

TRANSCRIPT

## Defense Writers Group

A Project of the Center for Media & Security  
New York and Washington, D.C.

---

General Kevin P. Chilton, USAF  
Commander, US Strategic Command  
March 4, 2008

THIS IS A RUSH TRANSCRIPT AND MAY CONTAIN ERRORS. USERS ARE ADVISED TO CONSULT THEIR OWN TAPES OR NOTES OF THE SESSION IF ABSOLUTE VERIFICATION OF WORDING IS NEEDED.

Q: Let's turn attention once again to the shoot-down of the NRO satellite. You remarked that one thing that you don't think has come out as much as it should is how joint this operation was. There were a lot of agencies, a lot of services involved. Take a few minutes and talk about that.

A: Sure. This is a lot of the behind-the-scene things that were going on leading up to the actual intercept. Of course I give great credit to the Navy who was at the pointy end of the spear there, actually on the line conducting the mission. They did a marvelous job, the sailors involved there.

But behind the scenes, what perhaps other folks didn't see, was just how joint an operation it was. The Air Force was involved in a big way with the satellite tracking capability, their surveillance network. Just about all of our components in STRATCOM from the Joint Functional Component Command for Integrated Missile Defense was involved in bringing some sensor management forward, and in addition to that obviously JFCC Space was involved. The [SECW on DFOCS], we relied on DTRA a lot for not only some [plume] analysis if the tank were able to make it to the ground. NASA was involved. We stood up a contingency response force that was prepared to deploy anywhere in the world in a 24 hour notice. We had Air Force C-17s on alert. This force was a pretty interesting crowd, it included--

Q: Was Cobra [Gold] part of that force that was involved? They've been doing plume analysis [inaudible].

A: We used a variety of assets on station to try to analyze how successful we were in the intercept. So we had some infrared sensors looking up as well as optical sensors actually deployed to Hawaii. They were airborne at the time. So we had a variety of sensors

including the sea-based XBands that were called up. We basically said we needed to have everything we could possibly have pointed up there.

Q: So is that yes or no on Cobra [Gold]?

A: I think they were involved. We had different names for the different airplanes up there, but let me follow up for you on that exactly. I know we had a P-3 out there with some infrared capability as well.

But this group at Maguire Air Force Base that was on alert included the Coast Guard, included FEMA, it had expertise from Air Force Space Command that knew how to handle hydrazine. They were on alert for the contingency that we missed for the satellite to reenter, and they could deploy anywhere in the world to help any country that might need that.

I think what I was most proud of was the headquarters at STRATCOM really did a great job in integrating this all together to allow me to make a recommendation to proceed or not, and it was really a great join-up, great joint effort.

Q: I believe down in Orlando you said that when this first, the first time someone brought the idea of actually shooting down the satellite was sometime in mid November.

A: Early December.

Q: The NRO--

A: Dr. Sky Large actually, he was concerned about this because of the hydrazine on board. I think he called General Obering at MDA and said is there anything we can do about this? And Trey didn't say no, he said let me think, let me look and see what we can do. I got a call from Trey--about that time he also told me what they were looking at. Then between Christmas and New Years is when Trey called me up and said I think we can do it. Our experts have looked at this and they think there's a possibility we could intercept the satellite. I said you can't just intercept the satellite, you've got to hit the tank. That's the objective. So there was a lot of analysis that went into their ability to do that.

The real hard calculations and modeling for the intercept itself was done by Missile Defense Agency and a lot of their contractors really supported that well. So it was a great team effort.

Q: So from the time Obering said maybe we can do this until the shot took place, about six weeks?

A: That's about right, between Christmas and New Year's, and then we executed in February.

Q: Could that have been shortened if it was more of an emergency situation? Or was this kind of a one-off shot that never will be duplicated and you had to invent new things in order to get it done?

A: Well, new software had to be written, and new procedures for using that particular system had to be developed. But a big part of it was not only the technical side in this case, it was the decision whether or not to do it and weighing the risks. And the risks that we had to weigh, the risk to the population on the planet if you did nothing was one of the key ones that we had to address and talk about and that's where we relied a lot on some DTRA modeling. NASA was very helpful in this regard in modeling because they've done a lot of the work on reentering debris. We weren't worried about the debris in this case so much as the tank. So you had to weigh that versus, if you're successful and you hit the satellite and hit the tank, what kind of orbital debris will you create? How persistent will that be? What kind of risk does that provide to low earth orbiting manned and unmanned vehicles? What if you hit the satellite and missed the tank? Do you make things worse?

So all that analysis had to be done. We had different groups working on them and then bringing it all together and making sure everybody was using the same assumptions and that the work being done could converge. What you didn't want is one set of opinions on one side, another set on the other. You wanted everybody to share their data information. And it all converged to provide the information we needed for the system.

Q: Was this the only option that you had? Or were there fallback options?

A: This was the only option we could conceive of. The other option was to do nothing and then we, of course in parallel, I described our contingency response force that we put together. That we were going to do anyway, regardless.

Q: But the ground-based interceptors in Alaska wouldn't have been of any use?

A: Those were ruled out real early because they weren't mobile. So it would limit opportunities. They're fixed sites.

Also it looked like the schedule to make modifications to those was much more riskier to get done in the time period. We knew we had to be done by the last week in February based on JFCC Space's orbital predictions. So when you looked at all that, MDA said you're most likely to be ready with a capability that will be effective, that would give us the flexibility we would need to increase the probability of success with the SM3 option.

Q: Finally, have you heard from China as to what they would like to know about this operation?

A: Personally I have not.

Q: The United States government?

