shows up the second day of training they're issued an M-16. It does not have a firing pin, nor does it have a bullet for obvious reasons. [Laughter]. They then live, eat and sleep with that weapon until they graduate six weeks later. Six and a half weeks later. That is, by the way, going to be extended to eight and a half weeks here within the next fiscal year. The reason we do that is to create a mindset in those young airmen that they are not a hydraulic specialist, they are not going to be a security forces individual, they're not going to be a PJ, they're not a personellist, they're not a medic. First, they are a combatant. They're joining a combatant operation. They are going to be combatants. Then after that they'll be medics, they'll be security forces, they'll be personnelists, they'll be whatever. That's a significant change in the way we're doing our training and our educating and creating an entire culture of airmen.

We're doing the same thing with our officer corps because we're going to have a shared experience is the goal at Air and Space Basic Course or the Academy, the Reserve, the Guard -- everyone is going to go through that together. ROTC. After their commissioning, and it will be more focused on combat skills than it has ever been before. Moving towards a 70 to 80 percent focus during that timeframe on gaining combat skills, learning to work together as a team, and remember first you're an officer and a combatant, then you're a pilot or a navigator or a logistician or whatever the case may be.

So those are the things that we're involved with and working initiatives that are ongoing. I could not be more pleased with what we've been able to accomplish in the recruiting area and what we have been able to do and continue to do, and everything looks very very reasonable in the near future.

**General Bradley:** Things have gone very well for the Air Force Reserve Command in recruiting. We reached 100 percent of our goal for this fiscal year on the 28<sup>th</sup> of August. We're still putting people in so we'll go way over 100 percent as we have for the last seven years. In fact I think percentage of goal wise we've led all components in DoD for the last several years. We've got great recruiters that bring in great people.

Now we take some people straight off the street and we get a large number of folks from the regular Air Force, folks who decided to separate, folks who have been force shaped or due to personnel cuts in their particular skill level, so we're the beneficiary of a talented pool of experienced airmen, and it has worked very well.

We have a couple of areas where we have some very small problems. We don't have enough navigators in a couple of our units. That has affected us some. However, my flying units are more than 70 percent in the top two readiness levels, and all of my units are well above 60 percent in the top two. So we are not hurting badly, but recruiting is very strong for us and our retention is almost at an all-time high, even though our folks have been working harder than we have in our history, I think. So I think folks are pleased with the jobs that we give them and the deployments that we put them on and they are staying with us rather than leaving. So that's been a very good news story for us.

I'm pleased that recently, as the Chief announced at Maxwell a couple of weeks ago, we're moving all of our Air Force Reserve folks who will become officers into Officer Training School. We've been sharing in the Air National Guard training at Knoxville in the Academy of Military Science which is a superb program, but we want that shared experience. We have just begun entering people in, we've always sent people to OTS that are going to flying training but some of the rest could not get slots at OTS. There just weren't enough. There are plenty of slots available now so all Reserve airmen who want to become officers will go through OTS now, and that is a very good deal for our command.

So I'm very pleased with how things have gone with recruiting and retention and our readiness levels, and it has solidified our abilities to support our Air Force in the Global War on Terror.

**General McKinley:** Thanks, General Bradley. I too am very pleased with our recruiting efforts but I, of all the people on the panel, will have to report probably, we haven't got our September numbers, that we will miss our end strength goal of 107,000 this year by about less than a half a percent. But as I

said in professional development yesterday, we have the most qualified Air National Guard we've ever had, the most experienced, and the best equipped. And I will not trade readiness dollars to go out and recruit and pay huge bonuses to people who won't stay with us.

Chief Smith, my Command Chief and I, watch this every week and every place we go. The Air National Guard is a community-based organization. People join the Guard and Reserve because they want to stay in for years, they want to make a career out of it, and like John Bradley, I get the preponderance of my folks from the active component. So as the active component draws down 60,000 people, roughly, 40 to 60, we will take any member from that force shaped force into the Guard, and I know John feels the same way about the Reserve.

