

"Current and future Threat Environment Facing the USAF"

Lt. Gen. David Deptula

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Lt. Gen. Deptula: Good to see you. I'm looking for a laptop.

Moderator: Because there's no what?

Lt. Gen. Deptula: A laptop. A laptop was supposed to be here. So here's the presentation, so we're trying to find one right now.

Moderator: Here's the presentation.

Lt. Gen. Deptula: We may have it before -- flexibility.

Moderator: Do you have a --

Anybody have a laptop?

Lt. Gen. Deptula: Do you have my laptop? [Laughter].

Moderator: I knew there was a reason I brought my computer.

Lt. Gen. Deptula: Here, why don't you give that to those guys and they'll --

Thanks very much, Sandy, for the kind introduction. What I'm going to do, because I was given 55 minutes, is go ahead and get started and then we'll catch up with the charts when they them set up here.

But let me start this morning by thanking Mike Dunn and all of the members of the Air Force Association for doing everything they needed to do to put this convention together. Because it really does give us an opportunity to get together and share ideas and catch up on the latest technology and educate others on the criticality of maintaining a strong Air Force.

As many of you know, maintaining a strong Air Force, however, is becoming increasingly difficult for a variety of reasons, one of which is the evermore complex capable and

proliferating threat. And that's what I'm going to be addressing this morning.

Threats aren't standing still, and if we want to maintain our ability to fight and win in the future, we can't afford to stand still either. I don't think I have to belabor the point to this crowd gathered here that the Air Force has a 62-year history of successful operations. But those didn't come easy.

It was because of the lessons learned in the skies over Europe and the Pacific during World War II, and then Korea, Vietnam, and for the past 18 years in the Middle East, which our Air Force achieved a doctrinal, technological and operational superiority unsurpassed by our adversaries. We got here because we anticipated change and adapted our air, space, and cyber capabilities to meet the threat.

But we shouldn't take these advantages for granted nor assume that we'll retain these advantages in a world where potential adversaries have been learning from our successes. They have been very attentive students.

Where do applied technology, doctrine, and thought, to deny us in the future the advantages we worked so hard to obtain over the years. Now what's at risk is the dominance we've come to expect across the spectrum of Air Force core functions.

Our first look/first shoot capability tied to superior tactics has ensured that opposing air forces were incapable of effective opposition. Our security plans and policies relied on our Air Force for its nuclear deterrence and global precision attack capabilities in every major U.S. operation since World War II. It's these capabilities that give US policy makers a hammer when diplomacy fails, and it's these capabilities that new threats are working hard to deny in the future.

Providing timely situational awareness to our national leadership, joint force commanders, and our allied and coalition partners is also a capability that's becoming challenged. Of course with every military combat operation or civil relief effort, our success is tied to rapid global mobility and agile combat support. Our adversaries have set their sights on disrupting these capabilities as well.

Also, in a time of increased focus on irregular warfare, Special Forces are playing an ever-larger role in environments that are becoming increasingly complicated and

dangerous. And as an enduring Air Force core function, personnel recovery, remains an imperative mission.

Finally, the cutting edge command and control behind all operations is coming under risk with ways and means that we're just beginning to recognize.

You know I told my staff, come over here and set this stuff up and make sure that when you run through -- [laughter] -- so Snake, I'm holding you personally accountable. [Laughter].

[Pause for audiovisual setup here.]

About the only other thing I can remember similar to this is one time I was giving remarks at a graduation for an F-15E RTU, you know, and there are like 70-80 people in the audience, and one of the parents of one of the folks who was graduating had a heart attack in the middle of my speech. The good part of that is, you know we kind of paused, we stopped, I didn't continue going on. We got some folks in and revived him and he was okay.

That was kind of like the end. We could go right to the end. [Laughter].

Actually, I'll just wrap this up and I'll do the questions and answers. But there are some really cool builds in here.

All right, let's see if I can catch up here. You got all that? [Laughter].