A: I think we've been very transparent. This was I think what was really neat about the US government approach to this. We told the world what we were going to do, why we were going to do it before we did it, we stood up this contingency response force with the sole purpose of helping not only the United States but anyone else in the world who would call on us for assistance, and we've been very clear as to why we did it and what we were going to do and what the risks are and we continue to publish the results of the intercept with regard to things we're tracking on orbit and predictions, and we think they'll all be down. They will all be down, we predict, I just talked to General Shelton the other day. He expects all debris to be down in about the next 60 to 90 days, is his estimate on that. Which is more optimistic, actually, than what we had considered before. We thought it might take six months to a year. So we're a little short of the six month side I think to have actually had even the smallest of debris come down.

Q: I know the bomber, the 2018 bomber, they need to write the RFP soon. I know you have some interest in that. What would you like to see in that RFP and how might that fit into what we just saw in the Chinese report on the Chinese military and their emphasis on non-symmetrical warfare and non-contact war?

A: David, what I've gone on record with the Air Force for the 2018 bomber requirements as the STRATCOM Commander, is I basically need two things. There are some things that fall out of this, sub-requirements, but I need it to be nuclear capable because we still expect that to be part of our nuclear defense posture in the future to have a bomber-delivered weapon; and I need it to be able to reach anywhere on the planet when it comes off its last tanker. So range and payload, as you might expect, are a big requirement for me.

What we owe back, and we are working on at STRATCOM, to the Air Force is the numbers we think we would need to preserve our nuclear deterrent in the future. They may want to build, pick a number, 100 of them, so we need to tell them whether we need 100 nuclear capable or not. And then the second thing I think we owe them--

Q: Do you know the window for that force structure number? It might be as low as, it might be as high as?

A: I guess we can get to the as high as part, for sure. That's what we're looking at, doing the analysis now. But today we have 76 B-52s and 20 B-2s out there that are nuclear capable so that kind of bounds, I think, the upper end likely. I don't see us growing in that need. But we need to sharpen our pencil on that and make sure that we give the Air Force a number to shoot for.

The other thing is we need to make sure we understand what the requirements are for this platform vis-a-vis its design with regard to, well let me put it this way. In the Cold

War we designed to a requirement that assumed the bombers would penetrate and that they would be in an environment where other nuclear weapons would be going off around them. I think the classic PsyOp approach. On the other hand, we designed F-16s that can also carry nuclear weapons that don't have those EMP hardening requirements on them.

So what is the need for the future bomber? We need to answer that question back to the Air Force so they can get that requirement out.

Q: But once again, the Chinese association. One of the things they're looking at is EMP weapons, HPM weapons. According to that report CAN jamming, so that would all seem to impact on whatever that requirement might be for the bomber.

A: The nuclear environment is a high EMP environment and so the question is do you envision that this platform would be penetrating into that environment or be subject to that kind of a--

Q: They're talking about non-nuclear EMP and pulse weapons and that sort of thing. So you're talking about a non-nuclear environment, but yet the effects of a nuclear attack which I think is one of their goals in all of this. Do you think, I mean I suspect what you're going to say ultimately is that it's going to be standoff weaponry and that sort of thing that would be part of this that would keep you out of the envelope, but I'm hoping that you say it rather than I.

A: No, there could be. That's why I say, we've got to look at how far do we envision this thing having to penetrate, or not, and whether or not it would be in that threat environment or not as to how hardened the bomber would need to be. You're exactly right.

Q: But do they indeed, do you subscribe to what the report said on China and its emphasis, particularly in that non-contact warfare information?

A: I think the Chinese have written openly about that, about going that way. I have no reason to doubt that they would proceed along those lines and look at every opportunity to leverage what you classically call asymmetric approaches.

Q: But I thought it was pretty much theoretical thinking up to this point. The report seems to me to indicate that it had gone to theory to their starting to implement some of these capabilities.

A: I just read the executive summary to the report, so you've got me there. I didn't read it that in-depth in that particular area, but I think it's fair to say that as we go to, we look forward, there are new things that as we look at the 21st Century that are growing in importance. Space and space capabilities. We're obviously dependent upon those today. So that's a domain we need to be able to preserve, the uninterrupted delivery of those

capabilities to our warfighters.

Cyber is the other domain as well where we've found ourselves becoming dependent on it in the way we conduct operations, military operations, and so you would expect an adversary to try to counter those advantages that the United States has to bring to the fight. So that doesn't surprise me.

Q: Just one last thing. The Navy is finally looking at EPX. Are you encouraging them to look at a replacement for Rivet Joint? The Air Force?

A: No, I'm not at this time. I think though as we look at the ISR, and part of our mission area, as you know, is to try to advocate for ISR capabilities. I don't see, eventually the Air Force is going to have to recapitalize the fleet of 707 aircraft that they have, and when they do I think that is a capability they're going to want to continue to provide their combatant commanders in the regions around the world. But I've not heard any programs that are being funded right now to replace them at this time.

If you're asking me do I see a continued need for that kind of capability, the answer is yes.

Q: It's more when do you see the recapitalization happening?

A: I couldn't tell you when that would be.

Q: I wanted to ask you about the [inaudible] site. No agreement yet. What's your comfort level with Fox right now and the decision being pushed back [inaudible]?

A: OSD policy and the State Department actually, Mr. Rood, are leading those discussions. And Trey Obering is involved as well, from MDA, to make sure we can explain it. So my source is mostly discussing with those individuals. And they remain optimistic that we'll eventually be able to deploy the system that they're proposing in Europe.

Q: Do you have any concerns with Congress right now pushing to NATO-ize the system? What complications does that bring to--

A: I don't have any concerns with regard to that at this time. I know one of the key elements would be what we put over there, and they're working on a battle management control system in Europe that would be able to marry up with and not be in conflict with this type of system. Then you'd expect the countries in Europe to develop their own short range and defensive systems, terminal phase defensive systems. You would want to have those battle management control systems to be able to share information back and forth. So I know there are discussions going on in that regard, and I think those are the intentions.