We've got to also factor in too the fact that the Air National Guard, as I said in my initial answer, is transforming for the 21<sup>st</sup> Century. If you take the state of Michigan, all three of our flying wings in Michigan have changed mission sets. Our A-10 unit at Battle Creek has moved down to Selfridge in Detroit. They will now move those A-10s to Detroit. The F-16 unit will leave and the KC-135s that John has there will replace the C-130s. So an airman in Michigan will train and retrain to a new specialty. So that's happening across the country for a variety of reasons.

So on the first of April, 2008, all our new manning documents become effective and so that is the true measure, is can we recruit to the new documents that will have the transformed Air National Guard as part of it. So we're excited, we're happy, we're pleased with our force, and we're pleased with the Air Force support of that force.

**Moderator:** Thank you.

Chief, I asked for a tsunami of questions and about half of the 300 I got up here are on personnel issues. So I'll phrase you a multi-part question and you can go at it any way you want.

There seems to be a lot of happiness in Air Force people doing Army jobs. There also is, the nature of the questions, many of them revolve around the fact that we're drawing down our end strength at the same time we've got new demands for Cyber Command, new demands for AFRICOM, and there's probably a lot more out there that this audience may not be aware of. Additionally, we've drawn down to help recapitalize so the broader questions are how are we doing on that last one, and how does the personnel and end strength situation look for the future?

**General Moseley:** Mike, that's a great one. Let me take the in lieu of tasking question first.

I know there is a lot of happiness out there by doing this, but let me put this in perspective. The country's at war. U.S. Central Command is the combatant commander that is engaged. There are a variety of stresses on the American military and a variety of stresses on each of the services, whether it's the land component, the maritime special ops or air. I truly believe the country's at risk at a level much higher than it's been probably before World War II with this business of transnational militant terrorism and criminal activity. So the notion of the Air Force as a member of the joint team being able to contribute when and where we can is a constant and it's a given.

The challenge in this is to provide people with the core competencies that meet the requirements as defined by the theater. General North sitting over here is the first, his hat at the COMAFFOR, Commander of Air Force Forces, as well as his role as commander of U.S. Central Command Air Forces is our window on the world of defining requirements for this in lieu of tasking.

Let me be honest with you, though, the term "in lieu of" is a big irritating to me as a Service Chief because that presupposes that our folks are milling around doing nothing, waiting to be asked to go do something in lieu of. I think there's probably a better way to couch that requirement.

The first challenge in this is to define the actual requirement for a skill set, whether it is someone from Army, Marine, Navy, Air Force, or Coast Guard. General North and the folks at CENTAF and Central Command are the clearinghouse for defining those requirements. As that requirement comes forward, our A3, General Chandler, and our A1 General Brady, are the ones that then take that on to see if there are core competencies that we can match and not cross service red lines on dwell time or on sending people out to do something that they're not qualified to do.

We then take a look at the available assets through the MAJCOM commanders as A1, the personnel guys, begin to work that.

The other piece of that which we have worked very hard is General Looney, and after I finish I'll let him address how 2<sup>nd</sup> Air Force works the training for this, because I would offer to you that that has been a challenge up front, but that has been a story that Air Education and Training Command and 2<sup>nd</sup> Air Force has worked very very hard.

We are very sensitive to sending people out to do something that is outside their core competency. In fact that is one of our red lines as we evaluate and validate the requirements that General North and Central Command sends.

I am also very very aggressive in knowing what our people are doing once we send them out to General North. General North has done some great work along with 2<sup>nd</sup> Air Force in defining a command and control system that tracks the people that 2<sup>nd</sup> Air Force and Education and Training Command prepare that then prepare, that then go into the theater, to make sure they're actually doing what they were originally sent to do. We've had some experiences that lead us to believe that sometimes this bears watching, that people are actually trained to provide a certain skill set and then get into theater and then are told to do something else. As a Service Chief I'm not necessarily amused by that. So General North has been very aggressive in making sure our command and control system knows where every airman is and that airmen work for airmen.

So the in lieu of tasking, I don't know that this will end but I will tell you that we will continue to be very very vigilant and aggressive on making sure that people are trained to do the things that we send them to do, and that we know where they are and we know what they are doing and that airmen work for airmen.