It's a changing world, and there's one more growing threat to our aerospace operations that may affect our nation's ability to maintain credible deterrence, and assure our sister services and allied partners protection from and access to air, space, and cyberspace. The permissive era of aerospace operations today, earned from the lessons of conflict of the 20th Century, may not last. In order to continue our advantages, we have to recognize the growing threats and act to negate them.

In the past, friendly air forces were generally only considered vulnerable once they crossed into enemy air space. We use superior technology, tactics, and techniques to bypass, avoid, or overwhelm our threats. We completed our missions with effectiveness and the highest degree of precision that technology allowed, all with the aim to minimize casualties on both sides.

You can't hear me. Can everybody hear me in here? What? Are you afraid your recorder won't pick it up, or what? [Laughter].

Gosh. You know there's danger in the room when a reporter makes that comment. [Laughter].

No, I'm going to use this. Okay. No more interruptions.

Today, however, our window of vulnerabilities have increased across the full spectrum of air and space missions, to include pre-mission preparations as well as the launch and the transit phases. Now, three factors have contributed to this increase.

First, our adversaries have been exploiting technology. Our adversaries have learned that one way to defeat our technology is to steal it, copy it, study it, and emulate it.

In 2005, for example, a South Korean national was caught attempting to export U.S. helicopter engines to China. The shipments were authorized for the South Korean army, but the spy diverted the shipments to China. In addition, factors like dual-use technology make it more difficult to keep up with espionage attempts.

While these tiny application chips shown here have legitimate commercial purposes, they were stolen because of their use in the Hellfire Missile System. We are increasingly vulnerable to our increasing reliance on computers and the internet. In many cases, potential enemies can study our technology without leaving the safety of their own intelligence facilities.

Second, potential adversaries observe our training and operations in order to better understand how we operate. At the low-tech end, a sympathizer armed with a cell phone and binoculars can observe and report on airfield operations.

During Allied Force, I think many of you recall that plane spotters in Italy and England observed our takeoffs and landings, calling back to Serbia with the information. Today, armed with a credit card and access to the internet, anyone can access data from commercial satellites that less than a year ago was considered classified.

So regardless of the levels of technology our adversaries apply, they're constantly observing our

operations and learning, and the results can be catastrophic.

Finally, and where air, space, and cyber power is emerging as most vulnerable, perhaps, is in the area of Adversary Information Operations. Today we face an incredibly media-savvy opponent, one who is very adept at using the camera as a weapon, using visuals to create desired effects not otherwise achievable. This is all a great example of effects-based operations.

This adversary is able to oscillate reality, as Chuck de Caro outlined for those of you who attended his presentation yesterday. They use information to deny us the use of ways and means they cannot counter directly and enables them to influence perceptions around the globe.

Air power is one military instrument they can't deny us physically. So they do it with information, creating the effects that cause us to limit employment ourselves. These expanded challenges have driven an opening in our window of vulnerability and it's a trend that's going to continue into the future.

Now the depiction here describes the traditional mission phases, and I'm going to use this depiction as we walk through the remainder of the brief.

While we've addressed, to a degree, the impacts of cyber exploitation, in future conflicts an adversary is likely to execute a significant cyber attack before we even step out the door to load or fuel our aircraft. A consequence of globalization is that we don't produce all the computers and related electronics that we use.

Unfortunately, up to 20 percent of their components are counterfeit. And some of them contain so-called backdoors that allow the builder to extract data.

In 2007, Seagate announced that an unknown subcontractor in China had loaded password-stealing routines on some of its new drives. Luckily, this activity hasn't caused critical failures in Air Force operations yet, but it's a growing threat and part of the purview of our new cyber numbered Air Force.

Now one way to disrupt operations is to deny use of owned networks. This denial of service strategy was recently applied by North Korea, and Russia used it in the cyber isolation of Georgia. Attackers use zombie computers, those used without the owner's knowledge, to generate vast

amounts of electronic traffic in order to overwhelm network bandwidth.

