

**HEARING TO RECEIVE TESTIMONY ON ARMY
MODERNIZATION IN REVIEW OF THE DE-
FENSE AUTHORIZATION REQUEST FOR FIS-
CAL YEAR 2012 AND THE FUTURE YEARS
DEFENSE PROGRAM**

TUESDAY, APRIL 5, 2011

U.S. SENATE,
SUBCOMMITTEE ON AIRLAND,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

The subcommittee met, pursuant to notice, at 2:31 p.m. in room SR-232A, Russell Senate Office Building, Senator Joseph I. Lieberman (chairman of the subcommittee) presiding.

Committee members present: Senators Lieberman, Blumenthal, Brown, and Sessions.

Majority staff member present: William K. Sutey, professional staff member.

Minority staff member present: John W. Heath, Jr., minority investigative counsel.

Staff assistants present: Hannah I. Lloyd and Brian F. Sebold.

Committee members' assistants present: Christopher Griffin, assistant to Senator Lieberman; Jeremy Bratt, assistant to Senator Blumenthal; Anthony Lazarski, assistant to Senator Inhofe; Lenwood Landrum, assistant to Senator Sessions; and Charles Prosch, assistant to Senator Brown.

**OPENING STATEMENT OF SENATOR JOSEPH I. LIEBERMAN,
CHAIRMAN**

Senator LIEBERMAN. Well, the Subcommittee on Airland will come to order.

I thank everyone for being here, particularly, of course, our witnesses.

We meet today to receive testimony on Army modernization, as we do every year, before we go into the markup on the National Defense Authorization Act.

Just by way of context, which obviously our witnesses appreciate every moment of every day, there are about 100,000 American servicemembers in Afghanistan today, and some 50,000 more of our troops are in Iraq. Others, obviously, are deployed elsewhere around the world, including in response to the tragic natural disaster in Japan; and in North Africa now, our Armed Forces have come to the aid of the people of Libya.

So, after almost 10 years of war, I must say, first, how much we appreciate both the quality and courage of our servicemembers, and how inspiring their resilience is to all of us. And even for those who don't really think about it every day, as it's our job to do—how much I know that their service and your leadership contributes not only to our security, but to the freedom that is our blessing and birthright as Americans.

Last week, I made a visit to the Bethesda Naval Medical Center and met with a 22-year-old marine from Connecticut who's recovering from really serious damage to his arm that he suffered in combat in Afghanistan. You know, as always, I asked him if there was anything I could do for him. And, of course, he said, "Sir, what I most want to do is go back to my unit in Afghanistan." You know, every time I've been at Walter Reed or Bethesda, I hear the same thing. It is inspiring beyond my ability to describe, and it just adds to the gratitude that we all ought to have to men and women of our military.

So, that brings me to Army modernization. What's Army modernization about? It's really about how we're going to make sure that these soldiers have—that I've just talked about—have everything they need to do what we ask them to do for our country, and to do it in a way that protects them best.

The topics that we're going to discuss today run the gamut from the Army's programs, policies, and priorities, to the challenges concerning modernization of the fiscal year-2012 budget request and the Future Years Defense Plan.

Given the state of the National economy and the determination of Secretary Gates to reform the business practices of the Pentagon, the proceedings today merit particular attention and provide the opportunity for our witnesses to update the subcommittee, particularly in the context that we're living through right now, here, of the debate about the Continuing Resolution keeping the government going for the rest of the fiscal year and the various ways in which different people are dealing with the Defense budget.

There have been quite a few developments in the Army's ongoing modernization efforts over the past few years. And I'd say, over the last year or two, particularly, they have been, in my opinion, extremely positive. I want to compliment the Army's leaders, including the three of you who are before us.

General Chiarelli, I particularly want to thank you for the efforts that have been made to work through all the programmatic issues you face as—and to thank you for the progress that you've made toward establishing a cost-effective and stable modernization strategy.

In—I think you—we have begun, through your leadership, the three of you, to learn, frankly, from some of the mistakes that have been made, and also from some of the things that have worked.

In February of last year, Secretary of the Army McHugh directed the Under Secretary of the Army and the Vice Chief, General Chiarelli, to conduct a comprehensive review of the Army's investment strategies across the capabilities we need and expect the Army to have, a review of the Army's capability portfolios. The goal was to ensure that the—that funds were budgeted, programmed, and obligated against valid requirements, with the results to in-

form some of the hard decisions the Army will have to make during the budget cycles of the next 5 years.

From the written testimony submitted by the witnesses today, I am pleased to acknowledge that this work has identified a number of areas where we can achieve savings and eliminate redundancies. This subcommittee looks forward to hearing more about this in your oral testimony.

The top two modernization efforts identified by the armor's—Army's fiscal year—2012 budget request are the network, which will connect the various systems in applications used by the Army, and the ground combat vehicle, the replacement program for the armored fighting vehicles in the Army's heavy brigade combat teams. Given the termination of the future combat systems in the early infantry brigade combat team effort, our subcommittee looks forward to the witnesses' discussions of the lessons that I've referred to that the Army has learned and now applied to current and future modernization efforts.

I'm very please, since this is the first—we've had a lot of full-committee hearings this year, this is the first of our subcommittee hearings, as we hone in on preparation of our Defense authorization bill for fiscal year 2012.

I've very pleased to welcome our new ranking member of the subcommittee, Senator Scott Brown of Massachusetts, a fellow New Englander, but, unfortunately, a Red Sox fan. [Laughter.]

Senator Brown is a proud veteran of the Army National Guard. He brings that special expertise, as well as the strength of his leadership and experience, to this subcommittee. And I look forward very much to working with him in this session of Congress.

Senator Brown.

STATEMENT OF SENATOR SCOTT P. BROWN

Senator BROWN. Thank you, Mr. Chairman, for those kind words. And it's a—I am honored to be here with you. And congratulations on the—your State's victory last night.

Senator LIEBERMAN. Thank you.

Senator BROWN. I watched. I had to turn down the volume, though, with all the clanks—[Laughter.]

—with a lot of the missed shots, but—of both teams—but it was still good to see a New England team do well.

Mr. Chairman, Generals, collectively, sir, it's good to see you again, and also want to thank you, obviously, for your continued service and leadership and guidance through these tough fiscal times and leading in your respective categories. Thank you.

And, as you know, Army modernization is a topic of considerable interest in Capitol Hill, based—I guess we've been forced into it sometimes. I've noticed, since I've been here, we need to—we kind of have to kind of be forced into doing things, versus just being a little bit more proactive. And I am concerned about the Army has had inadequate models to assess how future weapons systems will perform during, you know, irregular conflicts and stability operations, and the weakness that casts doubt on the services' justification for new platforms. It's something that I think concerns many of us.

And I have plenty of questions, I'm sure that the Chairman does, as well. And it's no secret that, between 1990 and 2010, the Army has terminated 22 major acquisitions programs, resulting in the loss of billions of dollars of tax dollars to—that could have been potentially used in a better way.

However, the Army has made some recent progress in improving its acquisition oversight and—led by you, sir—and thank you for that. I know we've spoken offline a little bit about it.

And the Army has rationalized its lines of efforts in major function areas; i.e., precision fires, air defense, and critical enablers, engineering support, force protection, et cetera. And the analysis developed by this review process has led the Army to terminate or substantially reduce acquisition programs, like the non-line-of-sight launch system; the surface launched advanced/medium-range air-to-air missile, that has underperformed, cost too much, and/or redundant with other capabilities, and also has developed greater forethought in—by pulling back on the ground combat vehicle request for proposals and scaling back the requirements for the program. I'm familiar with it. I actually visited the company that actually is involved in that process.

Both of the examples that I've discussed represent a move in the right direction. And I'm certainly thankful for that, as somebody who serves and somebody who is a taxpayer, as well.

That said, I also feel that the Army has not demonstrated that it can successfully take a major acquisition program from the initial technology development phase through to the full-rate production and sustainment. Beyond controlling requirements, the Army must also show proficiency in cost estimation, budgeting, program management, and test evaluation. In recent history, from the cancellation of the early infantry brigade combat team increments to the decision to develop the—the not field—but not field the MEADs, suggests that the Army still has a long way to go.

In sharp contrast to the previous modernization attempts, the margin for error in the—for the Army, going forward, will be significantly tested, because of the resource constraints that we're now faced with. First and foremost, the Army must develop and devote resources necessary to win the fights, not only in Afghanistan and as we step back from Iraq; the equipment returning from Iraq will need to be reset in or recapitalized. Being a member of the Guard, I know firsthand, you know, what was happening, not only in the active Army, but the Reserve and Guard units, as well. And we'll have to find efficiencies and outright cuts to support higher priorities inside the DOD, and out. And I know that's something that you're greatly concerned about.

And, during his speech at West Point, Secretary Gates warned that the Army will have difficulty justifying the cost of large heavy formations in future budgets, and the likelihood of another large land campaign, like Iraq or Afghanistan, appeared, at least in his view, to dim.

So, facing that daunting challenge, I know that you're gearing up for the fight and able to tailor the force and also provide the tools and resources for our men and women so they can do their job and, ultimately, come home safe. And that's the goal. Do the job, do it right, do it well, do it honorably, and then come home safe to your

families. And your visions for the roles of the missions of the Army will be undertaken to really dictate that future. And I know it's not an easy job.

So, in closing, before we get to our questions, I just want to say that, once again, Mr. Chairman, I'm—I fought to get on this committee, and I'm honored to be here. And I look forward to playing an active and, hopefully, a thoughtful role in that regard.

Thank you.

Senator LIEBERMAN. Thanks very much, Senator Brown.

Let me just give a brief introduction of the three witnesses, and then we'll go right to you.

General Chiarelli is, of course, the Vice Chief of Staff of the Army. This is his third year serving in that position and, essentially, running the day-to-day administration of the Army.

