

TRANSCRIPT

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Q: OK, welcome to Lt. General Trey Obering III, Director of MDA. Second time before this group. Glad to have you back, good time to have you. On the record as we always are, so as we were discussing on the way up, you have an issue going with, in Eastern Europe, the deployment or the post-deployment of 10 interceptors in Poland and the radar in the Czech Republic. You can discuss high politics if you want to get into that, but what I'm interested in first off is, what technical merit, if any, is there to the Russian claim that these interceptors could be readily converted to offensive weapons, and secondly, that they could be used to undermine Russian nuclear deterrence?

A: What I'll do is just give a little bit of context to start that. There's a sense of the Russians that we are aiming this toward them and to try to better emphasize why it is not aimed to them. In fact, just back up just a second. We started this several years ago, this fielding and deployment in the summer of '04, and if you look at the way we started this deployment, it was clearly geared toward North Korea. We started the placement of the interceptors in Alaska, California; we started the fielding of modified AEGIS ships, etcetera, in the Pacific, and of course we modified (inaudible) radar in Alaska and in California. We ended up deploying a third base radar in Japan, so we were clearly oriented toward North Korea. We have said all along that the two countries we're very concerned about were North Korea and Iran, and so, we felt that North Korea was farther advanced in their development and their testing, and that Iran was slightly lagging there, and so we turned our attention first to North Korea.

Now we turn our attention to Iran and along those lines what we do, we start modifying

radar in the United Kingdom because that gives us initial protection in the United States against North Korea and we have started work on the radar in Greenland, working with the Danish government to complete that protection for the United States. But when we look out we have the deployed forces in the European theater, we have many, many Americans living in Europe, we have our allies and we have our friends there that are not protected against what we see to be a threat that is emerging from Iran. And so that's the context by which we wanted to go ahead and field a capability to extend that protection, and that's been part of our strategy from Day 1, by the way. But if you go back to even the summer of '02 we talked about this technical approach.

Now, let me talk specifics. The way we do business is we look at, and this is very much a geography- and a physics-based business, so we look at the potential launch points from Iran toward Europe and into Europe, and we look at the launch points from Iran into the United States, and we look at the azimuths of the trajectory coverages of those. And you take a look to see, what is the best location to cover those azimuths from an optimization standpoint. The other thing we have to factor into this is range. You can't be too close. I wish that we had a boost phase defense, otherwise I wish we could knock down a missile in the boosting phase; that's what airborne laser and that's what kinetic energy interceptor's about, but those programs are still years away for us, even though we're making great progress. But we can't, so we have to be far enough back to be able to engage these threats in their mid-course phase, and we also have to be far enough back that we can launch the interceptor, get it through its own boosting phase, to be able to lethal them in order to kill the inbound missile. So both from a azimuth projection as well as from a range projection, Poland and the Czech Republic came out on top of that.

And in fact, because we optimized it for an Iranian threat, it is not optimized for if we were trying to address Russia. We are too close, so to speak, and we're also geographically not optimized because if the Russians were to launch an attack in the United States and we were to launch one of these interceptors we'd get into a tail chase very quickly. We can't catch, basically, the Russian ICBM--we can't catch it. And this is a game of speed as well. I mean, that's exactly what it is. That's what makes kinetic kill work by the way, is the speed.

Now, in terms of, well this is just a pretext for offensive missiles. You can just look on the surface that that's just not a claim that we can hold up. Remember, number one, luckily because we have advanced this technology and we have relied on the tremendous talents of a lot of hardworking Americans, these kill vehicles that are on these interceptors are very, very small. They're only about 75 kilograms, about 150 pounds; they're not very big. They travel very, very fast, and that's why they're lethal. That is not like a nuclear warhead, that they would be much more massive and you'd have to have a larger diameter missile, you'd have to have a longer missile, you'd have to have a different silo than what we have; and so there would be obvious modifications that

would have to be made to these silos, and we have said all along that the Russians can come and inspect, look at our sites, visit our sites in the United States, in Fort Greely, Alaska, for example. And, even though it's not totally our call, we don't have a problem with them visiting a site, for example, in Poland or Czech Republic, depending on what those governments say. So, we're trying to be as transparent as we can, so technically, there's just not a case to be made for this.

Q: If the Russians know anything, they understand ICBMs and missiles and rockets, and so surely they know this. So what's up here?

A: Well, I think, I can't speak for Russians, honestly, but what I would say is, they may have other security concerns and they're looking for ways to address those concerns by trying to leverage missile defense. I don't know, but all I can say is, that it just doesn't make sense from a technical perspective; there may be, if we give them the benefit of the doubt. There may be some ambiguity in their minds about the performance of our system, and therefore, we are going to engage them at a technical expert's level so that they can have a better understanding and maybe that will help resolve some of this. And what they also, I didn't mention, but it's obvious as well--most of the folks sitting around this table know the Russians have hundreds of ICBMs and they have thousands of warheads. And we're talking about 10 interceptors, so that's not going to change even from a numbers perspective the strategic balance between the two countries.

Q: So when you, have you talked to the Russians personally on this matter, do you?

A: I have. I have traveled to Moscow, I've talked to their chief of the general staff, Baluyevsky, and I've talked to then-defense minister Ivanov, along with a contingent. But again, those discussions, I think were the beginning, so to speak, and I think we need to continue to engage them, and get into more detail with them.

Q: But when you make the same technical case for them, they just make us what--what do you get, a blank stare or--?

A: No, just a lot of questions. A lot of questions about altitudes and speeds and those types of things, and that's why I said I think it's the beginning of the conversation that we have to continue.

Q: General, some say that after the Chinese ASAT test that what you need is something to intercept the missile (inaudible) that's pointing to a US (inaudible) or an ally satellite. Some in the Air Force say, we'd need such an interceptor, the answer is, persistent ISR and a new bomber that you could take out the sites from where those, an ASAT weapon would be launched. Where do you fall under--what do you think is the answer?

A: I think that, first of all, we are not in the business of ASAT. Our mission is to protect the United States and our deployed forces and allies against ICBMs as well all the way down to shorter-range missiles. But if I could comment, what I will say is that, I think it's not very prudent to try to rely on one particular approach on anything. That's reflected in the way that we do our business as well. We try to layer our defenses and when you try to integrate those layers so they can work together, because it is a tough technical challenge. The particular profile for the ASAT launch, that happens very quickly, it's over with very quickly, so that means you have to have a (inaudible) command and control system set up to be able to handle that and you have to be able to react quickly to that.