Q: Would you see this delaying getting a system deployed?

A: The--

Q: GMV.

A: Do I see what--

Q:--having to strike--

A: Like I said, everything I've heard, folks seem to think that we're going to continue to move forward with the negotiations and deploy on time.

Q: General, we haven't heard anything recently on the plans for instant strike, long range strike, to convert some of the Trident missiles to conventional warheads. Congress kind of kicked back on that and [inaudible]. Is that still on the planning?

A: The whole discussion on CTM for the Trident version of that is at a point here where the Congress has made it clear that it's a capability they would not like to see deployed at this point. I think we've learned a lot as we've moved down that track, and we are learning more in continuing down the track of developing the technologies that we'd need for a Prompt Global Strike capability that could be land-based and in fact an AOA, analysis of alternatives, is in the process of being briefed out, should come out to the Joint Requirements Council this summer. I look forward to seeing the results of that.

But you're right. I think we were unsuccessful in getting Congress comfortable with the conventional Trident approach. But that doesn't slow us down from working on the technologies that we'll need, and the key technologies are, since it's a conventional weapon, you'll want high accuracy and you'll also want, we want to work on the material properties that you need to allow the reentry vehicle to do large cross-range maneuvering so that it can reach targets without over-flying countries that you're not interested in getting excited. Those technologies still need to be moving forward. We've got investment programs in place that are doing that.

Q: The main concern was the possibility of confusion, launching a conventional weapon from a nuclear platform.

A: Right.

Q: We've got four SSGNs which have been converted, taken out of the nuclear role. Is there any thought to using them as platforms?

A: Today we use B-52s both in the nuclear role and in the conventional role, but we're pretty clear about when they have them and when they don't. Same with the B-2. So the concept of using a sea-based system I would say is not ruled out, it's just using the CTM

proposal that was going to be a mixed load out today, is the one that Congress is not comfortable with.

Q: The B-52 [inaudible] is not as clear as it should be I guess, given Barksdale and Minot.

A: We're very clear about what our intentions are with those weapons.

Q: Is that it, Otto? All right. Michael Sirak, then Emily.

Q: Generally, the START Treaty expires next year and there's talk of maybe some kind of follow-on agreement with the Russians going down to lower thresholds of weapons. I'm wondering as a combatant commander, what capabilities have to be in your quiver, what infrastructure do you feel you need in order to feel comfortable with going below the 1700 to 2200 warhead number if the President or [inaudible] would ask your opinion?

A: A couple of things. I'm comfortable with the 1700 to 2200 number right now. To maintain that number, though, with the weapons we have today, we have a pretty large inventory on the shelf. As we look to the future, and I believe we're going to need a nuclear deterrent in this country for the remainder of this century, the 21st Century. I think what we need is a modernized nuclear weapon to go with our modernized delivery platforms that we've worked on and are working on. And a responsive infrastructure, one that can produce weapons. And I think if we do that right, if we build a modern weapon with the requirements prioritized of having high reliability, safety and security enhancements for the threat environment we're in today, and maintainability, and then an infrastructure that can not only produce those weapons but do the maintenance on those weapons, that you have an opportunity to lower what is referred to commonly as the hedge inventory, the backup inventory.

You want either the capabilities I just described or a large hedge inventory for two reasons. One would be if you had a failure mode that you develop in a family of weapons that's a large percentage of your force. So you want to have a lot of alternative weapons in a stockpile you could put on board; or a capability to produce or maintain those weapons.

The other is just strategic uncertainty. As you look to the future, you come down to a number, you'd like to know that you have the capability to flex to a higher number should the strategic environment change.

So to sum, I think with a responsive infrastructure, production capability, and with a modern warhead we have an opportunity to not only perhaps lower the deployed warheads, but I think certainly to lower the inventory of warheads that we have on the shelf. I think that's important.

Q: What impact, if there is some kind of Prompt Global Strike system, conventional

system, would that have on the number of nuclear warheads that you would recommend maintaining in the future?

A: When I think of Prompt Global Strike I think about the strike part when we talk about the new triad. And strike as conventional strike. Non-nuclear and nuclear and non-kinetic. If you think about deterrence in the 21st Century, it's much different than the Cold War deterrence where it was just us and the Soviets, and it was really, the principal method of deterrence was massive nuclear threat of destroying each other's countries.

I think deterrence is much more nuanced as we go into the future. Still requiring an adequate capability to deter nations with large numbers of nuclear weapons that could destroy the United States of America, but also to have other I'll say arrows in the quiver in that area. That's where it's nice to have a Prompt Global Conventional Strike capability and also the cyber capabilities or the non-kinetic capabilities that could help shape that. Equally important as you look at a more nuanced deterrence in the future is the defensive side and the impact that could have on an adversary.

Q: General, you mentioned the Prompt Global Strike AOA. And you have not been briefed on that you said?

A: I have kind of an in-progress review of it but not the final version.

Q: Anything you can share on that? And then also any ideas or concepts that you see in industry that interests you, or any--

A: I can review what they're considering in the AOA and that would be a land-based option, a kind of a forward deployed or mobile option, so shorter range. And a submarine-based option or sea-based option better said. And then an air-breathing option with a very high velocity delivery mechanism. So those are the four areas that they were considering in the AOA.

Like I said, they'll bring that forward and it will go to the Requirements Council this summer. We look forward to hearing the final version of that effort.

Q: Any thought to any of those options, or--

A: Well, again, I'll go back to the key capabilities that we need. That will be I think, as I review them I'll want to make sure they've addressed those, like I said, prompt. I'm not looking for something that has to take off and fly for several hours and then deliver, for example. So how do you address the prompt with the various concept of operation?

I think it's real important, too, that we preserve the sovereign nature of this. I want to make sure if we're looking at forward deployed that we're forward deployed to territories that the United States government has sovereign rights over to exercise. So that kind of balances it.