General, I really want to thank you for your leadership across a remarkable diversity of issue areas. We're here to talk about Army modernization. I know you've really thrown yourself into that, with good effect. And, of course, not so long ago, you were focused on a very different kind of problem, which is suicide prevention within the Army. And I'm pleased that that has also shown some good effect, as well.

So, we look forward hearing you first, then we'll go to Lieutenant General Robert Lennox, Deputy Chief of Staff for the Army, G-8, responsible for oversight and recommendations regarding requirements, priorities, and allocation of resources.

And finally, Lieutenant General William Phillips, principal military deputy to the assistant Secretary of the Army for Acquisition, Logistics, and Technology, and director, Acquisition Career Management.

You have the longest title of any of the three today.

And, as his title indicates, he provides oversight and recommendations in the areas of research, development, and acquisition for Army programs. Can't thank you enough for joining us today.

General Chiarelli, please proceed.

STATEMENT OF GEN PETER W. CHIARELLI, USA, VICE CHIEF OF STAFF OF THE ARMY; ACCOMPANIED BY LTG ROBERT P. LENNOX, USA, DEPUTY CHIEF OF STAFF OF THE ARMY (G-8), AND LTG WILLIAM N. PHILLIPS, USA, PRINCIPAL MILITARY DEPUTY TO THE ASSISTANT SECRETARY OF THE ARMY FOR ACQUISITION, LOGISTICS, AND TECHNOLOGY, AND DIRECTOR, ACQUISITION CAREER MANAGEMENT

General CHIARELLI. Senator Lieberman, Ranking Member Brown, distinguished members of the subcommittee, I thank you for the opportunity to appear before you today to discuss the fiscal year 2012 budget request as it pertains to the Army acquisition and modernization.

Since you, sir, have introduced both General Lennox and General Phillips, I will not repeat that—those kind introductions.

As you are all aware, our Nation's military continues to face a broad array of complex challenges as we approach the start of the second decade of a long struggle against a global extremist network. Today's uncertain and dynamic strategic and operational en-

vironments, coupled with current political and fiscal realities and the rapid pace of technology development, have made our outdated cold-war era strategies no longer supportable. To be successful now and into the future, we require a strategy that takes a more focused and affordable approach to equipping our force.

Our evolved strategy, aligned with the Army Force Generation Model, or ARFORGEN, will allow us to incorporate lessons learned, improve or maintain core capabilities, incrementally modernize to deliver new and improved capabilities, and integrate portfolios to align our equipment modernization communities, thereby enabling us to develop and field a versatile and affordable mix of equipment, ensuring our soldiers and units have the resources and capabilities they need to be successful across the full range of military operations today and into the future.

As part of the Army's modernization plan 2012, we have prioritized our material programs to focus on capabilities which give our soldiers and units the decisive edge in full-spectrum operations. While considering cost and size, the emphasis is on capabilities critical to Army success and our ability to network the force, deter and defeat hybrid threats, and protect and empower soldiers.

I've talked about the importance of the network with members of this subcommittee on numerous occasions. I believe it represents the centerpiece of Army modernization. And today I'm pleased to report we're making significant progress. The Army is passed talking about concepts. We are making the network happen, delivering needed capability downrange as we speak. Certainly, there's much more work left to be done, but I am confident we're headed in the right direction. Much of what we're trying to accomplish, in terms of improving the pace of Army acquisition, derived from what we learned about the network and about the nature of rapid evolving technologies. However, the principles have application across the entire modernization program.

While the network represents our number-one priority, running a close second is the ground combat vehicle, or GCV. We must first field this full-spectrum operations-capable vehicle within 7 years in order to address what is a critical capability gap across our formations. I am prepared to discuss in greater detail the specifics of the network, the ground combat vehicle, and other fiscal year 2012 priority programs, as outlined in my statement for the record, during question-and-answers.

The advanced technologies and added capabilities we are pursuing are vital to the success of our force. That said, we recognize that modernizing the force is not solely about buying newer, better equipment; it also has to do with spending money wisely and finding efficiencies wherever possible. I assure the members of this subcommittee—and I and the Army's other senior leaders remain diligent in our efforts to be good stewards of scarce taxpayer dollars.

Over the past year, through our ongoing capability portfolio review process, we've identified a number of areas where we were able to make changes and eliminate redundancies or outdated requirements. In fact, as part of the Department of Defense's reform agenda, the Army has proposed \$29 billion in savings over the next

5 years. And we will not stop there. We will continue to pursue further efficiencies in the days ahead.

In the meantime, I respectfully request your support of the Army's proposed research, development, and acquisition budget of \$31.8 billion for fiscal year 2012. We believe that this request allocates resources appropriately between fielding advanced technologies in support of soldiers currently in the fight and developing of new technologies for the future.

Mr. Chairman, members of the subcommittee, I thank you again for your continued generous support and demonstrated commitment to the outstanding men and women of the United States Army, and their families. We look forward to your questions.

[The prepared statement of General Chiarelli follows:]

Senator LIEBERMAN. Thank you, General.

General Lennox.

General LENNOX. Sir, no opening statement. Thank you for the opportunity.

Senator LIEBERMAN. And, General Phillips?

General PHILLIPS. Sir, nothing further to add. Thank you.

Senator LIEBERMAN. Good enough. I'm glad you're here to participate in the answering of the questions.

Incidentally, of course, we'll enter all your statements in full in the record of this hearing.

General Chiarelli, let me begin with you.

I know you've worked with Under Secretary of the Army Westphal through this subjective and detailed series of capability portfolio reviews that, as I've observed them and their results, have gone a long way toward rationalizing and stabilizing the Army's modernization strategy and programs.

But, let me ask you a few questions, by way of context. Senator Brown referred to some numbers, and I believe they—earlier on, in his opening statement—they may come from the study, done by former assistant Secretary of the Army Decker and retired Army General Wagner, that found that, since 2004, the Army has spend, annually, between 3.3 billion and 3.8 billion on weapons programs that have been canceled. I want to invite your response, overall, to the Decker-Warner—Decker-Wagner report and its critique. And, if you would, put your work on the capability portfolio review in the context of the criticisms in that report.

General CHIARELLI. Well, Senator, no one is proud of those numbers. But—those numbers represent canceled programs, but I will tell you, in many cases, we've sent—seen technologies from those programs, because—we have, if—it's almost like—it sounds counterintuitive to say there's a right way and a wrong way to cancel a program, and the best way to do it is to harvest—when you realize that the requirement is no longer value—valuable—of value, to harvest as many of those technologies so they can be used later on.

And I'd give you an example of one, in particular. One of the FCS vehicles, main-ground vehicles, you remember, was the NLOS cannon.

Senator LIEBERMAN. Right.

General CHIARELLI. We've harvested many of the technologies off of that canceled program and integrated them into the Paladin

PIM. And I think that shows that, if you do this properly—when you have what is an unsatisfactory situation of having to cancel a program, if you do it, there are technologies and dollars that are saved, that can be integrated into new systems.

We're doing the same thing with SLAMRAAM. And you mentioned it. SLAMRAAM is a program that we're going to put \$29 million more in over the next 2 years—

Senator LIEBERMAN. Right.

General CHIARELLI.—but so we can get it to a position where we can take that technology and put it on the shelf. And, should the threat increase in the future and the need for that weapon system be a requirement, it will be there for us to harvest.

And MEADs is my final example, is that, albeit there is—we are forced with a dilemma here. We have program termination costs that are estimated to be somewhere around \$800 million, or we can continue investment into the program, so that we can, in fact, harvest some of those technologies to use in the upgrade of Patriot. No one likes that \$800 million pricetag. But, if there is any good that comes out of it, we know that some of the technologies that have been developed for MEADs could be integrated into Patriot at a later date.

Senator LIEBERMAN. So, talk a little bit more—incidentally, I didn't announce it at the beginning, but I hope we'll each do a 7-minute round, and you keeping an eye on us—just go into a little more about the process you've followed in the capability portfolio review, and how you relate that to what you've just said about the spending on canceled programs.

General CHIARELLI. Well, I will air the dirty laundry. But, air and missile defense was a beautiful example.

Senator LIEBERMAN. Yeah.

General CHIARELLI. We had a number of programs in air and missile defense that were based on requirements that were years old, where the threat had changed. And, because we had so many programs, we were spending a minimal amount of money on each. And when we—in spending that minimal amount, we were dragging out even those that we were procuring over many, many years, which, in fact, costs—as you well know, the cost of individual weapons systems to go up. So, we look at—we looked at the entire portfolio, realized that the NLOS LS missile, once envisioned to be a \$100,000 missile designed to hit a moving target, was going to cost \$300,000. Based on a requirement from a linear battlefield and not a nonlinear battlefield, we decided we didn't need it.

When we looked and we saw the SLAMRAAM that was based off the Air Force's AMRAAM missile—although we've canceled the SLAMRAAM, the missile will continue to be made, and the Air Force will continue to buy it, because they control the missile. The cost of that missile, in order to put some of the improvements that they have put on it, had risen from \$300,000 a missile to over a million dollars a missile. And we—when we looked at 276 launchers with six missiles apiece and a threat in this particular area, which we believe there are joint systems that can help us answer that threat, we realized that this was another program that we had to take a hard look at and cancel.

And at the same time, we looked at what is affecting our troops today. And just the other day, we had 12 soldiers—2 who were killed and 10 who were wounded—with a rocket attack in Afghanistan. And we realized that where we really needed to be spending money was on the threat that is, in fact, affecting our soldiers and civilians downrange today. And that was to get after indirect fire and rocket attacks. And there are programs that the Army is investing in, and it's going to use the money we have, in fact, harvested from these other programs to meet that threat.