You can't always go on the assumption that you're going to be able to find missiles; we've learned that in all of the SCUD hunts that went on back in the early '90s and everything else, so you can't always say we're going to meet the stake for this offensively. We've shown that that just doesn't work, so you have to have a, I think, a balance spectrum by which you address any threat. And so I would say that it's going to take a combination of being able to provide a defense, certainly he's going to pull that combination at some point, I think the (inaudible). But right now our boss has been asked a question does that threaten the ballistic missile defense system that we're rolling out, and the answer's no, it does not. Basically the capabilities we've seen, that doesn't mean that may not evolve in the future to where it could.

Q: Back on the Russian issue, I just wanted, through your meetings with the Russians, if you could see it from the Russian perspective. I mean here in the United States, look what's going on--we're spending more money than we ever have on defense. We've expanded NATO, the Russian (inaudible) there's talk of making Ukraine being in NATO at some point, which is part of Russia according to the (inaudible) Russian point of view, and we're building a new nuclear warhead. So when you give the Russian assurances that we don't mean to hem them in, I mean, do you see this at all from their perspective that it's hard to believe?

A: Of course. I think it's always proving the trust, see things from other peoples and other perspectives; other peoples and other perspectives, and so I can understand concern with it, especially looking back historically with Russia, so that's why I think it's important that we continue to engage with them because missile defense, and certainly more than almost anything, is a result of geography. And it just so happens if you look at trajectories from Iran into Europe or Iran into United States, guess what--they overfly Russian territory, they're very close to Russian territory or overfly, many of those trajectories. If you just take a look at the way that this works out, so they're involved because of what we had to, the steps that we had to take to try to defend ourselves and our allies, it actually, if we work this properly, I believe, instead of it viewing as being hemmed in, it could be viewed as engaging them to collaborate with us to try to prevent

and stop this threat from proceeding, so that we can work together to try to do this. Because we have, I think we have combined interest in stopping this emerging missile threat. It's not the Russians that we're worried about--it is the Iranian missiles that we're worried about.

Q: I mean the United States government hasn't even been able to set up that joint early warning center, which they've been trying to do for a number of years, eight or nine years, and that was a simple problem compared to what you're talking about here. What makes you, gets you all warm and fuzzy that you're going to actually be able to bring the Russians in when you can't even do the joint early warning center?

A: That's a great question. What we believe, though, is that, first of all, just because you haven't been able to do something in the past, doesn't mean you don't continue to try, that if there's no other lesson to learn that we learn in missile defense it's that one. The other thing is that there are all these opportunities opening up, and there's all these evolving conditions and what we believe, that I personally believe, frankly, is that we are reaching the point now where we may have an opening, an evolving condition, and let me explain what I mean by that.

First of all, the threat is getting more and more real, and it's getting more urgent, whereas in the past ballistic missiles, for example, of the SCUD variety or the extended range interceptor weren't very accurate (inaudible), they're getting better at what we're able to do, and we've seen that in some of the demonstrator testing. We've seen a, what we see now a development and a test program in Iran, that is far accelerated and in fact, if you look at the total number of (inaudible) launches around the world and the tests, this year so far in '07 it's twice the pace of last year.

And so this idea of proliferation of missiles is something that we have to be very concerned about. There have been developments such as what happened with North Korea last summer, and I don't have to explain that to everybody at this table, everybody knows what happened, and what we saw. There were the Raptor attacks against Israel, in northern Israel from Lebanon last summer. They demonstrated what happens when you're not prepared for this type of attack, obviously not a long-range weapon but a ballistic rocket anyway. And so, I believe that there's an opening here that says, look, we've got to be serious about addressing this threat.

And more importantly, this is a fundamental point that I'd like to make and that is, why have countries been investing in these weapons? Why is Iran been investing heavily in their missiles? Why does North Korea? Why are these so valuable to them? And I believe the answer is that historically we have not had deployed defenses against them. Because they know they can work, they know that that puts them on a par, so to speak, with a significant conventional force, especially if you marry a weapon of mass destruction on

these missiles. And so what better way to devalue those weapons than to have a defense against them, and so that meant hopefully we would see more behavior like we saw from a past Libya, for example, where countries decide to de-vest themselves of these weapons because, for a variety of factors, but one primary factor would be that there not going to be effective. If we can join together with NATO, with Russia, for that matter, and be able to deploy and provide missile defenses, we can devalue these weapons in the eyes of some of these countries and hopefully I think it will raise the security for all of us.

Q: Sir, I just want to clarify, you used the term far accelerated when you were talking about Iran's development program. Is the threat accelerating in terms of its (inaudible) previously said or is this an acceleration that you guys have predicted and you know has been done--?

A: It's primarily what we see coming down the path, and if you look at some of their exercises that they've done recently just as late as last fall and again in January, where they're demonstrating these tests, you could pull it off the television if you'd like, you can see that. So, I mean it's what we predicted in terms of how they develop. However, having said that, it's hard to predict, as you well know. We saw a couple of points there, number one, back in '98; many experts were predicting that the North Koreans would not be able to launch a long-range missile for years and years. And they did it a month later, and when you have collaborations in Iran that we know is occurring, it's hard to predict what that development will be. And the other thing I want to make a point of is, you can't look at what's happening in Iran today and say, OK, let's just prepare a defense for what we see today, because that right there is just like being in a tail chase; you're way behind the power curve. You have to say based on what we see happening today, what may be there in three or four years, so it's going to take that long to build and deploy defenses that can counter that. So, it's a type of a chess game, you have to try to stay ahead of your moves, and that's why we think with a sense of urgency about this.

Q: Last year, there was talk of a space-based testbed or a space-based concept, and I think Colonel (inaudible) at LA was going to try to create a little sort of space center of excellence for MDA out there. Where does that stand today? Because space really does offer (inaudible).

A: What we've had to do is, that was the space testbed concept that we had envisioned that we were going to begin this year; it was part of the '08 line for the '07 budget; it was about 45 million if I recall. We had to reduce that to about 10 million and that was because of the budget reductions that we took from the '07 to the '08 budget of about 500 million in '8 and 500 million in '9. It's still a good idea; it is a good concept and it gets back to this idea that you have to stay ahead and try to make sure that you always are maintaining options for the future. What we had envisioned is, and we are by the

way, we do have space activity beginning this year for the Missile Defense Agency again, kind of a return to space. We're going to have NFIRE launch that will occur in this month, later this month. Then we're going to have our space tracking and surveillance satellites launches, that'd occur at the end of this (inaudible) year.

And that begins the sensing portion and the experimentation portion will then follow the sensing portion with the FCSS. But we still think that it's prudent to have an effort in which we can explore concepts from space just like you said because it offers geographic advantages, it offers access advantages, it offers timeliness advantages, and it offers a cushion against uncertainty because, can you tell me who's, (inaudible), if somebody can tell me who our threats are going to be in 20 years from now, we can save a lot of people a lot of money. But we can't.

