

**DEPARTMENT OF DEFENSE AUTHORIZATION FOR  
APPROPRIATIONS FOR FISCAL YEAR 2003**

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**HEARING**

BEFORE THE

**COMMITTEE ON ARMED SERVICES**

**UNITED STATES SENATE**

ONE HUNDRED SEVENTH CONGRESS

SECOND SESSION

ON

**S. 2225**

TO AUTHORIZE APPROPRIATIONS FOR FISCAL YEAR 2003 FOR MILITARY  
ACTIVITIES OF THE DEPARTMENT OF DEFENSE, TO PRESCRIBE MILI-  
TARY PERSONNEL STRENGTHS FOR FISCAL YEAR 2003, AND FOR  
OTHER PURPOSES

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**PART 4  
AIRLAND**

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MARCH 14, 2002



DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 2003—Part 4 AIRLAND

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**DEPARTMENT OF DEFENSE AUTHORIZATION  
FOR APPROPRIATIONS FOR FISCAL YEAR  
2003**

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**THURSDAY, MARCH 14, 2002**

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

**ARMY MODERNIZATION AND TRANSFORMATION**

The subcommittee met, pursuant to notice, at 2:36 p.m., in room SR-222, Russell Senate Office Building, Senator Joseph I. Lieberman (chairman of the subcommittee) presiding.

Committee members present: Senators Lieberman, Warner, Inhofe, and Santorum.

Committee staff member present: David S. Lyles, staff director.

Majority staff members present: Daniel J. Cox, Jr., professional staff member; and Creighton Greene, professional staff member.

Minority staff members present: Judith A. Ansley, Republican staff director; Ambrose R. Hock, professional staff member; George W. Lauffer, professional staff member; Patricia L. Lewis, professional staff member; Thomas L. MacKenzie, professional staff member; and Scott W. Stucky, minority counsel.

Staff assistants present: Leah C. Brewer and Nicholas W. West.

Committee members' assistants present: Frederick M. Downey, assistant to Senator Lieberman; William K. Sutey, assistant to Senator Bill Nelson; John A. Bonsell, assistant to Senator Inhofe; George M. Bernier, III, assistant to Senator Santorum; Robert Alan McCurry, assistant to Senator Roberts; Michele A. Traficante, assistant to Senator Hutchinson; Arch Galloway, II, assistant to Senator Sessions; Derek Maurer, assistant to Senator Bunning.

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

Senator LIEBERMAN. The subcommittee will come to order. Thanks to our witnesses for being here.

Secretary Brownlee, first off, it is a great pleasure just to address you with that title and to have the long view of you as opposed to having you back here. [Laughter.]

It is great to have you back in this hearing room in your new capacity as Under Secretary of the Army and, if I may put it this way, to continue discussions that you and I had when you were on the committee staff about Army modernization and transformation.

General Keane, it is always good to see you as well. Your testimony last year was very helpful in this regard. I will look forward to a similarly rewarding and productive discussion today.

Since this is the first Airland Subcommittee hearing of the second session of Congress, I want to acknowledge how much of a pleasure it continues to be to work with Senator Santorum as my ranking member. This is the fourth session, actually, we have worked together as chair and ranking member of this subcommittee; each of us having a stint in both positions. It has been a real pleasure to share these responsibilities with someone who shares the same concerns I have for the Army and the same determination to help the transformation that is ongoing to be a successful one.

This subcommittee, I am proud to say, has been a strong supporter of the Army's effort to transform since the first budget request submitted after General Shinseki announced his transformation initiative in October 1999, which was the fiscal year 2001 budget request. That year the Department presented an Army budget that had decreased in real terms by 1.5 percent.

At that time, General Shinseki submitted an unfunded requirements list of \$10 billion, which was double that of General Reimer from the year before. The Army had cancelled seven major acquisition systems and restructured many others to shift \$1 billion to begin research and development (R&D) on the Objective Force and to begin the procurement of the Interim Brigade Combat Teams (IBCT).