Senator LIEBERMAN. Okay. Those are good examples. Now, let me ask you a question about the new Ground Combat Vehicle Program. And let me state it in a devil's advocate form. Secretary Gates spoke recently at West Point and had some really interesting things to say, including a focus on the Army's challenge, which he issued in a way to justify its heavy force investment. So, when you—when we think of that, in your view—that challenge—how would you justify the Army spending 20 to 30 billion on a new ground combat vehicle that some people say may only be marginally better than the Bradley variant that it's intended to replace? Did I set that one up well enough for you, General?

General CHIARELLI. You did, sir.

Senator LIEBERMAN. Thank you.

General CHIARELLI. First of all, the example I always like to us when I'm talking about GCV is the tank. We're not buying a tank. And we're, quite frankly, not buying a heavy vehicle. We're buying a vehicle that will have a range of different weights, based on the capability packages that we're able to hang on it, using some of the new technologies in ceramics that are available. But, when the decision was made to build the M-1 tank, in 1978, and the—we bought a tank with an extra road wheel, we didn't—I don't think knew exactly what that decision meant. But, it meant that we had built into the very first model of this tank, which was delivered about 7 years after the cancellation of the last tank, not unlike the FCS which was delivered. When we did that we built in size, weight, and power into that vehicle. And that vehicle today has moved from a 105-millimeter gun to a 120-millimeter gun. It is a commander's weapon station that makes each tank worth, some people think, two tanks. And it is—has been able to incrementally change over time.

That's what we want to do with GCV. Rather than reach deep, we want to look at technologies that can be delivered in 7 years, ensure that they are included on this vehicle and that we incrementally improve GCV over time so that we have the same effect of the tank which was built in 1978 and will be—and is the finest tank in the world today—and will be, I submit to you, well into the future.

Senator LIEBERMAN. Good enough. Thank you.

My time's up. A vote has gone off. I'm going to head over, rather than recess right away. And, just to sort of show how meteoric Senator Brown's rise has been on this subcommittee, he's now in charge. And—

Senator BROWN. Just—

Senator LIEBERMAN.—I'll try to get back before his questions are done; if not, he can recess for—

Senator BROWN.—just get back before the vote stops, sir.

Senator LIEBERMAN. I will.

Senator BROWN [presiding]. Thank you.

Just to continue on with the GCV vehicle, sir. I understand about the fact that we're spending 4.62 million in fiscal year 2011, 8.84 million in fiscal year 2012, 1.2 billion up to the—you know, the three—the TD contracts. And I'm wondering—and that's a \$40 billion ultimate effort, or more, depending—I mean, the way I'm seeing things being done around here lately, it's 40-plus, pick a number, because there's—between cost overruns and the like. And we are going to be replacing every infantry fighting vehicle.

I guess, two questions: Are you concerned that we're putting all our eggs in one basket with this new vehicle, since we're replacing all the infantry fighting vehicles?

General CHIARELLI. I'm not. I think it's exactly what we have to do, because the Bradley has reached a point where its size, weight, and power won't, in fact, carry the network in all instances. The Bradley loses a lot of its problems if you take the turret off of it. It also—it loses a lot of weight, it gains a lot of power, and it—that Bradley can be used for other uses that the Army might have. We see it as a possible competitor to replace the M-113. And we see those Bradley hulls as something that can be used.

And it points to the fact that, as we developed our plan for the GCV, we just didn't look at a single vehicle, we looked at the entire portfolio of vehicles—combat vehicles we had and what we could afford, and what we needed the most to find a new vehicle. And we felt that the ground combat vehicle was the critical piece where a new development was warranted. It will provide the protection our soldiers need. We want to ensure it's in their hands in 7 years. We want to be able to carry that nine-man squad from point A to point B on the battlefield. And we want to ensure that, at a minimum, it has the ability to conduct full-spectrum operations with capabilities packages that can be added or subtracted from the vehicle, based on the enemy threat.

And one final point I would make: There's a tendency to look at the force today and say that it doesn't have heavy vehicles. An MRAP ATV downrange today, that's carrying four infantrymen, weighs 17 tons. To move a squad in Afghanistan today, of the 181st or the 82nd, is 51 tons of armor going down the road. So, in order to get the protection that you need for these soldiers—and protection matters—we've got to find a way to ensure that our next combat vehicle provides a minimum—and, we think, better—protection than the MRAP provides today, understanding, at some point, physics takes over; it becomes a much more difficult problem for the enemy if you can provide that protection.

Senator BROWN. I know you're doing a—you're upgrading the Abrams, obviously. Based on what you just said, you don't believe that you can continue, or you should be trying, to upgrade the Bradley, as you're doing with the Abrams, or not?

General CHIARELLI. We have very good uses planned for the Bradley. We're talking about—there are many Bradleys that serve on forces that are not ground combat vehicles. They are serving in—as other variants. And we have a requirement today, we know, to replace the 113. And the 113 replacement very well could be a

variant of the Bradley, where we're able, without having to put a larger engine in it, to be able to take the turret off and, in fact, have a very suitable replacement for the 113, at a much reduced cost.

Senator BROWN. I'm sorry, I'm just looking at—I have a couple more minutes, then I'm going to have to shift gears and just go into a brief recess, if possible.

The M-1 tank, if we could—sir, if we could just shift to M-1 Abrams—as the budget stands now, there'll be a break in upgrades to the Abrams tank in 2013. I'm looking at the funding schedule, and, you know, we go along in fiscal year 2011, 521 million, 2012 is 358, producing upgrades of 22, 21, 21. And then in fiscal year 2013 we go down to zero across the board until, potentially, 2016, where our—then we ramp up again from the 190—average it out—\$200 million to \$737 million.

Are you concerned at all that the—it's—number one, cost effective, and that you're, number two, mitigating the costs, and actually that the entity that's actually doing these things will actually have the working knowledge? Because basically you're shutting down production in the factory, and I can't imagine that all the worker bees, the people who'd actually have the institutional knowledge how to do this stuff, will actually be there to do it.

General LENNOX. Senator, I think it's a great question. Basically, what we're doing is, we are finishing up the procurement of a two-variant fleet, for the Active Force and for the Guard Force, of the very most modern Abrams tanks. In fact, you'll find that our average age of the Abrams fleet is around the 4-year-of-age mark. So, we've got a very fit and complete fleet that we'll have at this time. And that's what has caused us to stop buying something that we no longer need.

Now, your other question, which I think is very important, is about the industrial base and the implications. And yes, we are concerned. When we talk to General Dynamics and others, it is a—the amount that we've been given, that it would take to keep those plants open, is extraordinarily large. So, it was something that we had to address, in prioritization, about whether or not you could afford to buy more of something that we already have enough of or put our scarce resources against something else. And that was the logic that led us to stop the production at this time.

Senator BROWN. Yeah, I mean, I'm deeply concerned that the base will be there. You know, you say it'll—is it cost effective, are we properly mitigating the cost by, in fact—instead of going from 21 to 0, is there a more scale-up/scale-down proposal that will be more cost effective?

So, with that, unfortunately, I'm going to take a brief recess. Everyone can hit the head and do whatever. So, thank you. We'll be back in about 5 minutes.

[Recess.]

Senator LIEBERMAN [presiding]. Sorry for the recess. Hopefully, that's the last vote for a while.

It's my honor and pleasure now to call on my colleague from Connecticut, Senator Blumenthal.

Senator BLUMENTHAL. Thank you, Mr. Chairman.

And I want to thank each of you, and the men and women working under you, for your extraordinary service to our Nation. I apologize that we kept you waiting. There was a point in my life when the thought of keeping one general waiting would have mortified me beyond words. And the thought, even now, of keeping three generals waiting certainly is somewhat disquieting. But, I thank you very much for your patience.

I want to, if I may, go back to the conversation we were having before we interrupted, and ask you, perhaps—because I think the public fails to understand this idea of abandoned weapon systems, and so, often feels that the reason for abandoning them is that they just plain didn't work or the people who were developing them calculated wrong. But, I think that a part of your answer has been that the nature of the threat changed. In other words, that we understood better what the weapon system was designed to do, and, in a fast changing world, we had to adapt the weapon system to meet that threat.

And I think that's very important for us, in this body, to understand, and even more so for the public to understand, because it is at the core of the credibility that we all have in supporting the military, which we all want to do, and especially when you're doing the kind of work that you're doing, which is so essential to the Nation.

So, I wonder if there are examples that you could give us now or in the future, if you want to supplement these answers, that would give us the, for lack of a better word, ammunition to use when we're confronted with that kind of question or challenge.

General CHIARELLI. I'll let my two colleagues add to this, but you've hit just such a critical point. And I do not want to say we are not without fault. What we should have been doing is reviewing the requirements more often. And that's what we've done with the capability portfolio reviews. It's not a one-time look across air and missile defense, with a decision to cancel some programs and add to some programs. I've just scheduled a second one. We're going back again and look at AMD, after a year, to see if the requirements that we've laid out are still valid requirements, the numbers we say we need are still valid numbers, and if the threats that we felt we had a year ago are still valid threats.

We believe, if we do this and we institutionalize this across the Army, don't just come up with a requirement for a capability gap and then throw it over there to Bill Phillips, who's the acquisition guy, and say, "Bill, build this." He enters into the 5000.2 system and process of acquisition that takes 10 to 12 years to come up with a major program on the other end, and then, at the end of that, he comes to us with something, and we look at it and we say, "We don't need that anymore."

So, what we're doing with the capability portfolio review process is going back, on a very frequent schedule, to review all those portfolios, to make sure the threat is the same, the number we thought we needed is what we need, and the requirement remains valid.

General PHILLIPS. Sir, I would add just—Senator—a couple of comments. One is, we take our fiduciary responsibility to the American taxpayer and Congress very importantly. And every dollar that you give us, we want to make sure that we absolutely use that

dollar in the most efficient, effective way. And I think the CPRs that General Chiarelli mentioned are a tremendous step forward for us to get our hands around requirements resourcing and then an acquisition strategy.