Q: As you just said, it's very difficult to anticipate what the threats are going to be in some 10, 20 years down the road. (Inaudible). I just want to know what does that mean for development of the system going forward--(inaudible) criticism perhaps that focusing too heavily on silo-based interceptors, does that make the system too inflexible going forward?

A: No, it doesn't because what you have again, it goes back to you want to make sure that you try to, you want to have as much layering as you can, and you want to have as much integration and options. What is a silo bringing you, OK, a silo-based interceptor? First of all, they are large interceptors in terms of, compared to what you could get on a ship or what you could get mobile, and so it gives you a range that you're able to gain from that length, so to speak. And it gives you persistent, 24/7 coverage. It could be on-alert, around-the-clock 365 days a year. Now, the drawbacks are, you have a defined defended area, it may be very large but it's a defined defended area, and again, you have to make sure that you have the sensors positioned to be able to feed the information to those interceptors.

So the idea of going to mobile and more flexible interceptors is exactly what we're doing, and that's why we have actually increased the numbers of sea-based interceptors that we buy in this budget and the number of the mobile THAAD interceptors; we're buying two more THAAD fire units for a total of 96 missiles by the end of 2013. And we're buying more of the SM-3s to give us a total of about 132 interceptors on 18 ships, so we're moving in that direction because we do think that's viable.

But again, you can't go in one direction only, you have to make sure that you have both persistence that the land-based fixed silo gives you, as well as the flexibility of the more mobile assets. And then we don't envision though, that we're going to spend anymore on the land-based silos once we reach the 40 in Alaska, the 4 in California, and hopefully the 10 in Europe--we think that we can level off there and maintain that number, and

then we'll wait and watch and see what happens with the threat evolution.

Q: General, I'd like to put you on the offensive. You spoke of the great SCUD hunt; do you mean to suggest that if Iran or North Korea develops something capable of reaching the United States, we wouldn't see that in advance?

A: I will tell you that we cannot guarantee ourselves that we will. We could not guarantee ourselves that we will. And therefore, part of being in a defensive posture is you have to expect to be surprised because if you don't you could set yourself up a false sense of security, so we can't guarantee that we're going to be able to see everything that goes on.

Q: Of course nothing in life is guaranteed and everything's got to be balanced--we saw the North Korean missile last time around long in advance; Bill Perry argued it should be taken out preemptively. Why in this round isn't an ounce of prevention worth a pound of (inaudible)? Why should we just declare (inaudible)--you build a rocket like that capable of reaching us and we believe you have a nuclear (inaudible), we're going to think it out.

A: Well, a couple of things, problems with that. First of all, you're limiting the President to two options; one, capitulations, and therefore, giving into whatever demands that there may be there; or, retaliation on a fairly large scale. Even a single preemption is part of that retaliation is what I would say. So having yet another option we think is very prudent and relatively speaking a lot less (inaudible) with respect to the tension. But you're making some presumptions that it may not be accurate; number one, that you can see this. OK, we saw that particular missile; did we see all the activity in North Korea? No, we know we don't. Are we going to be guaranteed, not even guaranteed, are we going to be able to have a reasonable chance of seeing the majority of activity that may be going on? And the answer is no, I don't think so. So we have to be prepared for that.

But you also, there's something else implied, that whoever we're dealing with in North Korea or Iran or wherever will be deterrable or operating under a logical rationale that we are, and that may be a false assumption. So, we believe, going back to your point, that missile defense, and many people try do this; they try to set up this false conflict, I'm not talking about you, but they try to set up a false conflict between arms control, deterrence, and missile defense. (Inaudible) these are incompatible; they're not. They are extremely compatible; in fact, they're on the same spectrum, so at one end of the spectrum you have deterrence and that has worked very, very well for us, vis-à-vis Russia, and for many years. And so it worked very well and we ought to keep that as part of our defense posture.

We've also been very active in arms control and non-proliferation security initiatives and that's worked in countries like Libya (?) where you've used positive or negative sanctions to try to achieve that (inaudible). But we have to recognize in this new century is that we may be dealing with entities, whether they be terrorist organizations or a state equivalent of a suicide bomber, that are non-deterrable. And so what do you do--turn to your population and say, sorry about the tens of thousands or hundreds of thousands of lives we just lost because we were counting on being able to deter those guys? Or, we take out 30 million North Koreans because of a bad decision that one man makes? So I think that we've got to look at this in terms of our adding another level of options that we can use in our security policy.

Q: OK, just a quick follow-up. Absent a shield, do you suggest that the choices are; capitulation or retaliation--do you mean to suggest if the bad guy fires a missile at us and we succeed in blowing it out of the sky, that we won't retaliate?

A: No, I'm not saying that. What I'm saying is, at least you buy time to sit there and to think about what it is you are going to do as opposed to trying to react very quickly and very immediately in immediacy, it buys you not only another option, it gives you some time to understand what exactly happened, what are we dealing with now? In any crisis, one of the things that you want to know, what are you going to know and when are you going to know it? I mean, those are two questions that we always ask ourselves, and this gives you an opportunity to gain a little bit more time in trying to answer those questions.

Q: Missile defense took some hits in the President's budget for this coming year. I was wondering what your thoughts were on the funding outlook going forward--there are so many competing things trying to get (inaudible) in the defense budget, there's going to be a change in the Administration. Where do you see things going and do you think something like boost-phase defense that isn't as far along might be cut altogether so that we can have sufficient resources for other things that are already shown to work?

A: I wish I had my crystal ball to tell you exactly what's going to happen so we'd be better prepared, but I can't. But what I could say is, I don't hear anybody telling us if they're going to add to our top line necessarily, and therefore, I think the best we can do would be the President's budget leveled in spending. I think that there may be a push to reduce our top line. I do not know by how much because of the considerations that the Congress may go through. What I can tell you is that we believe that we have reached a balanced program. We are submitting a budget of 8.9 billion dollars. Congress has told us in the past that they want us to focus on near-term activities, things that give us capability in the near- to mid-term. Of that 8.9 billion dollars, about 7.1 billion of that is that, that's what it's focused on. And the remainder, the 1.8 is focused on the longer term.

But it's important I think that we keep that balance in terms of the makeup of our program, so when you start cutting boost-phase defenses, which are primarily future programs, then you can get out of balance, and that could cause you to be exposed to sooner or later in the future. Let me give you an example; if we had followed near-term defenses only in the mid-90s, early to mid-90s, what would we have had in the summer of '06? We would have had AEGIS, we would have had Patriot, and we would have had Navy THAAD, and that's it, because the ground-based mid-course was considered a futuristic program and you all know that when the North Koreans started making their preparations for launch, we were inundated with phone calls about, what can you do to protect us? Well, AEGIS and the THAAD and the Patriot, they weren't going to have any effect against the Taepodong-II.