Pictured here is the denial of service attack against Western Europe in 2006. It shut down European websites and slowed network traffic for those using the affected servers and routers.

As we move forward on this mission prep chain, increasing threat ISR capabilities are now enabling their significant insight into our mission preparations that we once could use as part of building surprise.

ISR need not be complicated, need not be expensive. Many of our adversaries conduct human intelligence on a daily basis, monitoring media and physical surveillance. They're all effective methods. I think that single picture revives what happened to us before.

At the more advanced end, many countries have the capability to place a variety of sensors into space. As I mentioned earlier, anyone with a credit card and an internet connection can buy access to these sensors, further increasing our operational exposure.

Moving to the launch phase and most likely having already telegraphed that we're about to initiate an operation, adversaries are now acquiring the ability to strike us before we even start our engines.

Air power is complex and requires extensive ground support. Without a functioning ground-based infrastructure, there is no fly, fight, and win.

The ready availability of communications technology coupled with the glut of modern military hardware for sale have led to a new breed of well-equipped adversaries. As a result of proliferation, our forces also operate under the threat of catastrophic attacks utilizing weapons of mass destruction. High-tech or low, this class of weapon could be used with devastating effect.

You know a small number of nations still maintain long-range aircraft capable of disrupting our operations as well. China's venerable B-6 bomber has been improved, along with the land-attack cruise missile it carries.

Russia's Blackjack is capable of delivering long-range cruise missiles, and even its aging Bear fleet remains a threat. It is now common to see them patrolling off the Alaskan coast. Russia has in the works a next-generation

global low-observable strike aircraft designated the [Pak DA] that's pictured here.

The land attack cruise missile threat will also increase over the next decade. At least nine foreign countries are involved in land attack cruise missile development today.

Increasingly, our overseas bases are at risk from surface-to-surface missiles. Systems like the North Korean Taepo Dong II have been in the media recently, and Chinese CSS-4s and 5s could certainly have an effect on operations in or around East Asia.

Another example is Iran. Shown here is the Shahab-3. Based on the North Korean Nodong design, it's capable of hitting targets 1,300 kilometers away and, as such, it's a real threat to forces deployed in the Middle East.

The surface-to-surface missile threat is now truly global. Long-range stalwarts like the SS-25 and the newer SS-27 are road mobile, extremely difficult to find and interdict. The CSS-4 and the DF-31A represent significant threats to U.S. forces operating in the Pacific, and the Chinese are setting the stage to announce a new missile capability next month.

Likewise, with advances in technology, so will come missile defense penetration aids, making the missile defense equation all that more difficult to solve.

As you can clearly see, the U.S. military is confronted with the reality that we are becoming increasingly vulnerable on the ground. Accordingly, we need to prepare to deal with this mounting set of threat capabilities.

Even in transit to our mission objective, the challenges continue. A critical area, where they are becoming a significant factor, is in the space domain.

Much has been written about China's test engagement of a satellite in 2007. The key takeaway is that space is no longer a sanctuary and our satellites are at risk. If key satellites are affected, we stand to lose command, control, and communications that are the backbone of our military operations.

For five decades, the United States has led the world in space. Space ops have improved life not just in the United States but around the world, enhancing security,

protecting lives and the environment, speeding information flow and serving as an engine for economic growth.

As a result, the space domain is perhaps the most likely arena for threats to achieve leveraged effects against our national security goals and operations. Technology exists to physically negate our satellite operations using means to create reversible or destructive effects. Russia envisions this capability becoming the norm in the not-too-distant future.

In addition to our growing space vulnerability, we need to acknowledge how the maritime domain, vital to U.S. military operations, is also being challenged by emerging threat capabilities. The U.S. military relies heavily on the maritime domain to support global ops.