I'll give you one example on the threat and affordability: Comanche. I was a captain in 1986 when I first went on the Comanche program. First unit equip was 1996, and the threat obviously changed over time as the program grew and grew. And there's a host of other requirements behind that. But, we determined that the threat had changed and the aircraft had grown so much that we needed to do something else with Comanche. So, the Army decided to terminate Comanche, partly by affordability and partly because of how the threat had evolved over a series of years. So, we invested 14.2 billion back into aviation today.

So, the results of that has been very positive for the Army. Number one, we harvested technology from Comanche. Number two, we have over 500 aircraft flying in theater today; as a result of the Comanche decision, flying at readiness rates above what we could even imagine back in 2003 and 2004, because the Army made the right decision to terminate Comanche and reinvest those dollars.

Senator BLUMENTHAL. General?

General LENNOX. Senator, I don't know how much time you have. There are so many examples. The one I was going to use is about the Scorpion anti-tank mine that we canceled as a part of the portfolio review—and CPR, in Army lingo is capability portfolio review—that we conducted last year. That's freed up probably \$500 million, total over the course of the program, that we're investing right now into counter-IED capabilities. So, that was an anti-tank mine system we don't think is relevant. And, in turn, we're taking that money and investing it in technologies to buy more of the Buffalo and Husky vehicles that soldiers are using in Afghanistan today, some of the mine detectors and some of the technologies that we're using to modernize an engineer portfolio that was pretty woefully out of date.

General CHIARELLI. And I would just—one final point. A secondary effect that we didn't fully understand when we got into capability portfolio reviews is what we have been able to do to rationalize the entire portfolio, such as combat vehicles. It's hard for me to talk to you about GCV without talking to you about the other Army combat vehicles, because we are—now look at it as a package that looks at affordability.

I mean, PIM is a great example. The Paladin PIM is a replacement for the A6 Paladin. But we realized we couldn't do a new start, we couldn't afford a new start with GCV and the other things we needed to do. So, here we have a weapon, where we've imported the technologies off that canceled NLOS cannon onto an improvement of the A6 with a brandnew body, new engine, but the same 155-millimeter gun to fire some of our new munitions.

But, you really can't talk about GCV as a single vehicle without talking about the entire portfolio. And I think that that's one of the huge benefits of this strategy, is in rationalizing all the systems, both from a standpoint of requirements and affordability.

Senator BLUMENTHAL. Are there—is—would there be a way for you to get us some more examples—get—or get me some more examples?

[The information referred to follows:]

[INFORMATION]

Senator BLUMENTHAL. Because I think what you have just outlined has been very, very helpful, and, you know, I can't speak for the subcommittee, but I think, for myself, would be a very constructive aid. And I know that I don't have unlimited now, but if I have some more, I may follow up.

Thanks.

General PHILLIPS. Senator, if I could add one comment.

We're doing an analysis of the 22 programs that were mentioned earlier, why they were canceled, in support of the study done by the Decker-Wagner team, so we can do that analysis, learn from it, and make sure we don't make the same mistakes in the past. And we'll take that action to get back with you, sir.

Senator BLUMENTHAL. Thank you.

Senator LIEBERMAN. Thanks, Senator Blumenthal.

And the whole subcommittee would benefit from having that information, as well.

We'll do a second round, another 7 minutes.

Let me ask a question about the Stryker. I know that the Army's been testing an improved version of the Stryker with a double-V hull for deployment to Afghanistan. I wonder if you could give us a status report on how the testing is going and whether it's proceeding as planned.

General CHIARELLI. It's been excellent. We are very excited about getting the double-V hull with the added protection into the field. There are a couple of issues that come up during testing. Most of them are in the driver's station, not from a protection standpoint; but, some of the changes to the structural portion of the driver's compartment have made it a cramped station that we're working to try to fix in later models. And we've also really reached the weight of the chassis. We have really come out on the top end now and have to look at that.

But, from the standpoint of protection for the entire crew, to include the driver, we are very, very pleased and are moving those vehicles to theater as we speak.

Senator LIEBERMAN. Good. And this was a real problem. That is, protection of people in the Stryker, with all the capabilities that it has. Am I right?

General PHILLIPS. Yes, sir, exactly. This actually significantly increases the protection level. It gives you MATV-level protection, or even greater. And our task now—I'll tell you, the latest, Senator, is, we've accepted 79 vehicles, as of last Friday—

Senator LIEBERMAN. Right.

General PHILLIPS.—of the double-V hull, and we have nine pos-
tured at the Port of Charleston for shipment over to Afghanistan.
And our—

Senator LIEBERMAN. Good.

General PHILLIPS.—intent is to get at least 150 ready, in the next couple of months, for fielding. But, this has been very positive for the Army, and it will help protect our soldiers in theater.

Senator LIEBERMAN. The fiscal year 2012 budget request for Strykers includes 100 new NBCRV vehicles, so it raises the question of why you'd want to buy any more of the flat-bottom Strykers if the double-V is the new standard.

General LENNOX. Great question, Senator. It's one that we wrestled with, frankly. The technology in the NBC Reconnaissance Vehicle we thought would take us a number of years to integrate into a double-V-shape platform. And since a number of these vehicles will be useful for homeland defense, we thought we'd progress with those that would not operate in an IED environment. We thought it was a prudent thing to do to minimize the risk, but still get this capability out to the field relatively quickly. But, we did wrestle with it. I think that's a—

Senator LIEBERMAN. So—

General LENNOX.—good question.

Senator LIEBERMAN.—so these will be moved out to the field, but then their aim will be to get the double-V hulls on all of them over time or as quickly as you can?

General LENNOX. What we're doing presently, Senator, is, we've asked for—and let me thank this committee for their support, because this has really been remarkable, I think, in 18 months, this teamwork from Congress and industry and the Army—we have fielded, and will field, one brigade combat team to Afghanistan. And that's the current plan. We're looking at possibilities for the future. And we're also looking at an overall Stryker modernization plan, that won't go into place for a number of years yet, but that will—we will be informed by this effort on the double-V hull.

General CHIARELLI. And I would say, Senator, there are some other efforts in underbody protection that are looking very, very promising that we may want to even meld with the double-V hull or possibly may even surpass it. We don't know for sure. But, there is—

Senator LIEBERMAN. Yeah.

General CHIARELLI.—a lot testing right now with different forms of underbody protection that are proving to be very, very exciting.

Senator LIEBERMAN. Let me ask you to step back a little bit and use the experience with the Strykers as an example. And I know—well, let me just ask the questions.

As you look back at the development of the Stryker, which has, as I said, remarkable capabilities that have really worked very well in Afghanistan and Iraq, obviously experience showed that the bottom of the vehicle was not giving adequate protection to the crew. Now, I know this is Monday-morning managing, but—or Tuesday-morning managing, but, as you look back at the process, is that something that should have been foreseen?

General CHIARELLI. If you understand the requirement came for the Stryker before we ever saw our first IED—I mean—

Senator LIEBERMAN. Right.

General CHIARELLI.—it's kind of interesting. Yesterday marked the 7th anniversary of the uprising in Sadr City, when I was in Iraq; we lost 8 soldiers and had over 60 wounded. But, the—not a single IED went off on April 4th, 2004, when that occurred. There was no requirement for underbody protection at that time, except for our larger combat vehicles. But, over time, this has evolved.

And, based on the nature of the threat, we've gone back, on Stryker and a number of vehicles—and we're doing the same for the Humvee today—

Senator LIEBERMAN. Sure.

General CHIARELLI.—and looking at ways that we might be able to provide additional underbody protection to those vehicles, to provide protection for our soldiers.

Senator LIEBERMAN. So, bottom line, this was a threat that didn't exist at the time Stryker was designed.

General CHIARELLI. That's exactly right. And that's why we're excited about GCV with capability packages. What we want to do is to build a vehicle that you can hang capability packages on that could provide passive protection or reactive protection, as those technologies improve over time, that will give that crew additional protection. The one thing we've been chasing for 10 years, in both theaters, is protection for our soldiers.

Senator LIEBERMAN. Right.

General CHIARELLI. I mean, we've been chasing it. Now, I can go through the litany of the improvements we tried to make to the Humvee, to the MRAP, and now the MRAP—

Senator LIEBERMAN. Right.

General CHIARELLI.—ATV to get us additional mobility. And where the Stryker provides us tremendous capabilities—it's basically road-bound in Afghanistan. And when—

Senator LIEBERMAN. Correct.

General CHIARELLI.—you put anything on a common path all the time, that's when you run into problems with an enemy that knows you've got to go from point A to point B on a certain route.

Senator LIEBERMAN. Let me ask you a related question about the MRAP vehicles. The Army owns about 12,000 of these now. As the forces draw down in the Iraq in the months ahead, I know that many of these vehicles are going to be returned to Army installations across the country. Secretary Gates has made it clear that he wants these MRAPs incorporated as an assigned capability in the current force structure. I have heard that Army staff is currently working to figure out how the vehicles will be incorporated into the tactical wheeled vehicle fleet and unit distribution plans.

Perhaps General Lennox: What's the Army's thinking, at this time, about how to integrate the MRAP, MRAP fleet, and all its variations into the current force structure?

General LENNOX. Senator, we've done quite a bit of work in the area of integrating of MRAPs, both as a carrier—in protection of convoys, for example. That's one areas that we'll incorporate them into our formations. Another one is as a carrier of equipment. So, as a carrier for some of our signals intelligence equipment, we're going to use and MRAP platform for that.

We've also come up with a plan to stage them in our APS, our overseas contingency stocks, so that they're available, because we only have small numbers, about 12,000. And we have about 200,000 tactical wheeled vehicles; we have about 12,000 of these. So, we plan to stage some so that we can use them in cases of contingency, as well.