On the end strength. PBD720 gave us a bill to pay relative to the investment accounts, the infrastructure and O&M accounts that took us to a shaping of 40,000 people. As the Army and Marine Corps growth has occurred after that decision, and General Keys has been very involved in working with Army TRADOC on getting visibility on exactly what these brigade combat teams, and for the Marines, regimental combat teams, will look like relative to our ASOSs and ASOGs, our combat controllers, our terminal air controllers, our combat com, our combat weather, all of the airmen that live embedded into our land formations, what does that mean to us with Army and Marine Corps growth? What does that mean relative to the training pipeline that General Looney is in charge of as we think about preparing more of the terminal controllers, combat controllers, or battlefield airmen overall? How do we do that better and what is the baseline given Army growth?

Those are some questions we don't have answers for yet. And Mike, I don't have an answer yet on what does that mean for our air-to-ground support people that are embedded in those units. We're working that with the Army and General Keys and TRADOC are all over that.

As far as AF, Air Force Cyber Command provisional, we're okay right now with a provisional headquarters, but once we can get General Lord in place and begin to get his arms as a provisional commander around this so he can better inform the rest of us at this table about the potential growth and the partnership within that joint community through U.S. Strategic

Command and the elements inside U.S. Strategic Command, I don't know that I can tell you how big Air Force Cyber Command will be.

But you know we have now that a provisional command has been announced and a commander announced and a staff, that we can begin to ask the right questions on location of the command, size of the command, habitual command relationships within the Air Force and within the joint community and with Air Force Strategic Command. Those are the guideposts out there that we will ask General Lord to come back and inform all of us. We'll have a chance to chat about this again at Corona in about another five or six weeks, and then we'll have another update in Corona in February so we can get at the possibilities that appear to be wonderful opportunities with Air Force Cyber Command in partnership within the joint community.

Our challenge in the force shaping, though, has been not to disadvantage our people and our families if we can. The personnel folks have issued several paths, and as you all have heard me say before, I have called these opportunity ladders. If we have someone who can move into a stressed AFSC, officer or enlisted, that's the first place we would like the person to go. If we have an opportunity for that person to go into the Reserve component or the Guard component, that's the second place that folks can go. The third place would be to move into Air Force civilian work which of course you all know we take very very serious about career patterns and growth and expertise inside the civilian side of the Air Force. If those don't work for the individual we have several venues for inter-service transfer into the Navy, Army or Marines to keep the person on board within the Department of Defense. If none of those work we have opportunities to help transition into a life outside the Department of Defense. So this has been worked very hard to make sure everyone that is touched by this have all opportunities and all visibility on options beyond active duty.

So I don't have an answer for where we're going to be given Army or Marine growth, and I don't have an answer about where we're going to be with the standup of AF Cyber, and I don't have an answer about what the in lieu of tasking or another name will look like over the next year or two years or so. But you can rest assured that those of us at this table worry about this and work this every day for our people.

So let me end up with General Looney talking a little bit about the training for in lieu of tasking because that's a critical piece of the question that you've asked.

**General Looney:** I don't know the exact timeframe, but I imagine it was somewhere around three, maybe even four years ago, that the Army initially began to ask for airmen to come and pick up some of the taskings that they just weren't able to fill. The

numbers were small at first, 100, 200, numbers like that. And initially we as an Air Force tried to work that through the staff. Slowly but surely those numbers began to grow, and about the time we got up into the 2500-3000 folks per year it became apparent that this was going to be a lot more challenging and difficult to work than just working it as a staff action up at the Air Staff.

About 18 months ago, thanks to some command chief visits to different locations, we became aware of some severe disconnects with the way the in lieu of training was happening. Essentially the Air Force was really not, we didn't have our arms around this one. The Chief asked AETC to pick this up and I passed it on to Mike Gould, 2<sup>nd</sup> Air Force Commander, and for the last 18 months we have worked this very very hard.

I think the first thing to appreciate and kind of take as an assumption is that in lieu of tasking is not going to go away. Maybe it will, but I think as a guiding principle to start off with we should not bet that it is, and given that, how do we make it as efficient and effective as we possibly can up front, and when the individual arrives in the AOR and when we bring him home. So we needed to create a command and control system. We have that at 2<sup>nd</sup> Air Force. An O6 is in charge. As a matter of fact, one of John Bradley's folks from the Reserve is doing that for us along with a small staff. We have members assigned at each one of the Army power projection locations, a small Air Force debt to ensure our people are received and equipped and properly trained and cared for as they should be, et cetera. The other thing is we've worked with the Army, they've been very receptive to allow us to validate the training that we're going to give these airmen. Some do not need all that an Army individual may need in that particular skill. They should also get credit for the skills and talents they bring already to the fight. So we've worked that very hard to ensure that our people don't have a lot of down time or wait time going from one to the other because in each one of these cases these folks go through the power projection training before they even start their four month, their six months, or their 365 tour. So to ensure that this is efficient and effective time spent, is one of our challenges. We've worked that very very hard.