Military Sealift Command provides essential combat support to sustain friendly operations. Long-range strike, anti-ship cruise missiles, piracy, mines, and, in the very near future, advanced double-digit surface-to-air missiles, like the SA-20 system, are all migrating to the maritime arena and being deployed in areas where they can threaten our ability to assure our friends of support.

Avoiding detection by adversary systems is also becoming more complex and difficult to achieve. In the past, we've enjoyed the ability to generate a large degree of uncertainty in order to create time and space to accomplish our missions. Today, over-the-horizon radar allows adversaries to get initial indications of friendly force presence. Passive radars can be used to establish rough tracks with no warning to our crews. These sensors then cue other more accurate tracking systems.

The result is the area that we operate in free from detection is rapidly shrinking. Our adversaries are going to have capabilities that we've never operated against before. We may have overmatched today against threat capabilities that we have operated against in the past, but we'll be facing entirely different capabilities in the future.

The fighter threat is also increasing in terms of both quantity and quality. As many of you know, Russia leads the world in the production of fourth-generation-plus fighters and in their export of these aircraft to other nations. In the quantity available today, these systems are no match for our most modern fighters. But as their numbers increase, our edge will erode as threat numbers rise.

Of course, we want to develop friendly partnerships with both Russia and China; that's one of our strategic goals. But at the same time it behooves us to remember the success of the Russian MiG-21; the most widely produced and deployed jet fighter in history.

Over 50 countries operated the MiG-21, not just Russia or China. Fourth-generation-plus fighter production will never reach the production of the MiG-21 -- 12,000 aircraft -- but we need to be prepared to deal with advanced fighter technology in quantities and locations beyond Russia and China.

Fifth-generation systems that aspire to rival our F-22 are also being pursued. The Russians are working on the PAK-FA, and China is working on their XXJ or F-12. Export of both fighters will likely take place, and the prices they'll charge will likely undercut the F-35. This provides the opportunity for both nations to acquire near F-22 performance while attempting to proliferate the systems to, perhaps, near F-35-like quantities.

If you take a look at this comparative time line, it shows that Russian and Chinese programs are not that far off the development mark we've set for the F-22 and F-35. Additionally, they're not all that far off into the future in terms of IOC.

These advanced systems are no small matter, as they're specifically designed to rival our fifth-generation systems in every way, as you can see as depicted on this chart. So with over 50 nations now flying Russian or Chinese fourth-generation fighters, and the emerging potential for the export of fifth-generation technologies looming, we may be facing a fighter threat capability in quantities we've never experienced before. Not just numbers, but the capability of the individual aircraft.

If that's not enough to get your attention, perhaps this is; proliferation of advanced surface-to-air missiles that are pushing us farther out from the threat. So let's take a look at just how much this threat is expanding using some territory you all our very familiar with, not some amorphous chart.

What you see here is a Legacy Air Defense Mission System, like the SA-2, set up on the national mall in DC. It can reach out about 27, 29 nautical miles, depending upon the variant. Today, with systems like the SA-10 and the SA-20, our adversaries have extended that range almost four-fold. They can reach out and target aircraft as far away as

Richmond and Philadelphia and at very low altitudes, even at these distances.

And then when you take a look at systems like the SA-21 and even those more advanced that are being developed, they can reach out to 300-plus nautical miles. So folks, that means that they can target an aircraft over Detroit or Boston from right here in DC.

As with advanced fighter proliferation over the coming years, these advanced surface-to-air missile systems will be operating in every corner of the world where we can expect to be operating.

Finally, we arrive at our target. But this too has become more difficult to impart our desired effects. Just like the increasing complexity of the threats we face in all other aspects of the kill chain, networking using modern technologies is complicating the targeting process.

As networks adapt and grow smarter and more redundant, critical nodes become a heck of a lot more difficult to find. In the near term, threats will share information near real time across an entire network so that target data is available to any shooter from any sensor. Killing one shooter will not necessarily have the immediate effect on the entire network.