So you got to be careful that you don't get out of (inaudible) with respect to a balance of near-term versus longer-term. I do hope, though, that from a top line perspective, that it is also, there's a couple of things to be kept in mind. Number one, the money that we're spending on missile defense represents a very small fraction of the overall defense budget, number one. Number two, we have tried to consistently stay within that top line and we have. We have not gone back to the department asking for more money, that type of thing. So we manage our programs within that top line; this idea of portfolio management. And number three, we think it is a very, very smart investment as opposed to a frivolous expenditure, and what I mean by that is, and you've heard me say this, if we can stop one missile from hitting one American city, we think we can more than pay for the program that's been going back to Reagan's time, because we spent about 100 billion dollars on missile defense since 1983, and we know from the one attack in New York alone, the damage costs from September 11th alone was 83 billion dollars, and that wasn't a weapon of mass destruction.

Q: But is that limited research budget enough to sustain all of the different programs that you guys have started?

A: It is enough to, the budget that we have is enough to develop, field, the development, the testing, and the initial fielding of these capabilities and to get some significant modicum of protection, and then how much force structure that you need beyond that is a decision the department needs to make based on what we see evolving in the future. Are four THAAD units enough? Are 132 sea-based interceptors on 18 ships enough? That depends, I believe, on what evolves with respect to the threat and to the world environment. So what we try to do is, we maintain the production rate, the production capacity I should say to meet whatever force structure that the department may need, but what we would field is just the initial fielding and the configuration management (inaudible) of that.

Q: Do you have the industrial base to do that?

A: Yes, oh yeah, we think so.

Q: Can we talk about the roll-out of this whole concept. You've had more airtime lately than Howard Stern on this (laughter). Today's breakfast is part that a roll-out, it's been going on since January, and it does give the impression that the Administration's rushing before Bush leaves office, to get this thing started. You remember GAO last year criticized the plan, the deployment of the '04 program, as perceived pressure from the White House leaving the quality problems at all, your urgency today you hadn't used that before and I've listened to you pretty carefully and even last week before testimony to the House, it does give a sense that the Administration is ratcheting up the public case on this (inaudible) September '02 and beginning of the rush of the war, and I just got to ask you, how much real or perceived pressure are you getting from the White House to build a case and get this thing started before he leaves office next November?

A: I can equivocally say, Tony, nothing could be farther than the truth. Absolutely not. We rolled this out when we first talked about this two or three years ago in terms of the third site, in terms of extending the protection, it was part of our strategy going back to the August of '02 in briefing what our strategy was for Block 4, our strategy was for Block 6 and Block 8 and beyond.

We put money in the budget last year for the third site to begin the work to begin the analysis and the site surveys and the engagement with some of the countries and that type of thing, to be able to get this on down. I have received no pressure from the White House at all on this. The pressure that I feel, so to speak, is one of, I don't want to frankly to waste the taxpayers' money in the sense of, I don't want to have this work started with respect to (inaudible) on interceptors or the site-clearing activities and not have a good concrete way ahead in terms of how we want to proceed. So, that is the urgency that I think the sense of a roll-out is exactly right but that's not for the reason that you thought it was--it's because we got a little bit behind the power curve with respect to a good understanding on the part of many of the nations in NATO and others as to what, why, where, etcetera.

Now part of that was intentional because we wanted to make sure that we had entered into, first of all, selecting which countries that we were thinking about doing this in and then getting that initial engagement with them to see, are they willing to be a host for these assets, etcetera, and that played out and that was fairly recently, then spreading that word to the rest of the NATO partners and NATO nations became important, so that's the urgency that you see in getting the word out. ("It's not an urgent threat from an Iranian threat at the moment?") The urgency that I'm referring to, just to be crystal clear is, even if we start next, if we get approval this year, and we start site-clearing and

that type of that thing, construction in '08, OK, we're not going to have the first interceptor on the ground 'til 2011, and we won't have a site completed 'til 2013, and most of the experts like Amy was talking about, you know, think that the Iranians are going to have the ability to be able to deploy long-range weapons by 2015. Now, we only had a two-year pad to do integration, checkout, testing, etcetera; that's the urgency I'm talking about.

Q: And we don't, we know the history of missile defense is not one of being on-time, on-schedule, and on-cost--

A: Of course it has been, since I've been director it has (laughter).

Q: Just a follow-up before I get my real question (laughter.) I want to come back to, you mentioned us being behind the power curve, then obviously you've just gotten back from Europe and you're headed back, I guess, in a couple of weeks. The sense that we get, particularly from Poland and the Czech Republic is actually you've fallen further behind the curve in terms of our public reaction, that you're starting to see political pressure, protests on the streets; Poland, in particular, seems to be, you know, Rod Sikorsky warning all sorts of, don't take Poland for granted, that kind of thing. Can you just give us a quick subjective sense of the political temperature there and your concern about that?

A: I have not visited Poland or the Czech Republic yet. That will be coming up, but what I can tell you is we have had discussions with Polish representatives, Czech representatives. I have personally briefed the North Atlantic Council twice, the NATO-Russia council. I have visited capitals in Paris and Berlin, I've been to Kiev in Ukraine. The sense we're getting is, frankly, is that first of all, there is a growing recognition that we have to do something; that NATO collectively needs to do something about the threat, and that we're moving beyond this issue of whether there is a threat or not. That I think is pretty clear.

Also, I think there's a growing recognition that what we are proposing makes sense in a NATO context even, because if you look historically, NATO defensive capability has been comprised of member nations bringing capability to the fray, I mean there's only a few instances where NATO's developed their own, envisioned this capability, NATO air command and control system being one the NATO AWACS being another. So for this idea that the US and the Czech Republic and Poland provides a longer-range protection and then the NATO can plug in with the theater of the shorter range, which they've stood up an office for.

In terms of public reaction and governmental reaction and that kind of thing in the countries, again, I meant what I said about being behind the power curve. Once the

people understand, I believe, and certainly it's been true with the governments, once they understand exactly the details of what we're talking about, you know, defensive missiles are not offensive in nature, you do not even fire these interceptors unless you have an attack missile in the air. When we go through and we talk about items such as debris and we talk about electromagnetic pulse and we talk about all the things that are of concern to member nations as well as to other allies, then we see a growing recognition and understanding that OK, this makes sense. That's the impression that I get. So I think a lot of this is getting the word out and making sure everybody understands what we're talking about, is comfortable with what we're talking about. This is not the United States acting on its own; this is certainly not a pretext for re-fighting the Cold War by any stretch of imagination. And we get asked about arms race, you know the arms race we're concerned about is not one in Russia, it's one in Iran.