So, they'll be integrated into our formations, and we'll have them staged to be used in case of deployments, as well.

Senator LIEBERMAN. Very good. My time's up.

Senator Brown.

Senator BROWN. Thank you, Mr. Chairman.

And thank you, to our witnesses, for being a little flexible with our votes.

On the radio procurement, you know, competition, General, once again—or Generals, collectively, whoever wants to chime in—certain vendors have complained about the lack of competition in that JTRS and the HMS system programs. Specifically, they note the lack of competition for the rifleman radio, or the manpack radio, until fiscal year 2014, prior to the start of a full-rate production. For example, I'm noting here on the schedule, when I reviewed it, that you're using the incumbent boxes, which is—for people that are listening—is the actual hardware. And then you're encouraging the competitors to develop software, which ultimately, I know, you get to keep.

Does that make sense, for the competitors to fully develop a cost-effective product when they need to actually rely on, you know, GD's original boxes? And—number one—and number two, does that give GD a competitive advantage? And number three, my question would be, Why wouldn't you move it up to the LRIP-2 phase in 2013?

General CHIARELLI. Let me—the key to JTRS and the JTRS's business model is what we have done with nonproprietary wave forms for our radios. A key and critical piece here is \$179 million that we have an RDT&E to complete the development of those wave forms so that we can then open up all the JTRS radios for free and open competition. Industry has made a lot of money on us over time because we have not owned our wave forms. And a non-proprietary wave form would mean that every time we wanted to go and change that wave form, we would have to go and pay integration costs and additional money to the industry.

Senator BROWN. Well, I understand, in terms of the—I understand that. But, I'm saying why wouldn't you move it up a year and let it go under the LRIP-2 phase versus—you know, save an extra year and make it a little bit more competitive earlier?

General CHIARELLI. I will sure take a look at doing it in 2013, but we have to complete the development of the wave forms in '12 and the integration onto the Shadow in 2012. And that's why that RDT&E money is so important: in order to allow us to have free and open competition. We've got to have these wave forms completed and ready to go before we can open it up to all the competitors out there and say, "Build us the best box for the cheapest price point you can." And that's what I find exciting about what we're doing here. We are changing the paradigm on how we buy—and it's not really fair to even call them "radios" any more—into the future.

Senator BROWN. Sure. There's—and thank you. I'm excited too. You can tell. [Laughter.]

But, I'm just asking, potentially—you know, we're using an incumbent box. We're opening up to competition at a certain stage. I think it gives one entity a competitive advantage. And potentially, instead of getting the best product possible, we may be getting, you know—hitting a 75—you know, the 70, you know, percent threshold or, you know, going up to—you know, we're almost

ready to kick it in at a touchdown, but we're not quite there because we haven't opened—but I would just if there's a way to consider, and maybe get back to the committee, moving it up a year.

[The information referred to follows:]

[INFORMATION]

General CHIARELLI. We will—I will investigate that immediately, sir.

Senator BROWN. I know. Thank you, sir.

And then on the MEADs program, you know, it's—this is probably third hearing, now, I've had on that particular program. I'm just flabbergasted that the person who wrote the contract and allowed us to basically sign a contract—whoever advised whomever who signed it to say, "Oh yeah, this is a great deal. And by the way if—you can't get out of it; and if you do, you've got to pay \$800 million." Are you kidding me? I mean, I'm at the point now that I'm thinking of, potentially, with other members, you know, just putting something in the authorization bill saying, "You know what? We're out. Sue us," and take our chances there and see what happens.

But, I was wondering—and I know there's timing issues and the like—I'm wondering why—when I say "you" I mean the Army, not just you, per se, sir—terminate the program and work out other arrangements with the Germans and Italians to actually—because I can't imagine they're none too happy either with what they're not getting.

General CHIARELLI. Mr. Kendall is quoted in the paper, the other day, as saying he's working with our international partners—

Senator BROWN. It was—

General CHIARELLI.—to do—

Senator BROWN.—based on—

General CHIARELLI.—exactly that.

Senator BROWN.—a conversation, actually, we had. I remember that, as well.

General CHIARELLI. I'm sure it is, because we came as prepared as we could to answer your question and, in our research, we found that the MEADs contract was put together in 1996.

Senator BROWN. Yeah.

General CHIARELLI. And it was an international memorandum of agreement. And the high termination costs were seen—were thought to be a requirement in order so that international partners would not renege on the deal. I'm sure that we've learned a lot about that today. If there is a silver lining in any of this, we see the possibility that there is some of the technology that would be developed over—with that \$800 million, that could be integrated into Patriot at a later time.

Senator BROWN. Well, that was my next question. Are you seeing or do you—are you hopeful that the money that we've actually invested will not be wasted and will—and we'll be able to actually get into our—get in use that type of information?

General CHIARELLI. There is a distinct possibility that that will be the case.

Senator BROWN. When do we think we'll know that?

General CHIARELLI. I'll let—General Lennox, who's an air defender, can probably—

General LENNOX. Sir, we're looking at a couple things. And, first of all, I just want to let you know that it was the Army that recommended, as part of the portfolio—

Senator BROWN. Well—

General LENNOX.—reviews, that we cancel this program.

Senator BROWN. That's great.

General LENNOX. So, we agree—

Senator BROWN. Sure.

General LENNOX.—with you completely.

Senator BROWN. Right.

General LENNOX. We think there are some potential technologies in the surveillance radar, the exciter, the coolant, the phased-array face on the surveillance radar we think that our potential candidates look at. The program's building a near-vertical launcher. That's one of the areas we might be able to look at. And it'll be cost-benefit to see whether these are worth adapting as we see what the program develops. So, we can't say, today; but, as we see how the program develops, we'll do a cost-benefit analysis about whether or not this is worth incorporating in the Patriot fleet.

Senator BROWN. Great.

And the WIN-T program—for those who are listening, the Warfighter Informational Network Tactical—what's the status of increment 2 and 3 of the WIN-T?

General CHIARELLI. Well, we're moving 2 as fast as we possibly can, but it's a key and critical piece of what we're trying to do to push the network down to the individual soldier.

Senator BROWN. So, what's the major technical hurdles in completing the program?

General LENNOX. I don't see any, Senator. I think our fiscal year 2012 request helps us finish up increment 1-B, which will make sure that it is compatible with increment 2 so that the units in the field can actually talk, and then begins fielding increment 2. So, I think we're on a path to do—to field this system.

Increment 2, I think, as you're aware, starts to give us the capability to do battle command on the move. So, it's one of our key objectives. It's really a transport layer that brings down the capability to soldiers in command posts all the way down to the company level. So, it's a key and critical program, and we ask your support.

Senator BROWN. Is that—

General CHIARELLI. And I'd like to push WIN-T increment 2 out as fast as we can. I'd like to see if we can't do some of the testing as operational testing, thereby saving money and getting a capability into the hands of the warfighter that the warfighter doesn't have right now. So, we're working very, very hard to see if there are ways that we might be able to do that and do some of that testing downrange. Because I believe it provides a capability that—the worst case is: you don't have it now and if it doesn't work you won't have it then.

Senator BROWN. Right.

General CHIARELLI. But, we have all indications that it will work.

Senator BROWN. The Chairman's given me a little flexibility to just wrap up this particular thought process.

So, if the warfighter actually has that piece of technology and they're actually caught, as an enemy, how does the technology that they—that the enemy gets—how would it affect the remaining network, you know, the ability to basically intercept and understand?

General LENNOX. There are secure devices, Senator, on each of these pieces of equipment, like a lot of the equipment that we have out there today. So, your old-fashioned radios that you probably used in the Guard and I used, growing up, had these KY—whatever they were called—secure devices on them. They have to be updated and can be—

Senator BROWN. So, it'd be a short-term—

General LENNOX.—sequestered—

Senator BROWN.—short-term potential—

General LENNOX. Yes.

Senator BROWN.—vulnerability.

General LENNOX. Yes, sir.

Senator BROWN. Once you know that soldier's been captured or—you'd be able to—

General LENNOX. It can be sequestered.

Senator BROWN. Thank you.

Senator LIEBERMAN. Thanks, Senator Brown.

Senator Sessions.

Senator SESSIONS. Thank you, Mr. Chairman.

Thank you all for being here. We appreciate your service, and I couldn't be prouder of the military and our Army.

And, General Chiarelli, I enjoyed visiting with you a number of times in Iraq. I know how many months you spent there away from family. I know how many hours each day you worked and how many days a week, which is about all anybody work, because you were, every day, trying to effectively carry out the mission you were given, and do so at the most minimum loss of life to the great soldiers that you led. So, I want to thank you for all that.

And I do truly believe we have the greatest military the world has ever known. We have a fabulous combination of equipment, training, and capability, and motivation. We've got warriors who have the courage to go and fight. And whatever we do as we work through this, Mr. Chairman, is—we don't need to break that. We don't need to somehow save dollars here and dollars there and end up damaging the great military that we have.

However, I have another hat, which is ranking Republican on the Budget Committee. And it's not good. This year we spend \$3.7 trillion and we take in 2.2. The interest, over the next 10 years, is projected to grow from \$200 billion last year on our debt to \$800 billion in 10 years—800—actually to 940 billion, which is way above the Defense budget, it's way above Medicare.

So, we're on a course that we've got to change. And when I talk about frugality, the first question I'm given is, "Are you going to cut the Defense Department, too?" knowing that I tend to be a defender of the Defense Department. So, obviously, everybody is going to have to look at it. So, something has changed. I just want you to know that. The world has changed. It's not anything we can dismiss. Everybody's mind has got to be a little different.

Let's talk about the ground combat vehicle briefly, General Chiarelli. What—how would it—what do you see it looking like?

How will it be configured? What uses do you tend to make of it? And how critical will it be to the Army's future?