I believe it's been a great success for us as an Air Force. We have our arms around it. We know where every single one of our airmen are. We know what they're expected to be trained on and what training they are getting. We are coordinating with CENTAF when our airmen arrive, that if we have trained them to do this particular job that that's the one they're assigned to. If not, what is the rationale as to why they have not been assigned to that job, and whether or not they need to stay there.

So I think we've worked that very hard. One thing I'm very proud of as an Air Force is that our attrition in the in lieu of training on the Army power projection locations is 1.3 percent, every year, this last year, less than 173 and the vast majority, I'd say 75 to 80 percent are medical issues. They had something occur -- broke a leg, had a fracture, whatever the case may be in training and weren't ever to complete. Compared to some other services that are participating in this, our attrition is astounding compared to theirs. So I'm really pleased where we are with this.

Like I said, I don't think it's going to go away any time soon, so therefore our obligation as the senior leadership both at the officer and enlisted level, is to ensure we provide those folks with the best care and most efficient and effective training possible. I'm very convinced we're doing that now. Thank you.

**Moderator:** Now Chief, we've got a couple of officers on the panel that have escaped the questions thus far, so General McNabb, what happened in the Tank yesterday? [Laughter]. I'm only teasing.

I do want to ask General Chilton a question. That is, how concerned, and for those of you that may not have been here, he addressed us at the last open forum, but how concerned are you about the China ASAT test? And then after you comment I'd like to ask General Hester to comment both about China and North Korea in the strategic sense.

**General Chilton:** First of all my view on the China ASAT test was it was irresponsible. They created a debris hazard to not just the United States of America, but all peace loving nations that want to operate in low earth orbit. Both military and commercial.

It was in an ironic sense kind of like, as far as the effect it's had, similar to Kim John Il's Taepo Dong launch on the 4<sup>th</sup> of July where it made it very clear to us that missile defense is something this country needs. China's action this year makes it very clear to us, those who weren't aware of it already, that space is not a sanctuary. And that we have to consider that domain just as we consider every other domain that we operate in under the sea, on the sea, on land, in the air, as a domain in which people may try to take away the asymmetric advantage that we frankly enjoy with the capabilities that we deliver not just to the Air Force, but to the entire joint fight. So it was a wakeup call, I think. It was something those of us in the space business in our great United States Air Force had been thinking about for a long time. Now everybody gets the picture, I think.

**General Hester:** I think General Chilton has talked certainly adequately about those launches. I might mention that North Korea, as you might know, and I'm sure there may be some other place in the world, but certainly in the Pacific, this is the last vestige of the Cold War that we look at.

Six-party talks are active. We, the United States, are heavily involved in this. Steve Wood who's the 7<sup>th</sup> Air Force Commander and Deputy Commander for U.S. Forces Korea is heavily involved in keeping the peninsula ready to fight tonight because the artillery tubes that are just north of the DMZ that are pointed towards Seoul and to the south every day. So that physical fact has not changed while the world has changed dramatically around the Koreas. North Korea still remains a vestige of a time that's long passed with a very controlled and closed state.

I think the six-party talks are certainly of value to us. Need to be successful. Much of that, as you might well know, is centered strictly on the nuclear program and how we resolve the nuclear issue with North Korea.

That provides an opportunity for us to keep one eye out at night, keeping you a little bit awake at night searching on that. But again, I think we've got the right people on the peninsula. One, with General BB Bell who is our commander over there, but also the Air Force commander, General Steve Wood.