At the end of the day if these systems can't meet the accuracy requirements and the concerns about overflight, then that's going to weigh on which one I would support as well.

Q: And in 2020 that's [inaudible]?

A: Let me get back to you on the time period. We're looking to do some flight demonstrations with DARPA for some of these high end material areas in the 2011, 2012 time period. So

'13, '14 is really sounding more familiar to me, but let me get back to you on that.

Q: General, the question, China yesterday [inaudible] was presented [inaudible] Secretary of Defense mentioned the fact that [inaudible] the Chinese had agreed to go forward with a dialogue, some sort of future dialogue with regard to nuclear weapons. I wonder if you could outline what you hope that might achieve and what your concerns are with regard to China's nuclear capabilities.

A: Andrew, I'm encouraged by that report. We had invited senior Chinese officials, STRATCOM had, under General Cartwright back in 2007 for a dialogue with the Strategic Command. That invitation is certainly open and we'd like to have that conversation with them.

We were very successful, I think, during the Cold War in transparent dialogue with the Soviets which although we had different positions in the world and different views, but that transparency I think was a great opportunity to eliminate miscalculation, particularly in times of crisis. So there are several parts to it.

One is sharing information and intent so they understand what their intentions are. The other side of it, I think it's important, equally, is the building of the relationship, the personal relationships between key leadership elements so that you have the ability to pick up the phone in time of crisis or uncertainty and talk to somebody who you know, know what their responsibilities are, and have a conversation. Along the same lines, I'm encouraged by the report that there's been agreement to install a Hotline, if you will, between the Chinese leadership and the US leadership. I think that's heading in the right direction.

Q: When you say sharing information, what are the question marks you have, what are the gray areas--

A: Well, why are you doing the things you're doing? Why are you modifying your DF-31 fleet? What's your view, China, on the deterrence posture you need for your preservation in the future? It's a lot of the same things that we talk about very openly in this country. When we talk about modernizing our nuclear capability we say why? What are we

considering? What are we protecting for in this nation? And that's important on the strategic side.

Space is another area where open dialogue--Why did you do that ASAT test? What are your intentions there? Where are you heading? You say one thing and do another, it would appear. So how could we have that dialogue?

Then I think as we move forward and mature those relationships, there are probably opportunities for further discussion from the STRATCOM perspective in the cyber arena.

Q: General, I'd like to hear you talk a little bit more about deterrence as we go on into the future here. And specifically I'm curious about how do you think about deterring two likely situations, one where you have a tin pipe dictator or a fairly new nuclear power sort of pushing the envelope a little bit and threatening to use nuclear weapons, and particularly if that person feels like his regime or his own existence is really threatened, his back is to the wall.

The other situation, of course, is where you have the threat of use of nuclear weapons by a group that doesn't own any territory. You're not really sure where they are or who they are.

How do you think about those?

A: You think about it in a much different way than you did the Soviets in the Cold War. As I mentioned, I think it's more nuanced. And I think deterrence in the 21st Century, I think we're recognizing, is going to require whole of government approaches to it, not just a military approach to deterrence.

Your specific example is a good one. It's not one size fits all for deterrence. So that hypothetical individual you described, what motivates that individual? What do they value? What do they fear? What is unacceptable risk to them, in what areas. And it may not be in a military solution at all. It may be in an economic solution or diplomatic solution.

So as we think about deterrence in STRATCOM in the future, some fundamentals are still going to be required. We believe that nuclear deterrence is still going to be required. I think there's a deterrent value in our conventional strike capability that we have today and I think with the Prompt Global Strike, that would be increased. But also how can we work with the interagency, with the whole of government to address the specific different types of actors on the world scene that we would be interested in deterring or dissuading from doing things counter to US interest?

The last one you mentioned is probably the toughest. How do you address the al-Qaidas of the world who would love to get their hands on a weapon of mass destruction and

employ it against the United States? How do you deter that entity? These are really hard questions that we believe we have to address and think about, report on.

Q: You don't have anything to offer us on that last one? How you're thinking about deterring an al-Qaida?

A: No, I don't personally right now. But our team's looking at that and thinking about those types of problems.

Q: General, it's been more than a decade since we had Air Force generals in here like Lieb Butler and Chuck Horner that we need to get rid of the nukes. You've said you think we'll need to retain nukes for the 21st Century, which is 92 years out. Why? I mean plainly the nukes we have are enticements to bad guys to try to try to get them, and under the NPT we're obligated to get down to zero.

So is your view inside the military today pretty common, that everyone thinks we need them forever? The recent Larry Welch report on the DSB was very distressing about the command and control that we currently have on our nuclear weapons in the United States, never mind in the rest of the world. Why for the next 90 years do you think we need to maintain a nuclear stockpile?

A: I'll quote General Welch here on this. So long as there are other countries in the world that possess enough nuclear weapons to destroy the United States of America and our way of life, we will have to deter those types of countries. So I am not in favor of unilateral disarmament. I think so long as we possess nuclear weapons it is our responsibility to treat them appropriate, safely and securely, and to make sure that we are ready to use them, because that is the deterrent force that we provide.

One of the messages that I'm carrying to the members of Strategic Command and our components, is that readiness is a mission. In the Cold War that was very clear to us, that having ready and capable nuclear forces was exactly what we needed to deter the Soviets. I believe that's going to be true in the future. People need to speak about the necessity of having ready and capable forces that are ready to do this. Otherwise you don't have a deterrent if you cannot show that.

In STRATCOM we're going to exercise those capabilities, and we say we can do it. We're going to exercise in our classic exercise training missions that we do. And make sure that we continue to be good stewards of this mission area that we've been given for the United States of America.

Q: Are you aware of any general officers who want to get rid of nuclear weapons?