General CHIARELLI. Senator, I think it's absolutely essential. I think what we have done with the ground combat vehicle has taken 10 years of lessons of war and created a vehicle that, first, is going to be full-spectrum, with a series of capability packages that will be allowed to be added to that vehicle, both passive and reactive, different kinds of armors to give it different protection, based on the enemy threat. And we've been chasing protection levels throughout this 10 years.

Number two, it will carry a nine-man squad. Right now, a nine-man squad is carried around, downrange in Afghanistan, in a wheeled—wheeled vehicles, three of them, that weigh a total of 51 tons. And even our lightest forces are having to use these vehicles to move from point A to point B and dismount the squads out of three vehicles. Commanders have told us they want to do that out of one vehicle. They want one vehicle to move, because that is how they can most effectively employ their squad.

Third thing is, we want to ensure that it has MRAP—at a minimum—type protection, with a capability, over time, to improve the protective capability over the vehicle, because we've built into it size, weight, and power. We want it to accommodate the network. And the network takes power.

And the final thing is, we want this vehicle in 7 years. We have lowered the requirements so that we can incrementally improve the vehicle over time. Not unlike what we did with the M-1 tank. We started out with a 54-ton vehicle, with a 105-millimeter gun, with a commander's cupola that was something out of—it was a joke. And we used to joke, as a tanker, that we ran out of money when we got to the commander's cupola. Well, we did. And when I met the person who designed the M-1 tank, he said, "You know what? That's exactly what happened." But, over time, because we built into that tank size, weight, and power, and we put a sixth road wheel on it so it could grow over time, since 1978 it is still the number-one tank in the world. And it will be, we believe, through 2050, because of—it was incrementally improved over time.

That's what we want to do with the GCV. And we think it will play a critical role in our combat vehicle portfolio.

Senator SESSIONS. Well, that's a good explanation and I thank you for it.

Let me just say that I was stunned at the cost that the MRAP eventually cost us, almost a million a copy. I know we were in a rush. We had quick demands, we had lives at stake. And I supported that. And I know all of us did. But, these vehicles don't seem to me to be so particularly costly and expensive. Is there some way we can break this cycle of the extraordinary cost that these vehicles have? It seems to me a lot of what you would have on this vehicle is a—commercial capabilities or proven stuff that we've used in the military before. Would you have any comments on that? How can we keep the cost down?

And I just want follow up with Senator Brown's comment. I truly believe that we're making a mistake when we pay to develop and research a new weapon system and then we allow the contractor to keep that patents and rights to it, and then, when we want to

change it a little bit, we have to—only they have the right—you know, the capabilities of doing it. Can we break that cycle?

General PHILLIPS. Senator, I would answer your question this way. Yes, we looked hard at affordability and executability. The reason we pulled back the RFP, on the 25th of August of last year, for the ground combat vehicle was because, when we looked at all the requirements that we had in the original RFP, there were over 900 that were essentially tier-1, must-have requirements. When we really pulled it back and, in a collaborative environment, with the requirements and resourcing and acquisition folks in the room for about an intensive 60-day period, we came up with about 140 or so requirements that were mandatory to meet the big four that General Chiarelli described so eloquently.

Now, when we went back and we looked at the original cost of that—the ground combat vehicle for the first RFP, it was over \$20 million. And then, through that collaborative effort, we came to understand, and validated, that we could build this vehicle for somewhere between 9.5 and 11—or \$9.5 and \$11 million per vehicle, almost a 50-percent reduction in what we expect the cost of it to be. And we think we continue to drive affordability down.

We looked at two things when we went and addressed it with Dr. Carter, the defense acquisition executive. We wanted an affordable program that the Army could afford within the combat vehicle portfolio. And then we wanted to make sure that we could execute a medium-risk strategy to get this vehicle within 7 years.

So, sir, we think we have an affordable, executable strategy, going forward.

Senator SESSIONS. Well, thank you for your work.

And, General Chiarelli, we talk about procurement, and that's what gets a lot of our attention. We complain about it. I know you're watching it. But, what is the total procurement budget of the Army compared to its overall total budget?

General CHIARELLI. Our total research, development, and acquisition budget for fiscal year 2012 submission, sir, is about \$31.8 billion. And the total budget's—in the request is in the neighborhood of 150 billion, not including wartime supplemental.

Senator SESSIONS. Now, I would just say that we have to have new equipment. We have to have new capabilities. And if you—if all of our cuts and reductions and everything come from procurement, we're leaving our soldiers with less than the quality equipment that they need. So, I guess, as you wrestle with where to reduce spending and contain the growth of spending, I hope that—you know, you'll just have to look at the whole budget. I mean, we can't take it all out of procurement of the new weapon systems that we need.

General CHIARELLI. We think that's absolutely critical. And, quite frankly, that's why we are going through the planning we're going through right now, that it—should an end-strength decrease be required in 2015 and 2016, as the Secretary has laid out, that 27,000, we are going through the necessary planning to say that we want to ensure that we have a balanced portfolio, across the board. Our tendency is always to hang onto our people. And if we do that, at the cost of all our procurement accounts, the exact thing you say, Senator, will occur.

So, we're going through, now, in that area, personnel, reversible planning. Should the situation change, should we not be out of Iraq, should we not begin a solid drawdown coming out of Afghanistan, should some other requirement pop up—hopefully, it will not—for large numbers of ground forces, and as long as we have access to the Reserve components, we feel that that kind of planning is prudent now. And it allows us to ensure that, as we do that planning, we take a look at personnel accounts with procurement accounts to ensure whatever size force we have, it is a balanced force. Not one that's heavy in people, light in equipment, or heavy in equipment and light in people.

Senator LIEBERMAN. Thank you, Senator Sessions. That was a good exchange.

Senator Blumenthal.

Senator BLUMENTHAL. Thank you, Mr. Chairman.

And thank you again for your testimony, which has been very helpful.

I want to change the subject slightly, from the ground to the air. And we discussed it a little bit. But, taking your remark, General Chiarelli, that the enemy can respond much more easily to transporting materials by road when it knows we have to go from point A to point B. I know that the Army is doing some very exciting work with payloads delivered by air, particularly unmanned helicopters, and, at the Natick Center, has just successfully tested the K-MAX helicopter, the unmanned version that's delivered a certain number of payloads. I'm not sure exactly how many or what weight. But, perhaps you could comment on the potential and the promise for developing that technology, whether it's the K-MAX or another version of the unmanned helicopter.

General LENNOX. Senator, the Army has invested heavily in unmanned aerial vehicles, in its fiscal year 2012 submission and throughout the program. It's a need that we cannot seem to meet. The demand always seems to outpace our ability to meet it. The demand is for full-motion videos to enhance situational awareness on the ground. One of the key lessons learned, in addition to protection, over the last 10 years, is that you can't enough situational awareness to soldiers on the ground. So, unmanned aerial vehicles is a big area.

We have invested in some pilots: the LEMV, which is essentially a blimp that we can hang a series of payloads underneath. And in the vertical launch capability, we're looking at the A-160, as well, as a program you've talked about, as possibilities that we'd like to pilot in Afghanistan and then see whether or not we want to adopt these technologies to long-term programs, or not.

General PHILLIPS. Sir, I would just add one comment. For UAVs, we've seen an exponential growth in UAVs over the last 10 years. It's incredibly important for the—our soldiers that are in harm's way today. And we'll certainly take a look at the K-MAX what capabilities it brings. But, I would share with you also that UAVs have flown over 1.1 million combat hours in theater, and we're always looking at ways to improve unmanned aerial systems, across the board. So, sir, we'll take a look at that.

Senator BLUMENTHAL. And I assume that these developments and the new technologies are being developed among the services, working together, not just by the Army.

General CHIARELLI. The Marine Corps has a very, very active program and, in many ways, is leading in unmanned aerial delivery of supplies, a requirement that they feel is—its time has come. And we're looking very, very hard at the work that they are doing, also.

Senator BLUMENTHAL. And, going back, you may not have—and we may not want to explore it here—but, going to the questions that Senator Sessions was asking about, the patents and the rights to use technology. I know we've talked—you've talked a lot about harvesting these technologies. Are there legal barriers? I recognize you're not here as lawyers, but do you find, in your work, that you encounter legal barriers that maybe we can be helpful in addressing?

General CHIARELLI. I know I'm Italian and my emotion sometimes gets away with me, but that is why I'm so excited about what we're doing with the JTRS model. Nonproprietary wave forms, wave forms that the United States Government owns, in an operating environment where we've set the left limit and the right limit, will allow us to duplicate what has occurred in the cell phone industry. We will have applications that we will tell people, "You write it to work on our operating environment or we don't want it."

So, everything that goes into that operating environment, not only will it work without us paying integration costs, but it will also allow different applications to pass data amongst themselves, because you've made that possible by dictating what the operating environment's like, not unlike you would see with the applications on an iPhone or a Droid or anything else.

This is a total change for the Army. It—when you update your computer program, whatever that might be, you have to go back and pay a fee for that update. The idea here is, we make the improvement to the wave form, but the government does it, spending the amount of money it wants to make the improvements it needs. And, when you—it comes out the other end, everything that rides in that common operating environment is able to talk to one another.

There's those who would rather not have us go there, because there will be money lost in integration costs that we've had to pay in the past. So, we're excited about this, and see a great opportunity to save money over time for our government.

Senator BLUMENTHAL. And providing a model other weapons development.

Thank you.

Senator LIEBERMAN. I have a—just a couple more questions.

First, I want to state for the record that, in this subcommittee, we welcome the expression of emotions by Italian-Americans or any other kind of Americans. [Laughter.]