China is a different issue, one which we look at every day. Modernizing rapidly. There has been much written and said about transformation inside the Chinese military and the reasoning that is not explained to the outside world as to why they are transforming with the kind of equipment, and also to what extent are they transforming? In other words, if you go to the WorldWideWeb and go to Google today you can principally see everything that's in the U.S. military budget. You can see where America is spending its money and you can see where America's policies are because it's very open and very public. Not so with China at all. So there's a lot of conversation when we get a chance to sit down with Chinese visitors about what are their intentions as well.

I've just recently visited China. The first time, I'll say this and I think I'm fairly accurate, the first time that an American Air Force general has visited in about 15 years. It was obvious when I sat down with their Air Chief that they were excited, inside blue suits of our nations, they were very excited to see another blue suiter sitting there with them. I took several messages from General Moseley to pass to their Air Chief. He warmly received those. Anxious to respond to one which was an invitation to come and visit with General Moseley here in the

United States. We're hopeful we'll be able to get that done in rapid succession.

Interesting conversations with them across a broad front of issues. Interesting as well, in that we have pushed for them to be more open. Again, another tag line of conversation with them. They did take me to look at some of their newer airplanes. Not the J10, but the let me look at a couple of their newer airplanes and airfields we have not seen before. But I think in the strategic sense it is a matter of continuing the dialogue, both at the political level, of course, but also at the military level. We've started that with my one visit. That's one data point in the visit scenario. We need to be observers into some of their exercises. We've already invited them last summer to come and be observers in our exercise. Three carrier exercise. I sent two fighter squadrons down to Guam. We had three Chinese generals there. Sent Chip Utterback out to be their host and escort for the occasion. We've not been reciprocated as yet, and we're looking for that reciprocal.

But at the strategic level, which his being worked by a variety of folks of course starting with our President through our various Secretaries of the departments, you support that strategic engagement by the personal engagement and we need to be more personal not at the general officer level, but we need to be more personal at the mid-range NCO, mid-range officer level so that you have a good two decades of work by those folks who meet and try to understand each other, getting to know each other, that they grow up and that one day one of those people who met today will grow up to replace General Moseley as our Chief and then their Chief on the other side. So they have confidence and some trust so that you have no miscalculation and miscommunication anywhere along the way.

There's a lot of work to be done here and we're going at very very slow baby steps. Americans who are very impatient, and I'm an impatient person as well, we would like to be on a full trot by now. We're working hard to try to get the speed up so that we can have some exchange. But China is a strategically important country, large country in the Pacific, and as well we'll need to be engaged and continue to be engaged for peace and stability in that region.

**Moderator:** Chief, this next one's from a foreign Air Chief, and I would daresay it's probably maybe one of the most challenging questions we've got today. The question is, while it would be ideal to have a 100 percent high tech Air Force, what in your reckoning would be an ideal mix of high, medium and low technology weapon systems for the future?

**General Moseley:** That's probably going to take about a week to answer, but let me offer -- [Laughter].

I think first it depends on how you view the threat. I think first it depends on how you conceptually view the mission. And then I think it depends on how you analyze the mission and the threat relative to programming resources against whatever it is you need to acquire, whether it is airlift, whether it is search and rescue, whether it is manned or unmanned, strike, whether it is intelligence, surveillance, reconnaissance, whether it is command and control, whether it is logistics, whether it is personnel, whether it is all of the connective tissues that make an Air Force an Air Force. Do you look at it as a capabilities based assessment which then takes you to the levels that you just described. Some could be high tech, some don't have to be. Some can be just enough reliability and presence that it can do its job.

Overlay that, the perceived threat that you have to play against in defense of your country or the planning guidance that you've got from your country, in our case National Security Strategy, the planning guidance that comes from the Department of Defense to the military departments. If the threat systems out there drive you to the notions of whether you are an Army or a Navy or an Air Force, that drive you to the notions of the systems that you have to acquire and the training that you have to commit and the people that you have to develop the competencies, then that takes you to a higher end notion if the threat drives you to that.

So Mike, I would say there is room in an Air Force for a mix of high -- in your words, high, medium and low tech. But perhaps another way to say this is there's room in an Air Force for a variety of systems that provide capabilities and capacity to generate numbers of sorties or numbers of events relative to, and then you can fill in the blank. Is it lift? Is it search and rescue? Is it surveillance and reconnaissance? Is it strike? Is it long range? At what range do you have to operate? Do you have the luxury of not having to operate at over 15 or 20,000 miles? So it takes you, I believe, to a set of discussions within a programming and planning cycle based on capabilities and based on threat.