A: Well you're talking to one right now. I mean, look, these are absolutely powerful and terrible weapons. I'm a father, too, of children that I would love to have them grow up in a nuclear-free world. Absolutely. I don't want to equivocate on that at all. But I'm not for

unilateral disarmament.

I also want them to grow up free. I think we need, as long as we have other nations out there with nuclear capabilities I've described that threaten our freedoms, then I think we need to have a nuclear deterrent force that can do the mission of preserving our freedoms.

I don't think that is diametrically opposed to a desire to reduce the total number of nuclear weapons in the world. That's another reason why I'm such an advocate for modernizing our nuclear weapons capability and building a responsive infrastructure because I think that will allow us to get rid of a lot of the nuclear weapons that we have in our inventories. Not deployed today necessarily, but in our inventories which are too big, in my view. Or bigger than they need to be, I should say.

Q: You inherited eight missions in STRATCOM. You decided I guess recently to set a priority on three of them. Can you walk us through why you decided this was necessary? What was causing you to be concerned about that you needed to prioritize on those three? And what does that say to the other five mission areas [inaudible]?

A: I can say it's really three plus four, because two of the groups are really doing the same mission area. That would be JTFGNO and Net Warfare.

It was really more for me getting my own head around the eight mission areas we have. Also an underlying approach to things that I have that, it's an old saying. If everything's equally important, then nothing's really important.

So as I came in and started reading the UCP, the Unified Command Plan, that said what my mission was, I tried to organize in my brain how we should approach things. The way I approached them, Elaine, I thought where do I have forces actually assigned to STRATCOM to conduct a mission where the President or the Secretary of Defense can give me an order and I can turn to a subordinate commander, they can lay out plans and different courses of actions, we can make a recommendation to the President, and then orders can be given from STRATCOM down to the commander down to the tactical level to do things. What were those missions?

Or said another way, in all the different areas that we had, if something started going wrong in one of those areas, there was a problem in which one would my phone ring on my desk and on the other end would be the President of the United States saying Chilton, fix this problem, or make them stop.

When we look at those along those criteria there are three really what I'll call areas we are operating in, mission areas we're operating in every day--strategic deterrence is one; space is another. Don't forget, US Space Command was merged with STRATCOM. We didn't change the name, but we still have every one of those missions. Along with that merger came a mission in cyberspace as well, to operate and defend the Global

Information Gig and be prepared to conduct network warfare. So those are the three areas that every day I wanted to increase focus on the headquarters on as to how we're doing in these areas.

The other areas are very important as well, because in those four other areas, we are charged to be the advocate for those capabilities for all the regional combatant commanders around the world. So it's not a trivial responsibility. We need to be plugged in in integrated missile defense, combating weapons of mass destruction, the pillars of IO that aren't associated with net operations, and ISR where I don't own any ISR forces but I'm chartered to say how can we better utilize the limited numbers we have, thinking about space and air-breathing capabilities, share those amongst our regional combatant commanders, and then be a voice within the programmatic POMing process inside the department to advocate for the capabilities that the regionals need.

Oftentimes in these other four areas, whether it be IMD or WMD or ISR, et cetera, the regionals have missions in those areas but sometimes their needs don't quite bubble up to the top ten of their need for the biggest threat in their region so they don't make it into the budget discussions. Well, we're chartered to carry that banner into the discussions to make sure we don't forget about these critical mission areas.

That's the way I've kind of divided it up in my brain and the way I've adjusted focus to make sure we're doing exactly what we're being asked to do, but paying a little more attention than I think we have been in the past on the day in and day out operational lines that we have.

Q: Isn't four and three seven?

Q: It is, but he said two of them were about the same.

A: When you look at the three, Mark, there's space, which would be Joint Functional Component Command for Space is my subordinate command for that. Then Global Strike or our strategic deterrent mission. Then we have Joint Task Force Global Network Ops and JTF Net Warfare. They have to work very closely together. But that's the mission area on that.

Q: If we can just go back to nuclear weapons for a minute, you said [inaudible] that the RRW essentially lets you reduce the strategic reserve. What's magic about 1700? And then what's magic about the number you have deployed [inaudible]?

A: I don't think there's much magic about those numbers. We're given a mission to deter and hold certain potential adversaries at risk as you look to the future, what could be the worst case type of thing. So on that you take a look at what kind of targeting you would need, et cetera. It kind of slows down to us and we recommend that back up and work very closely with policy. That kind of sets the number of deployed weapons that you would need to have.

Because it's such a change from the Cold War period where it was really a massive, mad type policy and a second strike capability, there was an element of preserving the second strike capability and making sure you have a survivable element that can do that. But I think the reduction in numbers has come about because of changes in requirements but also because of the dialogue with Russia, for example.

Today I think we should be really proud in America that we have about 25 percent, or we're working toward that by 2012, about a quarter of the weapons deployed that we had during the Cold War. That's not trivial, that reduction. And that we're working to eliminate large classes of weapons. So I think that's important.

You can say well let's go down to 100. Do I feel like I could do my job with 100 today? I would say no. But as you have discussions to come down to lower numbers, again, you always have to protect against strategic uncertainty in the future. You can do that with a large stockpile or you can do that with a responsive infrastructure. I think I'd prefer the responsive infrastructure. For one thing, it's a better way to maintain your capability as you go forward, but I also think it's a smarter way to be able to reduce your inventory.

Q: The number, the sort of [inaudible] point, [inaudible] lower than [inaudible]. We never got to that. The other part is when you say going to 100, what about 100 on alert? In other words, the alert part also keeps people nervous. I'm told you have to keep on alert [inaudible].

A: I don't think that would be adequate. Remember, readiness is a mission. Having a ready force is an important part of any deterrent aspect. I'm not nervous about having a ready force at all. Very professional and that's not a concern at all.