Q: As you would look in the (inaudible) and it talked a bit about the North Korea launch in July, obviously, sort of your first truly operational test, I guess, I know it was really short-lived, but can you just give us a lessons learned from that, particularly how the sensors performed--the DSP and what not in terms of actually being operational--?

A: A lot of that is classified as you all know, but what I can tell you is this; first of all, we had, and if you recall, we went to the North Korean event before we did our long-range test in September and so up until this point, we had tested our sensors, we had actually flown a target across the face of Cobra Dane, for example, we had tested our hardware, our fire control hardware and software in a flight test, so we had done all the piece parts of this. So we had actually taken, we took an AEGIS tracker and put that into the system, etcetera, but I think the real value of what happened last summer was all the command and control that went into that, and all of the situation awareness on the part of the warfighters and the operators and the commanders.

And this idea of what are we going to know when, and the performance of the--many of the missiles, especially the long-range Taepodong failed so quickly after launch we didn't gain a lot with respect to any sensor performance, that type of thing. But what we did see is first of all, we came to alert, we stayed on alert for an extended period of time, and the system in terms of reliability, availability, stability of communication links and networks and that type of thing, was very well-behaved. It exceeded our specifications frankly and our expectations, so I think that was a good thing, but a lot of the lessons learned were in interaction between the combatant commands and also the interaction between the developers and the warfighters as we transitioned the system to alert in that extended period of time.

Q: General, I was just wondering if you could just update us broadly on cooperation with Japan. I understand they have their first test of their own, AEGIS modified Kongo cruisers is coming up, Kongo destroyers, and also they're interested in ABL.

A: Well, first of all, Japan is our premier partner, just so to speak, just in terms of the amount of their own resources that they are putting into missile defense, which is considerable, exceeding a billion dollars a year. We are cooperating with them--we've been cooperating with them in the past with respect to cooperative research and development and the outcome of that was, for example, the nose cone that we flew last spring for the AEGIS sea-based interceptor, that separating nose cone, a clamshell nose cone that worked very well, by the way. It is the fact that we signed an agreement with them last June to co-develop a larger version of the Standard Missile-3 that would be capable of a much greater defended area, so that a single ship can cover a lot larger area and in addition has the ability to cover even a long-range threat like a high-end intermediate-range missile or an ICBM. And that's proceeding extremely well.

They have been gracious enough to host a forward-deployable radar that we now have in northern Japan that feeds information into the system. That's been tested and connected. And as you say, they are also building their own capabilities with respect to their Kongo-class cruisers and the SM-3 missiles that they're purchasing as well. They are going to flight-test later this year toward the end of the year with an intercept test in the Pacific, and so we couldn't be more pleased with that cooperation and with that partnership and we think that there's a reason for that, though, and that is, they have seen the threat upfront and personal. They saw the missile overfly their country in '98 and so they're aware that there is something that we have to worry about and that's why we're onboard with that.

Q: How about ABL specifically--they're interested in maybe-?

A: I believe that there's a great opportunity and the reason why is, because, as you know Boeing is a prime contractor on the airborne laser and we have all the other mission partners such as Northrop Grumman, Raytheon, and others that are working on the system. But we also know that Japan brings; part of what I think is going to happen with airborne laser, by the way, is that we are going to go through the knowledge points, we're going to complete our flight-testing, the tracking, and the beam elimination laser and that type of thing in the summer and then take that aircraft down, put the hydrogen laser on it, and then fly it so that we can achieve a shootdown in '09.

And then I think that you're going to see a period of airborne laser like we did with THAAD. If you remember what happened with THAAD, we successfully intercepted a couple of targets in the '99 timeframe, and then we went into a period of time in which we did a re-profiling of the missile for manufacturing ease of production, that type of thing, and I think you're going to see something similar on ABL, where we take all the lessons learned from our test program, all the lessons learned from the performance, and then kind of redo that with respect to the second aircraft. That's just what I see right

now, and in that period of time, and in that kind of that restructure, remanufacture, so to speak, for the second aircraft, I think that Japanese industry especially has a lot to offer in that regard. So I would anticipate that there could be some cooperation between American industry and Japanese industry as it relates to that.

Q: When is that second aircraft --?

A: It's not for several years still before we start that.

Q: General, you talked a lot about the Russian contempt about the program. I wonder if you could expand a little on why you think there's been so much concern in Western Europe, you said you've been in Germany and France recently--why do you think those countries, NATO allies, especially during the Cold War, have cold feet about this, and what do you say about the suggestions specifically made by the Germans that the whole thing should be under a NATO umbrella from the start. You're talking about developing the capability and then integrating it with NATO capability. They seem to suggest they would like to see the whole program under a NATO umbrella from the start. Is that feasible?

A: Well, first of all, to answer your first question, I think the concern that came out of Western Europe was primarily centered on the Russian reaction, and so I don't think that in and of themselves that there was a--there were concerns that I think, like I said, we're working through with respect to debris (?) questions and that type of thing, and those are certainly concerns that any country would have as you have to kind of go through and walk through those. But I think that we've been successful in doing that, but then the second level of concern was, well, what does this mean with respect to the US-Russian relationship and that type of thing, so I think that's what grew out of that. So I think the key then is, therefore, in addition to answering the questions that we are, as I said, I think, successfully with respect to the technical aspects, is to make sure that we continue to engage the Russians so that they understand that we can bring them onboard. That is the key I think to success.

And then the second part was, ("the NATO construct"). I have been the US representative on at least two NATO programs, the NATO air command and control system and I was the agent for NATO AWACS for a while and then the NATO advanced surveillance system I was also the US rep. for, and I have a healthy respect for NATO and a healthy respect for that environment. But having said that, when you see the urgency, like I've referred to with Tony in terms of where we have to go to protect ourselves our deployed forces and frankly what we believe our allies, we think that there's always a role for leadership within NATO. And we think that the US has historically played a role of leadership within NATO. And this is not outside of what context whatsoever. And I think that our allies and all of us would do well to go back and

take a look at that history in NATO; that has been a good one and it's been a great alliance, it's worked very well. And working this into the context of a NATO framework I think is very important.

And in fact, frankly, we have intentionally, if you look at the underlying technical architecture behind the command and control, the battle management communication system for the (inaudible) missile defense system, it is intentionally compatible with the NATO air command and control system and the NATO construct that's coming up now of where you see them heading with their NATO AWACS program, and so, that was an intentional underlying compatibility that we have there, so all along, we've believed that this is important to work with in a NATO context. I think as long as that's done, I think that's what's important. I don't necessarily believe that, because again, you go back; most of the capability NATO fields is not developed by NATO--it is member nations bringing their capability into a NATO framework.