The United States Air Force also looks at this as a mix because not every single platform, and we have to be careful not to view this as just a platform discussion but a notion of synergies, of capabilities and capacity. Not every single thing we have has to live at the far right hand scale of technology. But keeping systems around or keeping aircraft or capabilities around for 40 or 50 years also begins to create challenges. It becomes low tech not because it was 40 years ago but because the world has passed it by.

So in the United States Air Force when we look at the recapitalization discussions that we all have to meet the requirements that U.S. NORTHCOM or U.S. STRATCOM or Pacific or Central Command or SOUTHCOM or European Command have, we look at what is the best way to meet those requirements? If the threat drives you to a new system, if the threat [... tape skip ...].

And how does that fit into the dialogue that we all have with our governments on what is the primary mission of the Air Force? Then do you go down that road with capabilities or threat-based? So I think there's an opportunity for a mix. I think there is a danger in thinking everything needs to be high tech. Everything does not need to be high tech but you need the right tool at the right time and the right place with the right command and control structure and the right training and the right competencies and the people trained to actually perform the mission.

So I think there's an opportunity there to cross that whole spectrum. Depending on how you set the condition and depending on the mission that you've got.

**Moderator:** This next one is for --

**General Keys:** Let me just jump in. I always worry there's a pejorative view of high tech. I don't know what high tech is. It's really the right tech.

The argument always devolves into should you have P-51s or should you have F-22s? That's the wrong argument. I think the Chief has it right. You have to have, what's the mission, what are you trying to find? Are you trying to find a tank Army or are you trying to find five guys on a donkey? That will drive what kind of sensor you're going to need.

There's a lot of high tech stuff that works in a low tech mission. Over time whatever tech you have is driven by how much money you have. That's what gets you into the high tech, the medium tech and the low tech. Everything will gradually age out. The world changes, the threat changes. You've got to be sustainable, meaning you've got to get your systems airborne, you've got to get your systems to operate, but you also have to be relevant to the threat.

When we look at it down at Air Combat Command for the CAF, we're looking at we've got to fight tonight, so it's today's fight, it's tomorrow's threat and it's the futures technology because we are a technology based force and there is a game changer out there. If someone gets their hands on it, I can be out of business, no matter what my tech is. So I've got to divide my focus up into three things. The things that I have today doing the things that need to be done.

No one envisioned putting a laser pod on B-52s or on the B-1 back when we bought the B-52 and the B-1, but we have those pods on the bombers today in order to fight a fairly low tech war with fairly high tech, sophisticated things.

The Rover system that we have that takes the video from either the Predator or from the AC-130 or from the sniper pods and other pods that we have, we didn't envision having those kinds of things back when we got the pod.

So it's a matter of you adapt your technology, your high tech, to those kind of things that need to be done, and it's not just a competition between well, you don't need all of that. In some cases I've been asked many times why do you have the F-22? You don't need that in Afghanistan and in Iraq. That's right. I don't need it there. I needed the F-15 and the F-16 that I bought 30 years ago to win that war and the F-15 I will grant you is 104 to nothing in air-to-air combat over the last 30 years. It will not be 104 to nothing over the next 30 years if I can get the Eagle airborne over the next 30 years.

So it's a matter of as things age out, the world moves on, you've got to have the ability to get into the fight which is a sustainability and modernization question, and you've got to be able to win the fight which is a threat relevancy question. That's the balance that I think you are constantly fighting.

We go into this, all the budget discussions, with a vision force. This is the force that I would be comfortable with. I can't afford that force. Then we get into the programming force and that's where you start to take risk, and you take risk by having old airplanes and they break in ways that you didn't anticipate. You may not have as many weapons as you need. You may not have all the sensors to the highest fidelity that you wanted. Those are the risks that you take as you balance across the force -- high tech, medium tech, and low tech.

**Moderator:** Thank you, General Keys. This next one is for General Carlson and for General Keys, and there is a healthy bit of skepticism in the audience that given the budget strains and the level of procurement that we've got going, that we can bring a new bomber on by 2018. Can I ask you both to comment on that statement?