The Airland Subcommittee responded to this problem by adding over \$1 billion—\$1.1 billion, to be exact—to the modernization budget, including an additional \$46 million for Future Combat Systems (FCS) R&D; and the additional funding requested to restore the Chief of Staff's top two modernization priorities, which were the Wolverine Heavy Assault Bridge and the Grizzly Obstacle Breacher.

In fiscal year 2002, the first Bush administration budget request, the Army budget increased slightly, but procurement funding continued to decrease by \$630 million in real terms, while R&D increased only slightly by \$200 million.

At that time, General Shinseki submitted an unfunded requirements list of \$9.5 billion; \$2.7 billion of which was under the purview of this subcommittee. That year, we once again responded, adding over \$500 million, covering the entire Objective Force shortfall of \$43 million, funding \$20 million of the \$100 million IBCT shortfall, adding \$53 million in digitization requirements; and putting \$238 million toward aviation modernization and recapitalization.

While supporting Army transformation, this subcommittee did express some concerns and take issue with certain aspects of the Army's strategy to get there. In particular, we had, and I think it is fair to say still do have, some concerns that the Army proposes spending nearly \$10 billion of scarce resources to field six IBCTs.

Many questions we asked, honestly, have not yet been answered fully. Consequently, in the fiscal year 2001 defense authorization bill, Congress mandated that the Army conduct a side-by-side operational comparison of the planned interim armored vehicle with the medium armored vehicle currently in the inventory to determine

whether a cheaper alternative for the IBCTs was feasible and desirable.

Last year, at the request of the Secretary of the Army, this subcommittee inserted language in the defense authorization conference report to grant the Secretary of Defense authority to waive the IAV-M113 side-by-side comparison requirement subject to certain clarifications.

The legislation also mandates a formal experimentation program leading to the Objective Force, including a linkage of the IBCTs to that process. The legislation requires a full spectrum operational evaluation of the first IBCT and prohibits both its deployment outside of the U.S., and an obligation of funds for more than three IBCTs, until the IBCT is deemed operationally effective and suitable. That is one of the issues I hope we can discuss today.

Now, I wanted to briefly go through that history today, because we have been very much involved with you and have wanted to be supportive. This year the Army's overall budget increased by \$9.9 billion, a 10 percent real increase, while the procurement budget increased by 13.7 percent. So this is movement in a good direction.

In contrast, the R&D budget, while less than last year's appropriated level, increased by less than 1 percent when compared to last year's budget request level.

Even with that increase, and this is the dilemma that you are facing and in that sense, we are facing together, the Army still found it necessary to cancel another 18 acquisition programs, including some such as that Wolverine Heavy Assault Bridge, which the subcommittee had restored just 2 years before at the strong urging of the Army. The Army also reduced the number of Legacy Force systems it intends to recapitalize, and curtailed other programs.

Once again, although receiving that additional \$9.9 billion over last year's level, General Shinseki has submitted an unfunded requirements list of \$9.5 billion. So this gives us some sense of the pressures on the Army, as it tries to do all that we are asking it to do and it feels it has to do.

To say that challenges to a successful transformation still abound would, I think, be an understatement. I understand that the Army leadership considers the Objective Force to be the highest priority, and I agree with that.

I note that the Army intends to accelerate the development and fielding of the Objective Force by 2 years for an initial operational capability in fiscal year 2010. I strongly support that initiative.

But I remain concerned that the level of research and development funding may not allow that to happen. Even though the Army is focusing 97 percent of the science and technology (S&T) funding toward the Objective Force, the unfunded requirements list that the Army has submitted contains a \$190 million S&T shortfall, and a \$200 million research, development, test, and evaluation (RDT&E) shortfall for the Future Combat Systems in the Objective Force.

Now, that is something we cannot allow to happen. So the bottom line is, we have to work together so that the Army can find the resources to fully fund the Objective Force. It appears to me that the Army has to make some very hard decisions to free up the

resources to make that transformation happen, and you need our help to do that. Of course, if we are to help, we need to understand that the Army has made specific decisions and will stick to them.