Q: But if our enemy has an alert force, does that make you comfortable or not?

A: Our potential adversaries who would want to deter nuclear aggression against their country are going to want to have a ready force as well. And no, that doesn't make me nervous.

Q: A space question that touches a bit on your former job, obviously given your space responsibilities now there's also an element with your current job. About a year ago General Moseley asked you to do a review of our current space situation in light of the Chinese assets, how vulnerable they are. I'm not sure we ever got your recommendations or your views on that, particularly to the issue of offensive counter-space. My sense was that General Moseley was a bit more excited about that than you were in terms of developing capabilities to do that kind of thing.

Can you talk about your views as to the vulnerability of US assets in space and what we should do about it in protecting ourselves?

A: I can't go down the road on vulnerability, so I won't do that. General Kehler continues to work on that tasker from the Chief. But what we came back with immediately, and it was not new, was that we needed to increase our ability to surveil the space domain. It also meant it's not just about counting things up there but it's about having a situational awareness to understand what's going on up there. That includes an increase in intelligence, focused intelligence.

In my dream, we would know what's going up into orbit before it launches because we have that kind of intelligence. When it gets on orbit, we track it from the boost phase all the way to on-orbit, through insertion into its final orbit. And we know what it is, we know what the intentions of the government are that have it up there, and we keep track of it. If it maneuvers, we know it maneuvers, and we find that out in a very timely fashion, rather than in a long period of time where you risk losing track of it. So investment in space situational awareness, which is not only in sensors but in how you handle the data and fuse it and present it to commanders and refresh that data I think are really important. The Air Force has made investments in those areas I'd like to think because we've emphasized that.

Further, there's a group that's formed up called the space protection group that we started while I was at Air Force Space Command and General Kehler I think has taken it to a new level, that is working closely in an integrated fashion with the National Reconnaissance Office who obviously has equities here as well.

Then lastly, one thing we've found lacking in STRATCOM was a national military strategy for space. So my J5 at STRATCOM has been working on that for the last several months and we have a version of that that's being presented up to for consideration right now.

So there are a lot of pieces that knit it all together, both in investment and--

Q: Can you address the issue of offensive counter-space, though? Again, [inaudible] surveillance as the most important thing. Again, it sounds like General Moseley was pushing a little bit harder to consider being a bit more, leaning a bit more forward on the issue.

A: Maybe I didn't read that the same. I think one of the big questions that came out at that time period was here the Chinese did that ASAT test and they could blow up satellites in space. My comment was, and I still feel the same way, I'm not a big fan of creating space debris. That's why we went to such great lengths in our considerations for this recent intercept. I think you're heading down a bad path there if you start building strategies where everybody is going to be blowing up things in space. You just create a debris environment that would make it non-accessible to folks afterwards. So I've never been a fan of that. I've been on the space shuttle. I've had orbital debris hit my vehicle. I don't think that's necessarily the way you need to go.

It's important to talk with the Chinese. What's your intention there? Why are you doing this? Are you thinking this through clearly as you go in that direction?

Q: General, just a quick question first on the Hotline. Does that give you the capability to pick up the phone and speak with General [inaudible] and their strategic forces?

A: It's not in my headquarters, sir. The Hotline right now. I'm going to ask how, if indeed it's going to domino down to the STRATCOM level or not. It's so new right now, my understanding is it's at a higher level, probably at the Chairman, and probably higher, the Secretary of Defense on up. But it's a great question. I'm going to ask that question, how much further do we want to bring that down.

Q: But at the moment you have no way of talking to Genera. [inaudible]?

A: I don't. Other than trying to find him in the phone book. [Laughter].

Q: Another question is, as China develops its more mobile ICBMs, submarine-based ICBMs on the [inaudible] Class submarine, how does that impact US strategic posture? What do you need to change? Or is it just saying [inaudible]? What's different?

A: From a STRATCOM perspective, our strategic posture, I don't see it changing much, I don't. We want to deter them from ever using those weapons against the United States of America, and those are similar capabilities that the Soviets had developed during the Cold War.

I think some of the concerns with regard to China are, again, I would go back to the point that it would be nice to have a dialogue with them as to what are you thinking and why are you doing this? But there are also regional concerns. They would ask, rightly, why are you doing this? Is it against the United States? Is it some other issue? What is your intent here?

That's why I'm so in favor of open dialogue, opening a dialogue with the Chinese.

Q: And just very quickly, General James [inaudible] explained why he [inaudible] Latin America [inaudible] over a few times.

A: We received no response from the invitation that was sent in 2007.

Q: General, you talked a lot about deterrence and the missile defense system, you referred to earlier in [inaudible] for Europe primarily defense against the threat posed potentially by Iran.

A: Uh huh.

Q: If Iran is an identified state actor, as is [inaudible] cultural target [inaudible], why

won't deterrence work? Why do you need to build the [inaudible] system?

A: Again, it gets back to deterrence, the Cold War type of deterrence doesn't necessarily fit every model as you go forward. So some might argue that it would not deter them from developing and fielding that capability, and perhaps using it. So I think that's why it's important to have this balance as we go forward. Not only an offensive capability, but a defensive capability, that could also not only deter but perhaps hopefully dissuade people from heading down, our countries from heading down that path, so they would see the futility of making those investments into those types of programs.

Q: Why don't you think it would work with regard to [inaudible]?

A: The nuclear capability?

Q: Yes. They're interested in [inaudible].

A: Is that what you hear from Achmadinejad? [Laughter].

Q: You don't think they are?

A: I think at a level everybody's interested in their own livelihood, but I also think that people do things that are counter to that on occasion.

Q: Thanks, General. About the satellite shoot-down test. Now that we've established that the software upgrades and technical upgrades needed to shoot down satellites from Aegis cruisers are successful, many experts are saying that what we've done is in effect deployed and announced a worldwide anti-satellite capability ahead of a real national discussion or even government-wide discussion about whether that's even a good idea. What's your comment on that?