So, let me ask about the UH-60 multiyear procurement. The budget for the next fiscal year request includes a legislative provision giving the Army authority to enter a multiyear procurement contract for various models of the Black Hawk. The last multiyear procurement projected that cost savings of 5.3 percent would be re-

alized by a multiyear buy. But, in fact, only 4-percent savings were realized. There were real savings, but not as high as expected. The projection for savings that accompanies the request for fiscal year 2012 is now 10.5 percent from a multiyear. So, I wanted you to talk a little bit about the basis of that and whether there's a—that 10.5 percent—whether there's a CAPE-approved estimate that the Army can actually achieve a 10-percent savings through multiyear procurement authority for the Black Hawk.

General PHILLIPS. Senator—

Senator LIEBERMAN. Sir.

General PHILLIPS.—a couple of comments. One is the Black Hawk program is incredibly important for the Army. It's the highest density aircraft downrange today flying in Iraq and Afghanistan. There's over 300 aircraft that are flying there, with extraordinarily high readiness rates. So, we see the Black Hawk program and the UH-60M as critical for supporting warfighters downrange.

To answer your question directly, we're highly confident that we will achieve the 10-percent savings associated with a multiyear. And we've gone forward to Dr. Carter and show—laid out the case for that multiyear savings. And, when working with CAPE, in the original assessment that they did back in September, the assessment they validated was about 8.5 percent. But, we went back after that and worked with Sikorsky—the president of Sikorsky, Jeff Pino—

Senator LIEBERMAN. Right.

General PHILLIPS.—and team. And we are highly confident—matter of fact, Sikorsky has put in writing that they will achieve at least a 10-percent savings in the multiyear for the Black Hawk aircraft. And, if you look at the amount of money that we are going to spend over time for the Black Hawk, exceeding \$7 billion to buy this aircraft, a 10-percent savings is significant—

Senator LIEBERMAN. Sure is.

General PHILLIPS.—upwards to about \$700 million. So, sir, we're excited about the multiyear effort, and we strongly support its approval.

Senator LIEBERMAN. Good.

Do—obviously, part of the reason why I asked the question is because it is a significant number. Also, I think you know that there are some members of our full committee who are skeptical of the multiyear procurement savings that are claimed. It just strikes me as I hear—I don't know the answer to this question. Do we have—when you mentioned Sikorsky put it in writing—do we have any—we, the Army, the government, have any tools available to us, once we enter into a multiyear contract, to hold the contractor to the projections?

General PHILLIPS. Yes, sir. Well, actually when we work the contract and sign the bilateral agreement with a company through that contract, they're held accountable for the savings that occur—are documented within the contract itself. As we move forward with the UH-60 contract, we will do the same, sir, with Sikorsky. And, obviously, we've seen the same for the Chinook program.

Senator LIEBERMAN. Right.

General PHILLIPS. That's also one that we track very closely. And, matter of fact, savings are beyond 10 percent for the Chinook

program. And we're doing the same for the Apache today. It's important, sir. And we will track that closely.

Senator LIEBERMAN. Good.

General Chiarelli, last question from me. And it's about the—what you might say is a natural tension between testing and evaluation, on the one hand, and development of programs—of course, your smiling; I—that's good—cost and efficiency, on the other. And there's a natural tension there, where all the testing requirements begin, obviously, because both the Army and Congress were concerned about money being thrown in at something being—a system being used before it was ready, therefore not being effective; at worst, obviously jeopardizing the safety of our soldiers. On the other hand, it's possible that you can test to a point where you're adding—you're delaying the availability of the system unnecessarily to soldiers to protect their safety and make them more effective, and perhaps adding to the cost.

As I'm sure you know, the Weapon System Acquisition Reform Act had the intention to have developmental test activities earlier in the program, monitored by users as well as developers and oversight agencies. So, I wanted to invite you to do two things. One is, give me your own sense of what the state of this balance between development and testing—stating it simplistically—is. Maybe we should start with that, because that's a big enough question.

General CHIARELLI. If you start with a program, that's going through the—the 5000.2 series, you have this long—very elongated testing requirement. What most people don't understand is, with a JUONS that comes from field, when the field requires an immediate capability—

Senator LIEBERMAN. Right.

General CHIARELLI.—to get downrange we don't test or collect hardly any data on it at all.

Senator LIEBERMAN. Yeah.

General CHIARELLI. And we see both those as a problem. In the JUONS area, you end you end up with a system being sent downrange because a commander thinks he needs it; but, when he realizes some of the integration requirements that have to take place, he goes, "Wait a second. I didn't know that. I didn't understand that," because the proper testing hasn't been done.

Now, what we have done is established, at Fort Bliss, Texas, an Army brigade that will be filled up with soldiers from—fresh from the field and theater—that has just about every single piece of equipment in the United States Army. And we are putting them on, initially, a 6-month testing cycle that will go to a 4-month testing cycle. So, we can take both COTS, civilian off-the-shelf, pieces of equipment the commanders have requested—

Senator LIEBERMAN. Right.

General CHIARELLI.—because of JUONS or some of the helicopters, like the A-160 UAV, and be able to put it in the hands of real soldiers on a very quick testing program, every 6 months, so we can work through many of those integration issues, even on those things requested for immediate deployment by commanders. We think this is going to change the paradigm. And it's also going to allow industry, using their own developmental money, to build something that they feel meets an Army requirement and bring it

to us, allow us to test it, and, if it meets a capability gap, we will look at employing it to the force.

So, again, we think this is part of this whole strategy of understanding how technology—because it is moving so quickly, we have got to get quicker and more agile in our ability to get pieces of equipment to theater. And we've got to look at ways of, I believe, compressing testing, while always ensuring that we—the safety of our soldiers is paramount in everything we do. In some instances, I think that it—we may be excessive in some of the requirements that we have coming out of the testing community, delaying programs and delaying getting things to soldiers. But, at the same times, on the other end, we've got to ensure that we don't send the integration problems downrange to commanders to figure out.

I lived through that in 2006, when somebody in the building said, "We can have an active jammer for the Marines because they're in the west, and the Army's in Baghdad, north and south," and gave us a passive jammer. They sent them over, thinking that the two forces would be separated, when, in reality, they were passing each other all the time.

Senator LIEBERMAN. Right.

General CHIARELLI. And we had to do the integration requirements downrange. We want to take that burden off commanders.

Senator LIEBERMAN. Okay. It's an interesting and a good question. So, in a way, you'd say—right now, you'd say that perhaps there's a little too much testing at different points. You're trying to move it back along the spectrum; but, again, you stated the obvious primary concern you have is the safety of the soldiers.

I wonder, General Phillips, if you want to add anything about how the Army's going to incorporate appropriate developmental tests earlier in its program?

General PHILLIPS. Sir, I absolutely agree. I think we should do developmental testing as early as possible, because, as soon as you can find out the issues and problems and fix them, the better chance of that program to be successful at the end, to get into production.

I would only add that we're excited about the capability that we're standing up at White Sands Missile Range.

Senator LIEBERMAN. Right.

General PHILLIPS. So, if we can take a program like Paladin PIM or another program, and look at the test strategy and better integrate it; or the network and test the network out at White Sands Missile Range, and reduce something that might be a 9-month test down to a 6-month test and it's two-thirds of what it used to be—

Senator LIEBERMAN. That would be great.

General PHILLIPS.—by synchronizing and integrating better, that saves us money. It saves us time. And we get capability faster. So, I think it's a balance, sir. But, we got to look harder, in each program, at the test program and the test strategy.

I'll use Paladin PIM as another example. We looked at, hard, the testing requirements for this program over the last 3 or 4 months. And we think we can save anywhere from around 6 to 9 months, in terms of testing for that program, going forward. So, we might be able to pull milestone C, which is currently scheduled for June 2013, to the left so we can get that capability sooner.

Senator LIEBERMAN. That would be great.

Are the—final question—are the Defense manufacturers cooperating in your attempt to do the testing earlier in the developmental cycle?

General PHILLIPS. Yes, sir, absolutely. It's a team effort and a partnership. And working BAE, in case of Paladin PIM, we've worked closely with them to get the prototypes where they need to be, out at White Sands or Yuma, so we can execute the testing quickly. And then, obviously, the Army Test and Evaluation Command, ATEC, is also involved in that. So, that partnership has to be strong to be able to accomplish this.

Senator LIEBERMAN. Good. Thank you.

General CHIARELLI. And, Senator, for statutory and regulatory requirements, we've kind of put a wall up between operational and developmental testing. Maybe it's time to lower that wall a little bit and allow some of the work that's done in developmental testing to move over to operational testing so we are not repeating some of the exact same things in operational testing we did in developmental testing, thereby saving us some money.

Senator LIEBERMAN. Well, that makes a lot of sense to me, on—well, on quick hearing. Is that something you need statutory help with, or you just do that by—on your own?

General CHIARELLI. I can't tell you that right now. I don't believe we do. I think we just—

Senator LIEBERMAN. Yeah.

General CHIARELLI.—need to, kind of, to have a little bit of a cultural change—

Senator LIEBERMAN. Good.

General CHIARELLI.—between the developmental guys and the operational guys.

Senator LIEBERMAN. Great. Thank you.

Senator Brown.

Senator BROWN. Thank you.

Having Natick Labs in my district, I've visited there many times. One of the things that I know that they're trying to do, and I've heard from individual soldiers, is that, "Listen, if they have a new weapon system or they're trying to get it"—you know, you've got to get it in the field, let the soldiers, the people that are actually using it, you know, make the determination and recommendations as to how to make it lean and mean and actually functional. And some of the best suggestions actually come from the troops on the ground. So, just a thought on that.

But, I just want to kind of go through a checklist of things that I wanted to ask. The—is there any guidance as to where the Army is going, or will be going, with a next-generation carbine?

General PHILLIPS. Sir, we have a dual-strategy for the M4 carbine. And, number one, we are going to continue to improve. Right now, we have done about 62 different improvements to the M4 over time. It's a world-class weapon. There's over 600,000 of those that are out there, that exist today. And we're going to continue to improve it. The next phase will be a heavier barrel, an ambidextrous trigger, and also a selector switch that will allow it to also operate on automatic. So, we will continue to improve the M4. At the same

time, we've improved the ammunition that they're using in Afghanistan today, the 556.