So putting it all together, I think it becomes quite clear that the battle space of the future is becoming much more complex than we've ever faced before. The threat environment across all our operating domains will only get more severe as technology and knowledge of U.S. operations proliferates. The spectrum of threats our air and space forces will face in the future is expanding at an unparalleled pace.

You all know that your Air Force has been engaged in combat ops continuously since 1991. And in this period, we've enjoyed an unprecedented freedom to operate in air, space, and cyberspace. Threats are now emerging designed to specifically limit that freedom in every domain and in every phase of preparation and execution.

So let me conclude with a cautionary note. Our track record of predicting the future is not very good. The bottom line is we don't know what contingency we'll be called upon to conduct next. But we do know this. We have not seen the end of conflict, either irregular or major regional combat, nor will we always have the good fortune of operating in permissive air, space and cyberspace.

Accordingly, we need to be prepared to operate successfully across the entire spectrum of operations and increasingly so in contested and denied environments. In a future filled with uncertainty, one thing is certain, and that's that we can't go back. The future threat environment will not be like that that we've seen in the past.

Now, thank you all for your attention. And with the little foul-ups we've had up front, I think I've spoken long enough. Why don't I take a question or two from each of you?

Yes, Sir.

Question: Keeping with your theme of threat, can you give me a sense of [inaudible]?

Lt. Gen. Deptula: Yeah, that's a great question. Because, if you recall, all the way back at the very beginning I talked about there are a variety of issues that are making it difficult to modernize our Air Force. And it's not just our Air Force; it's all our military forces.

One of them is the declining resources. This isn't a surprise to anybody who has been around this environment. I mean, as far back as the Commission on Roles and Missions, 1994 and 1995, QDR1, QDR2, and QDR3.

We all knew that in about the 2010 time frame, what happens? All the baby boomers retire. So what happens? That curve in mandatory Social Security spending and Medicare starts to go up near exponentially -- maybe asymptotically, not exponentially, but it goes up a lot. That's nondiscretionary funding.

DoD is discretionary funding. We've seen the high-water mark of spending on defense in the near-term. I think you heard Secretary Donley speak to those remarks yesterday.

So it will become more and more challenging to fund across the board all those core functions that I talked about in the beginning, and hard choices will have to be made. And those choices are made on the amount of risk the Department makes the decision to take in consultation with the other departments of our national security apparatus as we move forward. So hard times ahead.

I would tell you that ISR is an area that people are recognizing demands more attention, not less attention, than

we've had in the past. Because -- and you asked the question, so I'm going to keep on going here.

And here's why. I like to tell folks that we've spent the last hundred years in our Air Force -- there really shouldn't have been an Air Force a hundred years ago; that's another subject. But Airmen have been around for a hundred years, and we've spent all that time trying to figure out how to hit any target anywhere on the surface of the earth, all weather, day or night, with precision, and rapidly. We can do that now. It doesn't mean that it's any less important than it was before, but we've got that set of challenges knocked.

Now the issue is, where is it do you want to strike. And maybe you don't want to use a kinetic effect. Maybe you want to achieve some non-kinetic outcome. Maybe you want your adversary to know it, maybe you don't.

But all of this points to the fact that we need to put more attention to the ISR piece. It used to be easy to find targets and hard to kill them. Now, just the opposite is the reverse. It's much more difficult to find targets. It's very easy to kill them. So ISR will see, as we deal with fiscal constraints, I think you'll see ISR get a proportionate share, if not increase, in the investment decisions that come down the pike.

Yes, Sir.

Question: [Inaudible] the message we had from the Secretary of the Air Force yesterday. Is it time for an ISR major command in the Air Force?

Lt. Gen. Deptula: That is going to be -- that's a wonderful question. It is going to be the subject of an ISR Summit that Secretary Donley and the Chief of Staff are hosting on the 29th of September. And there are a variety of options, of which an ISR MAJCOM is among them that will be addressed during that summit.

Question: Can I ask a follow-up then?

Lt. Gen. Deptula: Well that's not fair, Dave. [Laughter]. Come on, let's get someone -- Anybody else? Going once. Going twice.