A: We haven't deployed anything and we were very transparent about why we made the modifications. We're not intending to keep those systems modified but we're returning them to their original configuration and they're going to be used for their original intent. So I would just say they're wrong.

Q: Okay. And do you believe that this test should increase in any way our confidence in the operational capability of ballistic missile defense as it stands right now? Or do you believe, as some do, that it's not applicable to the overall capability of the system?

A: I'll tell you, I was impressed. What the Missile Defense Agency was able to do in an incredibly short period of time is figure out a way to hit about a 3.5 foot diameter ball embedded in a satellite that was about the size of a small school bus and destroy that tank that was traveling about 17,500 miles per hour with a missile coming off a ship in the middle of the ocean. I was impressed by that. I thought that was a pretty significant demonstration of a lot of the great work that has gone on in the Missile Defense Agency

and what they can do when it comes to fielding a defensive system as well.

Q: General, you've been emphasizing the importance of cyber events. If a cyber attack were extremely successful, could you operate your strategic systems without information technology?

A: We have a separate system for the way we handle our strategic deterrent system, disconnected from the internet, if you will. Command and control system for doing that.

My concerns would be not so much on the strategic deterrent side but on the broader way that our military fights conflicts and the way we exchange information in just normal conflicts, even the ones we're involved in today. And like space, I believe we have become dependent on cyberspace for transmitting information, doing analysis, and for indeed transmitting the orders on how we conduct operations. So that's why the mission, I believe, was given to STRATCOM to be able to operate and defend the Global Information Gig which is really the dot-mil portion of the internet domain, the dot-S-mil portion of it. I firmly believe we'll be attacked in that domain and I believe that our challenge will be to, and it will be degraded in some fashion because I don't believe every defense is perfect, although we strive for that. Our challenge will be to continue to operate in that domain. Just like in any other domain, when you're attacked you don't just stop operating. You must continue to operate. We're going to need to continue to operate the Gig to support the fight.

I'm excited about the mission area we have to defend and operate that. I think it's going to be very important as we go forward, just as space is in the way we fight today.

Q: Going back to the Welch report [inaudible]. There were some suggestions made specifically for STRATCOM and what can be done to reduce or maybe [inaudible]. One of them was establishing a flag-level sort of task force to come and look at them [inaudible] transferring more operational control from the Air Force to STRATCOM, more than there is already, on nuclear cooperation.

Now have those ideas [inaudible] within STRATCOM's area [inaudible]?

A: Let me tell you some of the steps we've taken in STRATCOM since the Minot incident last year.

One thing we found was historically in the past, and you go back to the Cold War period, the STRATCOM IG used to be, immediately post Cold War we used to send parts of our Inspector General teams to do kind of an over-the-shoulder inspection of the inspections, if you will, that are conducted by the services, the individual services, and also by the Defense Threat Reduction Agency. We called them nuclear surety inspections. We've reinstated that. So we're sending members from our IG team and they've participated in all the inspections that have gone on of late and will continue to do so.

Within the headquarters we've established an overarching working group led by my deputy, Vice Admiral [Monty], starting quarterly and eventually it will go to a semi-annual review of the entire nuclear enterprise that supports the STRATCOM mission area, and more specifically, the next level working group down would be, right now we're having it chaired by my J3, Admiral [McClain], but we're also looking at options of maybe increasing the flag officer level numbers in the headquarters to maybe make that a more focused kind of attention on that.

On the day-to-day, remember I mentioned we've increased our focus on our lines of operation and deterrence is one of our lines of operation, so at least weekly now we have communications on our daily reviews with the task force commanders that support the nuclear missions. So we're more plugged in now I think with their daily status and issues that they're working. I've seen the results of that in the headquarters with activities there.

The last part is, we advertise that we have certain capabilities in this command, and that the services support. The Navy with submarines, the Air Force with ICBMs and bomber forces. As we do our major exercises I want to make sure we exercise those capabilities. So it's kind of an I'm from Missouri, show me, approach. I think a lot of that has been pushed more toward what I'd call a command post exercise where you just fill in squares on the chart without actually having to do the mechanics of that exercise. I want to see more of the mechanics exercise out there.

I think this gets at one of the major concerns that General Welch spoke about, and that is at the lowest levels people aren't going to take you seriously unless you appear to be serious about this particular mission.

So I guess I would add one more lastly, me talking about this mission and recognizing the great people that do this mission both in our submarine, ICBM and bomber forces and the sacrifices they make to be ready, and they're really unsung heroes. They're kind of an invisible force out there. Talking about how important that mission is and how important readiness is for this mission for the United States of America I think is an important thing that leaders need to stand up and do.

Q: The operational control [inaudible]?

A: I think this is a proposal that General Moseley is looking at, at how to maybe look at a different way of making those forces available to us. But right now the bomber force element of our deterrence is not assigned to STRATCOM, it's assigned to Joint Forces command. And then at higher levels of readiness they would be chopped over to us and then start to generate for their nuclear mission. He's looking at some different constructs on it that could maybe make it sound more like this is an important principal mission that you have. So I'm looking forward to those discussions with the Air Force and see how they'd like to maybe organize a little differently to present those forces.

Q: General, I wanted to take you back to the China report. [Inaudible]. Aside from--

A: I'm sorry?

Q: Counter-space. Besides the anti-satellite test, what is it that they're doing [inaudible]?

A: Let me take it from the approach of what I worry about from space. And it's real easy to get overly focused on the satellite, particularly when you see something as dramatic as their anti-satellite test.