**General Carlson:** Sure, you can ask General Keys.  
[Laughter].

I don't think there's a question that we can bring a bomber on by 2018. We can do that if that's what we choose to do. We can't bring a bomber on with a two-speed cigarette lighter and a fur-lined glove box. It will have to be a block type program and

we'll have to walk into this with our eyes open, restrain the requirements, and then do it in a streamlined way. We know how to do that. We've done other programs like that in the past.

What we don't have that we had in the past to assist us is the developmental planning workforce available inside the acquisition enterprise in the government and the industry, but we're doing a number of things out there that have aided us in this manner. So with adequate funding, and I think we're probably about 95 percent of the way there right now, we can make this happen by 2018.

**General Keys:** I agree. There are three risks. There's a financial risk, there's a technical risk, and there's a political risk. In this town, people do everything for you short of giving you real help. [Laughter]. What tends to happen is someone is skeptical of your program so they take money out of your program which stretches out your program which then drives costs up which then other people come in and say your cost growth is out of control so they take money out of your program and you get into this death spiral.

We're committed to making this happen. As Bruce says, this is not going to be E-flat, double clutch, all aspects, fur-lined glove box and a Bose stereo in this thing. This is going to be technology we know or we know we can get to and it will be a block upgrade, so all the fancy stuff will be okay, that will be the C model.

I think we can make it. I think we've got a good handle on what the requirements are right now and I'm pretty confident that we can get there from here. I'm sure there was someone sitting her 25 years ago talking about the F-22 that said the same thing. So we will see. But we're committed to making it happen.

**General Moseley:** Let me add a notion to that. I'm glad there are folks that are skeptical, because that means there will be folks that will continue to watch and continue to provide support as we demonstrate that we can actually do this.

I would also offer to you that at the end of the day one of the things that defines an Air Force is range and payload. The soul of an Air Force is to be able to range targets with a payload that is useful to provide persistent coverage and to provide strike and to provide the signatures on an airplane that make it survivable.

As you look at the benefits that we have seen over having the combination of the B-1, the B-2 and the B-52 over time, I don't think there's anybody in this room that would question the nature of range and payload and the ability to reach targets at distance.

Remember from the early phases of Operation Enduring Freedom, the longest bomber mission flown in the history of combat aviation was flown from Whiteman, Missouri, to targets around Kabul and Kandahar and back -- 45-plus hours airborne. If you don't have that capability, how then do you play into the policy world as a country with deterrence and dissuasion? How then do you hold a global set of targets at risk? How then do you play into the normal attributes of an Air Force that are not limited by water or river crossings or mountains or terrain?

So those skeptics that say it can't be done, I wonder what they thought before December 1903 when Wilbur and Orville said they could fly? I wonder what people thought when folks began to extend the range of airplanes to provide access to a wider set of targets to be able to deter or dissuade, and short of deterrence or dissuasion be able to strike and lethally kill?

So we're committed to building a next generation platform that has those attributes of survivability signatures that are right, the technology baselines that are right, and it won't be the Cadillac version because that's not required. What's required is an aircraft that can provide the capabilities for the theater commander and to U.S. Strategic Command, and to the national leadership that provides options over those ranges. With that precision and that timeline.

So Mike, that's a great question. It's a great question to kind of come to closure on because, again, the soul of an Air Force, whether it's mobility, global mobility, or whether it's global vigilance with our ISR constellation and networks or whether it's global strike, is still range and payload.

**Moderator:** I'm sorry to say this brings us to a close of this session, and what a great session it was.

[Applause].

**Moderator:** Chief, what our plan is, I've got about 300 questions here. I'm going to give these to the ACFC commandant to have the students write answers up through General Looney to come back into you to help us out for the future.

**General Moseley:** That would be helpful, Mike, thanks. And we'd ask you to review those and provide comments on each and every one of them. [Laughter].

**Moderator:** Thank you very much General Moseley and the major commanders.

**General Moseley:** Mike thanks to you for being the flight lead on this. This is very useful for all of us and it's an

opportunity for a dialogue and to share some thoughts. And thanks again to the AFA for setting this up.

Welcome aboard in your new capacity with the AFA. We know you and you know all of us very well, so we're looking forward to a long and healthy relationship with you, Mike. So thanks, my friend.

[Applause].

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