Question: If you can elaborate, what are the other options?

Lt. Gen. Deptula: I would prefer not to do that right now. It is a four-star conference, and you saw me rapidly stop at my last answer. [Laughter]. So --

You know, there are some things that we want to keep inside the discussion space, so that it's not biased by premature discussion.

Question: [Inaudible] the JCIDS process for bringing everything --

Lt. Gen. Deptula: Ah, yeah, JCIDS. Do you want me to talk about that? [Laughter].

Question: No. [Laughter]. However, in the ISR arena it seems like because of the war on terrorism that there's a real need for rapid equipping and rapid reaction and the like.

Lt. Gen. Deptula: You bet.

Question: What's the process that you like to see, or that has been working well for the Air Force to get things up [inaudible]?

Lt. Gen. Deptula: You said you didn't want me to talk about the JCIDS process, but then your question really gets to that. I mean we have to get to a point with our acquisition system that we can become much more agile and rapid in terms of delivering desired capability. So I like any system that does that.

Now, let me give you an example. We are looking at follow-on to MQ-1, MQ-9. And my staff took a look at it, and I talked to them and I asked, hey, let's take a look at nominally what happens when a decision is made to move forward with a follow-on system; when can we get it delivered IOC, initial operational capability, using the JCIDS process as it's established today, with a decision in 2009, which we're not going to have because we're still running through the analysis of alternatives.

But if you made a decision in 2009, following all the parts, pieces, regulations, rules, and legislation associated with the JCIDS process, you'd have IOC by 2019. Now you've got to be kidding me. We have to change. Our acquisition system is too long, and it requires too many parts and pieces.

Now it wasn't done maliciously; in fact, just the opposite. It was done to assure that the Department of

Defense could deliver optimal systems and run through the checks and balances to assure that we didn't take a wrong turn somewhere and go spend lots and lots of money on something that wasn't optimal. But I think we've got to figure out in the 21st Century a better way of doing business. So there you go.

Question: So what's the method you're using to sort of get around --

Lt. Gen. Deptula: Well there are all kinds of options. I mean, the Secretary of Defense shares -- I mean, you know, he has the same frustration. That's why he stood up the OSD/ISR task force, to get by that, to rapidly deliver capability. And it can be done.

A good example is the MC-12W, the Liberty program aircraft. It went from concept to delivery of first aircraft in seven months. Now that's pretty good. I mean that's very good. Now granted the airframe existed, but there's still a lot that goes into the modification of the system.

And so there are ways to do it. And what we need to do is capitalize on those and make them the standard, not the exception.

What else?

Question: Folks down at JFCOM advocate doing away with effects-based operations. I'm just wondering if you would agree with that and if you agree with the criticism of that concept?

Lt. Gen. Deptula: It's a complex question. Because there are different -- it goes back to definitions. And that's why words and definitions are so important, not just in the context of effects-based methodologies in terms of application of the employment of force, but other things like cyber operations and cyberspace.

There were some challenges with the way some people in Joint Forces Command had been interpreting and applying the concept of effects-based operations in the early 2000s. Effects-based operations is an approach to how one needs to think about the execution of operations at the operational and strategic level.

And what happened was a bunch of people had tried to turn it into tactics, techniques, and procedures where you pulled out a checklist and you went from step 1 to step 54

and then when you were done; that was an effects-based operation. Well that's silly. That's nonsense.

Effects-based operations is nothing more than applied Sun Tzu. It's thinking about the strategy as you go into an operation. It starts with the end state. Where do you want to finish up? And then work backwards looking at all the different elements of the national security apparatus, not just the military piece, to achieve your outcomes.

It still is a viable approach to the way we conduct national security operations. And oh by the way, it's not just an idea. It was used as the basis for the planning of Desert Storm, and I think the outcome of Desert Storm was pretty good, so I think it worked and it's a proven construct that we'd be wise to continue to adapt as we move forward in our national security arena.