Q: Do you feel really that the threat is too urgent for all the negotiations, for example, with the Poles, with the Czechs--to place in that NATO context, is it quicker to get it done?

A: Well, I think certainly, historically it is proven that it's quicker to get things done by having the member nations bring their capability into the framework.

Q: Can you (inaudible) on the Russia issue. Can you sort of sketch out what you think the cooperative agreement with Russia might look like? What types of things can the US offer Russia that might appease their concerns and address the technology sharing issues that have been--?

A: I think that Ambassador Nuland did a good job of that last week. She released a statement that talked about kind of the spectrum of what we would do. I think some of the key things there is that, again, it can be a spectrum of activities--everything from looking at how we can share data today, including radar data, that the Russians have radars that are well positioned. We have the proposal of the radars that we replace so being able to do data sharing is important. Looking for ways that we can work together cooperatively, looking at some of the capabilities that the Russians have developed and some of the capabilities that we've developed, so I think there's a whole spectrum there that we can proceed down in kind of viewing them as a partner as we go through this.

Q: (Inaudible.)

A: Well, first of all, 10 is enough based on what we see, projections with respect to threat development, threat evolution, etc. Now, one thing that will be coming on the heels of the 10 interceptors several years after that will be the ability for the sea-based, the more

flexible family that we talked about with the SM-3, the Block 2s, that could provide longer-range protection as well, and so you could augment that capability down stream but it doesn't give you the persistence that you would be able to have with the silo-based interceptors in the ground, so again, as we've done here, we've layered our defenses. We would envision in the future that there could be a layering if it's needed for the evolution of the threat there.

Q: We had obviously (inaudible) last July the North Korean missile tests (inaudible) and Taepodong-II was unsuccessful two seconds after it launched. Do you have any sense now as to what they're up to, whether they're trying to take lessons learned from that launch, from the failure, and if not, do you expect that in time they will try to launch another Taepodong-II, and do you have a sense whether that would be in order of magnitude of months or years or where are we with North Korea?

A: A short answer, no. I wish I did, because my gosh. North Korea is a hard target in terms of intelligence; it's a hard target in terms of intentions. It's a hard target in all kinds of aspects with respect to trying to gain some understanding of what they're doing. What I can say about is, I don't think that we see any diminution in their interests with respect to their programs. I can't predict when they may start another round of testing. We do know that they still are showing signs of being very aggressive in their development in their test programs. One thing that kind of undercut a lot of the radar screening last summer was with the failure of the longer range was the success of the shorter-range stuff. I mean it was very successful. They showed control and they showed reliability that was pretty remarkable and responsiveness. So I think that is a cause for continued concern as well, but I wish I could answer those questions.

Q: Secretary Rumsfeld was very interested in missile defense, obviously. Many people say that a lot of the programs (inaudible) were actually (inaudible) programs. I was just curious what your sense of his legacy is.

A: I think that Secretary Rumsfeld did a great job in terms of keeping us and calling us to task and making sure that, you know, he would ask hard questions; he'd ask tough questions, and you had to be able to respond to those. I think that part of his legacy is that he was able to help us and that's something I'd like to get to, maybe at the very end of this session. He was able to allow us to get to a totally new way of doing business that I think is much more amenable to where we are today in the 21st century than some of the things that we've tried to do in the department that really (inaudible) the Cold War, as it relates to how we acquire programs and the way that we approach it.

He was also, I think, very instrumental in this idea that you need to have a layered approach to your defense, and that you need to have an integrated approach to your defense, and that you needed to be flexible as you move forward into the future, and not

think that you can predict with great certainty, which often times is what we kind of got into, a false impression that we can do in the past that we could predict with great certainty where we're going to be in 10 years and exactly what we're going to need in 10 years and exactly how much it's going to cost in 10 years. So, I think that that really helped us in that regard. And then again, I think that he was probably the most fundamental thing that he did was he really helped recognize that we are not in the Cold War anymore, and so you can't view the world through Cold War eyes and if you do so it's very dangerous. We were, at that time, when he came into office along with President Bush, we were in a treaty with the, that was written for the Soviet Union and was written for a totally different era, and he recognized that there was this growing threat that was occurring with missiles that our hands are tied because of that treaty in terms of responding to that.

Q: I'm just curious--you mentioned STSS and you mentioned (inaudible) Fire. The SBIRS (inaudible) was launched last year. The Air Force announced last November they were getting inventory (inaudible) checked out well, presumably that it's not just taking images it is also detecting heat sources and that sort of thing. Can you talk to us about when that payload and subsequent payloads are actually going to be useful in missile defense?

A: You mean the SBIRS? Well, you need to ask the SBIRS, you know, we don't own that program. But I'm not sure exactly when the specific date is, Amy, but as they're brought on operationally, we are already today connected to the SBIRS ground station, so we are already getting information from the SBIRS system, so to speak, that's being fed by the DSP programs, but we're already connected to get better information. So as soon as they finish their checkout of those birds and connect that operation to the SBIRS ground station, we'll immediately start gaining the benefit from that.

Q: But this is not one of those situations, as with the other systems (inaudible), where you can checkout and be operational with the flip of a switch, I guess--?

A: You could, you could, but again realizing that the main benefit we gain from even the SBIRS GEO birds is the ability to alert the system and the ability to give us some predicted impact points and to launch them. It is still not active enough for us to be able to target off of, and that's the big difference between the space tracking surveillance system program and the SBIRS program is with the STSS program, we actually believe we're going to be able to get a precise enough track that we can target on that track.

Q: But there've been lots of interesting infrared events since that payload was launched, so can you say with any certainty that SBIRS did help tip us off in any way?

A: No, I can't say.

Q: On the Russian criticism of the (inaudible), how much of this do you think is posturing, I go back to the treaty, ABM treaty, all the (inaudible) the Administration pulling back and all the cataclysmic conclusions. Kadish was in your shoes at the time, a new arms race, a new missile, there was a lot of bitching and moaning by the Russians and posturing came, June 2002 and went, dropped off the map. How much of this is really posturing for domestic and European consumption that will die soon?

A: Tony, I don't know, honestly I don't know, but hopefully, that is the case, and hopefully we can rapidly get this behind us and start getting about building the defenses and getting them in place. But I just can't answer that question.

Q: Given the past as prologue, may past be prologue here?

A: Let me answer this way. I think that there are other concerns the Russians have, that missile defense is not the primarily concern here. And I don't know what they are, but I think that that needs to be addressed and that's what needs to be put on the table.

Q: Could it be also posturing for Iranian consumption--you mentioned European and Russian?

A: I just don't know. I wish I did.

Q: You mention in your testimony something you call, I hadn't heard the term before, probably everyone else has, but "volume kill capability" for your mid-course interceptors. Describe that and what are the technical challenges to success?