To deliver a capability from orbit you really need three things. You need the satellite, obviously, and a launch mechanism to be able to get it there. Then you need a ground control station that can send commands to the satellite, both to tell it where to go and how to maneuver and just help for the satellite, kind of commands. But also when to turn on and do its mission. Then there's the link between those two. And all of those are vulnerable. The ground stations are likely plugged in in some form or fashion to the internet. That's how we move information around. So you have to think about cyber defense. And the ground stations are physical locations that if taken out, you can no longer communicate with the satellite. The RF transmissions from the ground station and a satellite, between the satellite and the ground, you've got to worry about those being jammed so that you can't deliver the effect.

So it's across really a whole spectrum that you worry about when you say counter-space capabilities. And STRATCOM needs to consider all of those and make sure we're paying attention to it.

Q: General, going back to the issue of cyberspace, I'm wondering how you might be involved in cyber [inaudible]?

A: We're going to be helping the Department of Homeland Security out in this area because we've been given the mission, again, not to defend all the areas they're chartered with. They're looking at the dot-com, the dot-edu, the dot-gov, the dot the rest of the world. Remember, we've just been given the mission to protect the dot-mil and the dot-Smil. We've learned a lot over the last three years, particularly under the leadership of General Charlie Croome at Joint Task Force Global Network Operations on what we think are some pretty good best practices on that and how to work that issue. So we're going to be providing as much assistance as we can as the Department of Homeland Security starts addressing what I would consider to be an even tougher challenge than we have in the area that we have.

I think part of this is people and expertise. In the whole NetOps or cyberspace domain this is an area where I've expressed to the services where I need some assistance. If we're going to do the missions charter to STRATCOM to defend and to be able to provide

attack options, we're going to need organizations within the services, units within the services that are organized, trained and equipped to do those missions. And for some of the high end skill sets, we don't have enough of those people. The people will range from high end to very low end skill sets, but right now I can't say I need a squadron of this type of people, can you give me a squadron, can you give me a wing, can you give me a platoon? Cyber warriors, if you will. They're just not organized to do that right now. And the services are excited about doing just that, to provide us those capabilities.

So people are going to be really key in this area and I think the Department of Homeland Security will find that same challenge. It's going to be key to get the right talent, the right kind of people, to be able to do their mission that they've been chartered to go off on.

Q: I've [inaudible] satellites lately. [Laughter].

A: I don't.

Q: In that realm, in terms of offensive cyber capability, how important to you think those are as [inaudible]?

A: Cyber. Just like in any domain, you can't just build a fortress around yourself. A good defense requires offensive capabilities as well. So in the cyber area, as I said, we're looking at defense from a perspective of the technical side, firewalls, et cetera, all the way down to you have to get the culture, and everybody that touches a computer in the services to understand that they can open a vulnerability to a system individually by their activity on the network. So the defensive side runs the gamut from a cultural perception and chain of how you act all the way up to high tech. But then you need to go beyond that as well and be in a position to have offensive capabilities to support the defense and the network as well.

This is in the area, that particular offensive area, where I think we're most challenged in finding the technical expertise that we need.

Q: What sorts of capabilities [inaudible]?

A: It would be a broad answer I'll give you which is as we see our adversaries begin to become dependent on cyberspace, in a war against an adversary that had those dependencies, you'd want to, the same as they'd want to do to us, they'd want to inhibit our ability to operate in cyberspace. We'd want to be able to inhibit their ability to operate, to affect victory.

Q: You said earlier that [inaudible] that we [inaudible]. You talked about you needed a capability to replace weapons in case a whole family failed. RRW can be a whole family in which you're going to have to take without testing.

A: I would envision as we move forward that there would be a family of weapons that would have this new design criteria. Not just a single design, but a family that would allow that.

We have a family of weapons out there today. We don't just have one type of nuclear weapon. But the thing I keep getting back to with regard to modernizing our stockpile is this. We've built these weapons in a Cold War era where we had certain threats and certain requirements. A lot of those requirements have changed.

The driving requirement in the Cold War was we needed a large number of weapons. We wanted to maximize the yield or the explosive power and minimize the volume because we had fixed size rockets and we wanted to add multiple warheads to them, MIRV them, whatever. Safety, security, maintainability was not a big concern in the design of those weapons because we also had a robust production capability that could produce thousands of new weapons a year. So if it broke or didn't work you weren't going to fix it, you were going to generate several thousand new weapons to replace it in a year.

We also, if you had any concern about a design or a failure mode you may have found in a family of weapons, we could test and eliminate those concerns.

Now as we go forward, we don't want to test and I think that's one of the key criteria that we look at as we go forward, maximize that you don't want to test. We're not interested in maximizing yield and minimizing volume. What we're really interested in is reliability. As you get to smaller numbers you want a highly reliable weapon. With the terrorist threats today, we didn't worry about the Soviets coming over and stealing one or two nuclear weapons. Today we worry about people that would be interested in that so you want to increase security and safety features in these weapons in your design criteria right up front, when you're starting with a clean sheet. Then if you don't want to build an infrastructure that can build thousands a year which I think would be the wrong thing to do you, want to make them maintainable so that if you have a problem you can come back. You can inspect the components around the package that are required to make the weapon function on a reasonable basis.

So it's really a change in requirements that we have as we look forward to the 21st Century, and of course the need, I believe, to preserve the capability that drives me to say we need a modern weapon that starts with different priorities in the design.

Q: You're looking at a family of two now.

A: Correct.

Q: Do you see it bigger than that?

A: I don't know the answer to that. I think we need to do some more analysis and study on that and there are a lot of questions we need to answer both from a technical

perspective, but also from a programmatic perspective. That's one of the key studies I think that needs to be done here over the next year so that we can present early in the next administration a decision package where they can decide which way they want to go.

I really do think now is the time to act on this. This is not something that we can continue to either not talk about or push down the road for future generations. I think now is the time when we need to address these tough issues.

Q: We'll have to leave it there. Thank you very much.

END TEXT