Okay, Dave.

Question: I was trying to do some informal polling of the contractors and they're saying the red lights are going off in the ISR world, but I see like Northrop Grumman with Joint Stars programs and Global Hawk, they're seeing some of their stuff going to the right, possibly in jeopardy. At the other end, Lockheed Martin's [inaudible], they're planning for business to grow.

So is that kind of a template that we're going to see the slicing at the high end and the survivors at the low end of the budgetary [inaudible]?

Lt. Gen. Deptula: Looking into what's going to come out of the machine before the sausage has been made is probably premature. So I don't think that's an appropriate way to characterize the decisions with respect to the ISR capabilities that are coming down the pike. I mean I think that's the direct answer.

We will look at, in the Department, the panoply of ISR systems that are out there and then make decisions accordingly, and those decisions might not all be based simply on the growing and rapid need for ISR.

Obviously, there are all other pieces that go into the equation to make those decisions, but one of the things that we have done recently that is going to allow us to work our way forward in an optimal fashion, and some of you may know about this, some of you may not.

We just finished, completed a one-year effort in the Air Force A2, building and ISR flight plan. And what that flight plan does is identify all the ISR capabilities resident in the Air Force today, what's in the POM, and then what's out there beyond the POM in terms of ideas. And we've lashed up this ISR flight plan with each one of the COCOMs and the MAJCOMs, so they can have direct access.

This kind of goes back to your question about how we make this process quicker. We're giving all the COCOMs direct access into our database so they can feed us their requirements now, not once every year when the XX Board goes out to visit each one of the COCOMs and gets their inputs. But it's a continuous flow of information so that we can rapidly adapt and modify our plans.

And again, it doesn't lay out a set of here's the way you're going to do it; that's part of the Air Force corporate process. But what it does allow us to do is to lay out options of capability.

For example, in the GMTI world there are other options than your traditional fixed-wing aircraft carrying radars. There's the whole issue of lighter-than-air aircraft -- you know, dirigibles -- you're familiar with ISIS and its capability to act as -- ISIS stands for Integrated Sensor In Skin. So you have an entire aperture that's on a thousand-foot long airship. That's an option. Is it a near-term option? No. But it's something that provides us one way to do business that's a little bit different than before.

I mean, I use that example. There's lots of other means as well. Some are more near-term, then there are long-term. And that will all go into the equation of what's funded and what's not funded.

Question: [Inaudible] something that could also be an ISR collection platform. Is that [inaudible]?

Lt. Gen. Deptula: I think that's an astute observation. We have been challenged, or one of the challenges that we need to adapt, and I would encourage all of you to recognize that some of the terminology that we've used to describe aircraft in the past really has lost its, not only has it lost its meaning, but it adds to the confusion of what the capabilities are of the systems and the technology that are resident on these airborne systems.

I would suggest to you that a long-range high payload vehicle that operates in the atmosphere is better characterized in terms of an ISR strike platform than a

bomber. Because a bomber conjures up certain images in folks' minds when, in fact, technologies are allowing us to incorporate a variety of different mission capabilities on one vehicle.

And clearly, this system of the future, this ISR strike platform, in the future will have the characteristics and the capabilities resident on it to rapidly acquire information, providing it to either the pilots that occupy the aircraft or the system operators if there's a variant that's not manned, to make decisions as to whether to employ weapons or perhaps just use the information in one way or another. We've got to get beyond where we were in the past because our technologies allow us to integrate so much capability on one platform.

Question: You touched on this a little bit.
[Inaudible] Air Force [inaudible].

Lt. Gen. Deptula: Well they're huge. I mean it is a growth industry as you well know. We have actually -- and they're very, very applicable in the current fight. And one of the reasons they're very, very applicable is because we own the airspace and we're operating in uncontested permissive airspace, so we can operate freely.