A: We think that that's a very important capability as we move in the future. What we've said in the past is that we have fielded and deployed a system, and we have tested the system that we think can handle simple threats, which means warheads and some simple countermeasures, that type of thing. As move in the future, we do believe that countries even like North Korea and Iran are going to have the ability to bring more complex kind of measures and those types of things to try to defeat a missile system. They could do that, so we have to be able to respond to that.

And we're doing it in two different ways; one is we are deploying and fielding much more powerful sensors and radars--for example, the sea-based X-band radar, which by the way, is a great success story, is one of the methods of doing that, along with really advanced algorithms that can go through and have distinguished what is a decoy, what is a warhead, and we're going to simultaneously parallel (inaudible), we're going to impact with the volume kill capabilities. So we don't have to say that is the particular warhead; we can say we're going to take out all of those credible objects and not have to

say that is the one warhead. And so volume kill means that, right now, every interceptor has only one kill vehicle. What we're going to get to is where an interceptor has multiple kill vehicles onboard that it can independently target at the credible objects. Now, that doesn't mean that we can have one interceptor to be able to take out 10 or more incoming missiles. What it means is that we can have one interceptor take out credible objects that could be deployed from a single missile, that's what that means.

Q: OK, and the technical challenges for that?

A: It is within the state of the art of what we're doing today. I would say the biggest technical challenge is going to be making sure that we can do that independent targeting with the multiple kill vehicles from the single carrier vehicle. But that's part of why we set up the knowledge points that we set up in missile defense and we measure to those knowledge points as we go through.

Q: Is it your sense, General, that that track is easier than trying to discern and pick out what are the decoys?

A: I think that there is benefit in pursuing both, (Right, but what if my question is, do you think that one's easier, no one talked about this until two or three years ago; now it's--) I don't know how to judge easier or not. I think that because there's a lot of things I just can't tell you, frankly. But I would say that we've made great strides on the radar side, and we hope to make the same great strides on the volume kill side. I get asked this question a lot about countermeasures, and most of the criticism that we get with respect to countermeasures are from folks that are very outdated on the system, that are not up to speed on what we're doing, and ignore the fact that we actually have some of the world's leading countermeasure experts working for us, and guess what, we flight test them. I mean we have a very robust flight test program that has some of the most complex countermeasures known to man that we can put on there, and we test our radars against those. So we understand what we're doing with them. Is it an easy challenge? Absolutely not. It's tough, but we make great progress there and again, we think that the volume kill even enhances and adds to that.

Q: General, we talked earlier about Western European reaction in contrast and the UK has been generally very supportive of the initiative, how you talked about the upgrading of the radar capability there. What other forms what might your cooperation with the UK take, I know you're in discussions with them; what kinds of things are you looking at?

A: They've been very close partners. They have a very well respected research & development community, and so we are partnering with them in that regard. British industry has opportunities that we think are significant that we will share in hopefully.

Even things like (inaudible) for battle management and that type of thing, there's a whole host of things that we can engage with our British allies on, and I do believe that we're going to make great strides here in the future.

Q: In terms of what, would it be facilities, is it possible--?

A: There could be, sure. Sure. Exactly

Q: Interceptors, or because, at this point, (inaudible).

A: We don't have, there's no plans at this point to put the host interceptors on their territory. Like I've said, we've already done the (inaudible) right out of themselves, but I think that we want to keep options open for the future no matter what we do.

Q: Secretary (inaudible) said this week that he thought it might cost about 1.7 billion to set up the interceptor (inaudible) deployment. I've also seen estimates of 3.5 billion for sites--what kind of money are we talking about in what timeframe?

A: They're both right. 1.7 is about accurate for the construction of the interceptor site and everything that would go into that. Then you have to add the cost of the radar site; you have to add the cost of the interceptors that would go into the site, and so when you add those numbers up, it gets closer to the 3 billion dollar mark that he talked about.

Q: 3 billion or 3.5 billion?

A: As I recall, it's about 1.7 for the site; you have to add the 10 interceptors--which roughly are another half, half a billion or thereabouts. Then you have the radar site construction, which is about half a billion as well. And so you can do the math yourself.

Q: And the long-term operating costs?

A: We factor that in as part of our, otherwise, that wouldn't be considered part of those numbers--that's just what it's going to take to stand up, but right now, our sustainment costs for the sites and for the entire ground-based mid-course program, that includes the sea-based x-band and (inaudible) and everything else, is right about 500 million a year. And our total sustainment bill is approaching a billion dollars a year. They would be somewhat less, much, much less than that because we're not having to support all of that.

Q: David's Sling--what is that?

A: David's Sling is a program that the Israelis have begun that we've been helping them

on to defend against very short-range missiles. And so they're in the process of going through a competition for basically a very fast reaction missile that would be hit-to-kill technology that could take out a short-range attack?

Q: (Inaudible)?

A: I'm not sure exactly what level of short-range, how far down it goes. I think that you'd have to ask the Israelis that, but we've been helping them with that. We've been helping them with technical assistance and helping them with simulations with analysis, that type of thing.

Q: Any US money involved?

A: Yeah. (How much, roughly?) I don't know.

Q: Can you confirm when the next (inaudible) test is?

A: Right now, we're shooting for the first part of May, and then we have another one that will occur probably the first part of October, end of September, something like that. I think we have five more AEGIS tests this year. Actually four test and five flights, because I think one of them is a silo flight, and then we have at least two more THAAD tests this year. We have one this week, tonight, for a THAAD.

If you have one more minute, it gets back to something Tony said, I think there's a huge story here that's being missed, and I'd like to just talk a little bit about it. It is something that is the Holy Grail that the department has been looking for for many years, and that is, how do we do acquisition that makes sense, and that is affordable, and that gets progress and everything else? And I think that we have begun to hit on a formula that people ought to pay attention to, and it is a kind of growth out of lessons that we've learned, some of the things that came by with General Kadish's commission last year, and that's this idea of a capabilities-based (inaudible) approach, in which we are able to make adjustments as we go through that we maintain a top level of spending, that we form a partnership, a very strong partnership between a combatant commander and in this case, a Missile Defense Agency--it doesn't have to be a Missile Defense Agency or a defense agency, it could be any acquisition organization. But we have struck upon a way of doing business here that gets us out of the Cold War type of mentality, you know, let's face it; we just don't do a lot of large, major-scale production runs in the Department of Defense anymore in a whole host of areas; we certainly don't in missile defense.