At the same time, we want to make sure that our soldiers get the best individual carbine that we can deliver.

Senator BROWN. Right.

General PHILLIPS. So, we're going through a full and open competition for the next individual carbine. We just had an industry day, about a week ago, where I opened that conference, where 38 industry partners were there. And we're excited about what industry may come and offer, in terms of what be the next—what might be the next individual carbine.

But, I also qualify that, because the requirement for an M4, in terms of reliability, is about 600 mean rounds between failure. The experience that we have in combat today is about 3600. So, the M4 is performing very well with our soldiers downrange, and we're getting very good feedback on what it does.

Senator BROWN. And what about taking it down a notch? The pistol—does the Army—are they planning on buying any more Berettas, or is it planning on—is there going to be a competition for a new pistol in the future? Or, what's the status there?

General PHILLIPS. Sir, I'll open up and let General Lennox, my colleague, respond, as well, but we've got about 240,000, in terms of the number of M9 pistols that the Army requires. We're right at the end of getting that quantity. The last 146 will be delivered by June.

Meanwhile, there's another requirement for the Air Force and for foreign military sales customers that we're also working towards. There is a RFP on the street today that's in source selection, where we will put in place a 5-year IDIQ to buy M9 pistols for the Air Force and for potential FMS customers that we might have. But, none of that requirement is in support of the Army—the Army's requirement for means and sustainment for the M9.

Senator BROWN. And just to add, General Lennox, have there been a lot of complaints with regard to the Beretta and its performance, or not?

General LENNOX. Senator, we have heard some about stopping power. But, realistically, the threat today—

Senator BROWN. That's what I've heard, as well?

General LENNOX.—the threat we've—today, though, is much longer range than pistol range. We're really hearing much more requests for weapons that reach out to the 5-, 600-, and 700-meter range.

Senator BROWN. Yup.

General LENNOX. So, we have no plans, at this time, to purchase additional pistols.

Senator BROWN. Okay.

And the Berry Amendment, sir. What's the status of the report on the Army compliance with the Baery Amendment? If it's out, and I'm not quite sure if it is, were there any major findings?

General PHILLIPS. Sir, you're relating that to the use of metals from foreign countries that are included in programs executed for the Department of Defense?

Senator BROWN. Yes.

General PHILLIPS. There have been some issues in the past for the Berry Amendment. None of them have risen up, that I've heard of, in the last several months. Some of those, in the past, go back to aviation programs, like transmissions for the Chinook, where we found that some metals that remained overseas, that fall under the Berry Amendment, were actually being used by manufacturers. We'll take that question back for the record, sir, and do more research to see if there are any current issues on the Berry Amendment.

Senator BROWN. Yeah, don't—I don't want reinvent the wheel if it's something that you feel is—you can just pick up the phone.

General PHILLIPS. Okay, sir.

Senator BROWN. The—does the Army have enough in its Guard and Reserve equipment accounts to meet the obligations at home and abroad?

General LENNOX. Sir, I think you'll find, now, that for the—I want to say, going back to the days of the musket, you'll find that we have better equipped the Guard and Reserve, commensurate with their deployments and their employment in Iraq and Afghanistan. The overall level of equipment in the active Force is 92 percent. It's 92 percent in the Guard. And it's about 91 percent in the Reserves. The percentage of modernized equipment—all the equipment's useful, but the most modern equipment—is in the '70s, equivalent in both the active and the Reserve components. So, I think, with the Congress's help, we have really, over the last 5 years in particular, made dramatic improvement in equipping the Nation's Reserve components.

Senator BROWN. What's the Army's plan to incorporate the MRAP into its permanent inventories of equipment for Army combat units?

General LENNOX. Sir, we have a plan of including it both into units in integral roles, such as convoy escorts for our combat support units, and for carrying equipment on the back of it, so as a secondary load. So, we have those roles for incorporating that equipment. We also have planned for using it as overseas storage to be employed in the case of a deployment, since we only have about 12,000 MRAPs, another 6,000 MRAP ATVs. So, we don't have enough for every single unit to be employed. So, some of it will be secured and ready to be employed, if needed by the threat.

Senator BROWN. And the GAO recently released a quick-look weapons assessment. And three major weapons programs since '97 have cost overruns as much as 50 percent of the original projections. What will the Army do to improve its acquisition workforce, particularly with regard to cost estimating systems, and engineering and developmental testing, to reform its requirements, instill budget and financial discipline, source selections, clear lines of authority with regard to acquisition, you know, the whole gamut? What's—how do we make sure this stuff doesn't keep happening?

General PHILLIPS. Senator, great question. Much of what you just described is embedded within the Decker-Wagner Study, which we are taking very seriously—76 total recommendations. As a part of that recommendation and building the acquisition workforce, we will look hard at bringing in additional cost analysts and other analysts that can help us get our hands around acquisition programs,

source selection processes, cost accountability. And I think you'll see the Army make great strides, now and in the future, in terms of affordable programs, going forward. So, we will implement the necessary changes and bring the acquisition force—workforce into play.

And let me also add that, in the acquisition workforce, we have already brought in 1,310 interns, some of which are cost analysts. Our target is 1,885. So, some of those interns that are coming in will certainly fill what might be considered gaps, in terms of cost analysts and others.

Senator BROWN. So, you're talking interns—paid, unpaid?

General PHILLIPS. Paid, sir.

Senator BROWN. And are these people that have a history of dealing with these sorts of things?

General PHILLIPS. Yes, sir. We are actually looking at folks coming out of colleges and universities that have the skills that are necessary to bring them in and train them in cost analysis and areas such as that.

Senator BROWN. So, I can put out a feeler and tell them that you have job openings?

General PHILLIPS. Sir, we are recruiting. Matter of fact, the standards that the Army uses to bring in an intern today, with a GPA of 3.5, is pretty high. So, we are really excited about the quality of the interns that have come in the Army today.

Senator BROWN. Okay. Well, first of all, thank you. I've learned a lot and I appreciate the answers—honest answers. I actually feel like I've gotten some good answers, finally, on a whole host of things.

So, thank you, Mr. Chairman, for holding this and including me.

Thank you.

Senator LIEBERMAN. Thank you, Senator Brown.

Senator Blumenthal.

Senator BLUMENTHAL. I have just one last question. I know that you've noted the good partnership that you have with private industry. Are you satisfied that there is a sufficiently prompt and adept procedure, in the event there is not cooperation or if you want to remedy problems that may occur in contractors, with addressing those problems?

General PHILLIPS. Sir, absolutely. Through our contracts that we have with our industry partners, and through a day-to-day dialogue that we also have, from the highest levels of leadership within industry down to those that actually execute the programs, it's important that we have a continual dialogue, because industry is incredibly important to our mission to field the best capability possible for our soldiers. So, when we have a contract with an industry partner, if there's an issue that arises, we want to address that issue as quickly as possible with the industry, whoever that might be, have them address it, remedy the situation quickly. And, if it can't be remedied, we want to raise it up to the right, appropriate level—and it might be to my level, it might be to General Chiarelli's level, or the Army acquisition executive—to be able to resolve that issue with industry.

One thing that Dr. O'Neill and I have taken on over the past year is to have a more stronger dialogue with industry. He is down

in Atlanta today, meeting with a host of industry partners at the Atlanta Conference, and will continue that strong dialogue with industry over time.

General CHIARELLI. Secretary McHugh, since coming to be Secretary of the Army, has instituted some get-togethers with industry, where we bring them into the building and sit down and talk. I would be less than truthful if I didn't indicate to you, I wish I had the ability to talk to industry a little more openly, in my role as Vice Chief of Staff of the Army, without falling too close, in some instances, to what the lawyers would indicate is a place that I shouldn't be. I don't know if that makes any sense. [Laughter.]

Senator BLUMENTHAL. I can understand what you're saying.

Senator LIEBERMAN. You're dealing—you've got two lawyers, even two attorneys general, left, so it makes a lot of sense.

Senator BLUMENTHAL. And two admirers of what you're doing. Thank you for your testimony today.

Senator LIEBERMAN. Thanks, Senator Blumenthal. I can't agree more, that this was a very good hearing.

The three of you are the leadership of what might be called the "business side" of the Army. Obviously, the Army's involved in very serious matters on our behalf, in fact, to fulfill our constitutional responsibility to provide for the common defense. But, to do that effectively requires really good business practices.

And I'm impressed by the quality of your leadership and by the extent to which you're doing exactly what a successful business would do, which is, one, try to apply the most significant advances in technology around you to what your business is, which are what the goals of the Army are; and, two, to understand that things often don't work quite as you want them to, and that—and then you've got to really work quickly to fix them. And I think that's what you're doing.

And I appreciate the—really, the directness of the process that you've been leading, General Chiarelli, with the assistance of General Lennox, General Phillips involved, because I—my own feeling is, we're—that this—what we have begun to accept a kind of a perennial problem of overspending, of starting big programs, canceling them—even though I know we don't—we still pick up some of the capabilities in those programs—I think we're turning the corner. And I appreciate that—it didn't happen automatically, so I appreciate the leadership that you've all shown. And it will matter a lot, most important of all to our security, but also really, just right alongside that, to the safety and effectiveness of the men and women of the U.S. Army.

The record of the hearing is going to be held open until this Friday to allow for the submission of additional statements or questions. I hope, insofar as there are questions, you can try to answer them in as timely a way as possible, because Chairman Levin and Senator McCain are starting to actually talk about moving to a markup of the Defense authorization bill.

Would you—is there anything else you'd like to say?

[No response.]

Senator LIEBERMAN. If not, I thank you again.

The hearing is adjourned.

[Whereupon, at 4:17 p.m., the subcommittee adjourned.]