We've gone from four Combat Air Patrols. The definition of Combat Air patrol is one aircraft airborne 24x7x365, so it's not just one aircraft; it's a set of aircraft, nominally four. So we've gone from four CAPs in 2004 to 36 CAPs today. That's over a 650 percent increase in six years.

And you know we're continuing to rapidly increase in terms of procuring those kinds of systems. They will provide us capabilities heretofore that we haven't had access to, and we will continue to rely upon unmanned aerial systems.

Question: Are they sort of [inaudible] because of adversaries that [inaudible] technological able adversaries? Or how [inaudible]?

Lt. Gen. Deptula: Again, excellent, excellent question. And it's one that is -- first, no, they're not a fad, which is the essence of your first part of your equation.

Unmanned aerial systems are something that are going to be with us because they yield very large advantages over inhabited aircraft. The biggest one is persistence, in that

they allow us to maintain a position for a long period of time or translate -- I mean that persistence can be translated into a lot of things; the ability to stare at a particular location or the ability to rove over a large area of terrain and observe lots of different places and parts and pieces. So they'll continue to be with us.

The second part, though, is, and thanks you very much for picking up on my message here. The message is that we will not always be operating in permissive air space. So we need to be thinking about building unmanned aerial systems, which really is kind of a term we're trying to be done with because there's nothing unmanned about unmanned aerial systems; they really are remotely piloted aircraft. In fact, there are more people in the system than there are associated with generally what we considered manned systems. But be that as it may, we have to take a look at how do we give these systems the ability and the capacity to operate in denied or contested airspace.

Now another thing I'd like to get out there with respect to the issue of remotely piloted aircraft is there is this tendency right now to define requirements in the context of CAPs, or Combat Air Patrols. But it's not Combat Air Patrols that are delivering the need that our Soldiers, Sailors, Airmen on the ground want; it is what they provide.

Right now what's in high demand is motion video. Today our systems are -- remotely piloted aircraft -- generally only provide one video image spot -- video piece, chip -- per aircraft.

We're in the process of developing a wide-area airborne surveillance system or pod that can be carried on the MQ-9 that will allow us in it's initial variant, which will come out here in -- right now it's prog'd as spring of '10 -- to look at up to 12 different video images transmitted to 12 different users on the ground equipped with rovers, remotely operated enhanced video receivers.

The next variant will provide up to 30 different chip-outs, or video images. The next variant will go to 65 plus or maybe even a hundred different chip-outs in a very wide area. The point of going through all of this is what we need to think about is not CAPs but capability, and then measure our requirements in that regard.

And the capability they provide isn't just limited to motion video either. There is a SIGINT piece, and there are some other pieces as well.

All right. I think I've got time for one more.

Question: [Inaudible] the coalition [inaudible].
[Inaudible] correct piece [inaudible].

Lt. Gen. Deptula: Ha! Well that's a magnificent question, and you know the answer. The answer is you're allowing me to expand upon my last question with respect to, and tie it back to, effects. It's about effects. It's not about things. Have we got the right balance is excellent, because there is a tendency to focus on the things, not what it is you're doing with them.

The value that's coming out of these remotely piloted aircraft right now is two-fold. One of immediate value to provide situational awareness to users that are right there on the ground, but also the classic intelligence piece that sometimes may take a bit of analysis to conduct. Sometimes it happens very rapidly and it gets fed right back to the users on the ground. Other times, it's forensic data that takes longer to mesh with other pieces.

And we are working very hard to get the decisionmakers to understand that what traditionally has been referred to as the back-end piece isn't back-end at all, but it's an integral part of the ISR process, which is why it's so important and why in the Air Force we've put together a Deputy Chief of Staff organization for ISR, not just Intel. All of those pieces need to be integrated, and we need to take an integrated approach, not a segregated approach as we have in the past.

So thanks very much for your question. By the way, we're increasing our analytical piece across the board in the Air Force by over 2,500 people to do that analyst job in the FY-10 POM.

All right. Thank you very much, ladies and gentlemen.

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