We're in a different kind of construct, and there's a sense of urgency about what we do in missile defense, especially. So this idea of a true capabilities-based approach that we engage in a partnership with the warfighter and we have this (inaudible) conversation

back and forth about what we want and what can you do and what is affordable and how fast can you get it, and a key thing here is, how much risk are you willing to take, because in the past, in the Cold War, what I mean by that is in the Cold War, invariably over time, almost everything the department fielded, it was already a capability in the field. So we were fielding a new F-15 to replace what I used to fly, which is now antiquated, an F-4, or we were fielding a new tank that replaces what was already out there.

So all these processes got set up in the department to stop something from being fielded unless you are 100 percent guaranteed that it was much, much, much better than what you had out there. And yet, that's not the situation we found ourselves in often times in a very dangerous and uncertain world, especially missile defense, where there's a sense of urgency where you don't have a defense or you have a major vulnerability, so we are willing to accept more risk and to manage that risk as we do fielding, we test enough to give us confidence, we field that, we continue to test and continue to field and improve. So we do this in a spiral engagement.

Now this has implications for how we engage the test community because we don't look for this seal of approval one time and then off you go into a large-scale production run. We are constantly involved with the testers as we go through this and in a continual fashion. And it goes back to our budget and schedule performance that you alluded to; I think we've actually done pretty well, in spite of what you may have read in some of the GAO reports, etcetera. In fact, I think, based on the GAO reports I've read in my history, they were very positive, much more positive than what I've seen in the past out of them.

What I mean by that is, stop and think about it; using this approach now, in June of '04 we began deploying and fielding. In a 30-month period, we have now put a radar in Japan, we've upgraded a radar in Alaska and in California, we have modified 16 ships, we've modified several of them to launch 20 of the sea-based interceptors that we fielded, we have put command and control suites in Hawaii, in Alaska, in Omaha, in Colorado Springs, in Washington, and in the United Kingdom. We have built a massive sea-based x-band radar that is performing absolutely outstandingly; we did that in a 44-month period for about 900 million dollars, and we placed 17 interceptors and silos in Alaska, built a field, put 17 interceptors and silos in Alaska and two in California--that's unprecedented in 30 months in the department, I think, in terms of fielding and getting things out the door. And if you look at our budget and our cost performance, we're well below the average of the department overall, and I think very well in terms of historically speaking with our budgets.

Frankly, there's a couple of things that GAO just got wrong in their audit, but right now we're running around 10 percent or less in our cost performance, which is remarkable. And some of our programs are even underrunning and accelerating. In our sensors

program, we accelerated that four-base x-band radar by almost a year, and yet we are underrunning that contract. So I think that there's a history here that over time, I think we've evolved, and we don't go back to the department and ask, we've had in most of the cost variances that we've encountered like on ground-based mid-course interceptor have been because we're adding scope to the program, we're telling them that we need to pay for O&S and support costs that we had originally not planned for in the program because we initially we were going to transfer it to the service; they were going to pick it up so we had to incorporate that in our program. We had setbacks where we had the explosion in California where it took out the six interceptors that were planned and by the way, that's (inaudible) off track right now--we're going to have 24 interceptors by the end of this year, and our original game plan going back three years was to have 30 by the end of this year. And those six are the ones we lost in that explosion. So I think it's a new way of doing business that is worth looking into and is it perfect? No. We've got our (inaudible) and we've got our setbacks and we're going to have failures. We've got a very aggressive test program; we're going to have failures in the future. But I think overall, it's a great positive story that needs to get out.

Q: Did you folks violate one of the rules about (inaudible) that you have so much concurrency in your programs--you're designing, developing, and testing at the same time, which leads to schedule problems, which leads to billion-dollar overruns--("I don't agree.") You don't agree at all? Are you advocating more concurrency?

A: No I'm advocating coherent managed concurrency. That's my point. Here's what I mean. ("What's your model of a great acquisition program that was managed in such a way that allowed concurrency?") Well, first of all, it's not how much concurrency you have, it's how much are you willing to accept and how much risk are you willing to accept, so for example, especially where you have no defense like we didn't have it against a long-range weapon, you test enough to understand whether or not you have a viable capability and then you can begin to field that and make sure you don't have any showstoppers. That's what we're after.

We test enough to make sure we don't have any showstoppers and that we do have a militarily useful capability. And I'll give you an example of a difference in the way of approaching this. You take the Patriot system--under the old construct, according to all the rules that are in place, if you have a requirements-based approach, the PAC-3 had to meet five key performance parameters. It could not meet one of those. Under their rules, you stop. You can't go past certified IOTD, you can't go into production because you can't meet your key performance requirements. But nobody turned around back to the warfighter and said, if you can meet four of those, is it worth it? And they go, "Heck yeah, it's worth it. We'd like it right now, because it is much, much, much better than what we have in the field." So what we do is say, OK, let's go ahead and field it with those, being able to meet those four key performance parameters; we'll come back and

on a subsequent spiral we'll go back and upgrade to meet the one that it couldn't. So that is a concrete example of what I'm talking about.

Now there's others; again, you don't have to have every t crossed and every I dotted in order to begin fielding--it's something that we measure that--it is an idea of measuring military utility with the warfighter, and we don't do that by the way. We allow the warfighter obviously does that, so that's the engagement, it's an idea of not just handing stuff, passing notes back and forth, it is actually engaging with them as we go through this. So that's what I mean by that.

So there is concurrency. (Inaudible) and then I'll let you guys go: airborne laser. Here's an example--(Is that a positive system?) Let me tell you. I'm going to tell you why I say that it's a good example of what I'm talking about. What you want to do is understand what are the critical knowledge points that you need to achieve in a program, and then convince yourself you can achieve that before you start embarking on a huge, a full-blown acquisition program. Airborne laser violated that principle early on, but they were going right down what the standard solution path is in the past, which is, OK, now we got a requirement; now let's lay out an acquisition program, let's think about supportability, maintainability, all the (inaudible) associated with that. Let's pile up a big workforce and off we go, and yet, they have not proved that they can demonstrate yet that they would be able to achieve with any reasonable success (inaudible) that laser.

So we came in and said, stop; cease and desist. You're doing this wrong. Take all those resources you have focused on maintaining the supportability and you focus them on getting first light out of that laser and being able to fire that aircraft with an optical train onboard. So we restructured that program from the old way of doing business to the new way of doing business, and guess what, they made great progress since then, and they're on track. They still may have failed--we don't know, but they're making progress and hitting those knowledge points. So you lay out the knowledge points that allow you to gain confidence that you are in fact tackling the tough challenges of your program--KEI, kinetic energy interceptor, what is that big challenge--their high acceleration booster--if it can't get there (inaudible) fast, it's not an immediate use force, so that's what we've done. We've focused that program initially on, you show us you can demonstrate a very high acceleration booster then we'll talk about a major program as we go through. That's what I mean, so I think it's worth pursuing.

END TEXT