Aviation programs that are critical, really, to the future, remain a concern. The future Air Combat System, particularly the Comanche, is still in development after nearly 20 years of effort. Two prototypes are built, and only one is flying.

Now, we understand that the Army must contend with a nearly \$1.7 billion developmental cost overrun. Similarly, the recapitalization and upgrade of the Chinook into the Improved Cargo Helicopter, which is another element vital to the Objective Force, is facing a so-called Nunn-McCurdy breach for unit production cost increases of over 25 percent. The Army has not yet begun a program to develop the Joint Transport Rotor Craft, which could be the Objective Force replacement for the Chinook.

Apart from the Objective Force funding concerns are the questions of: What is the appropriate organizational design doctrine, tactics, techniques and procedure? Where should we look for the resources to fully fund the transformation to the Objective Force, including the aviation systems vital to its success?

That brings me back to that \$10 billion for the Interim Force, which is over \$1.6 billion for each brigade. That does not include many of the other costs associated with that force. The \$276 million shortfall for the Interim Brigade MILCON, and the \$283 million shortfall for the Interim Brigade training on this year's Army unfunded list gives you some sense of the magnitude of the problem here.

So I raise the question, respectfully: Can the Army truly afford six brigades, especially when the sixth one is fielded in the same year that the Army plans to begin equipping the first unit of the Objective Force? Would a smaller number adequately fill the perceived capability gap, and would the risk be worth taking to ensure full funding for the transformation to the Objective Force?

Of course, we have to come back and ask: What about the Legacy Force? The Army plans to recapitalize and selectively modernize the three divisions and the armored cavalry regiment of the heavy counter-attack corps.

Unfortunately, while many of the major combat systems such as the Abrams tank and the Bradley fighting vehicle are targeted for upgrade, many of the supporting systems are not. Also, none of the modernized tanks and infantry fighting vehicles are scheduled to go in a pre-positioned equipment set, which could result in less modernized forces, which fall on to that equipment, being first to the fight versus the modernized counter-attack corps, which will deploy by sea.

As with the Interim Brigades, can the Army afford to modernize three and one-third heavy divisions and still get to the Objective Force? Would a smaller number suffice and allow the Army to modernize and recapitalize the support systems as well as the combat systems in a fewer number of heavy divisions and brigades?

These are not easy questions. I know that there is some risk implied in their implementation, but I do think to help you move to the Objective Force, which you want to do as quickly as possible, and I think we need to do, we have to ask those questions.

With apologies for the length of my opening statement to my colleagues and you, I look forward to your testimony and your counsel on these questions.

Senator Santorum.

Senator SANTORUM. Mr. Chairman, I will yield a minute or two to the ranking member of the full committee to comment about one of our witnesses.

#### **STATEMENT OF SENATOR JOHN WARNER**

Senator WARNER. Thank you very much, Mr. Chairman.

I believe this is your first appearance as a witness for the Department of Defense, Secretary Brownlee.

Secretary BROWNLEE. Yes, sir.

Senator WARNER. We welcome you.

Secretary BROWNLEE. Thank you.

Senator WARNER. We salute you for the recognition the President has given you and the trust that you now have. We have full confidence in your ability to discharge these obligations.

I also note, I believe, you are either the first or very close to the first of the civilians to visit the region in Afghanistan.

Secretary BROWNLEE. Yes, sir.

Senator WARNER. You visited the Army, which you, frankly, love so much, and the troops. Well done.

Secretary BROWNLEE. Thank you, sir.

Senator WARNER. I am going to urge this subcommittee to look very carefully at the Family of Medium Tactical Vehicles (FMTV) program. I think that fact has been communicated to you.

I do not raise FMTV in any way as to prejudice the varied parties that have interests in this program. But I do believe it is a matter of concern. Unusual pieces of information have come to this committee and to us individually about that program and, therefore, it bears scrutiny by this subcommittee. On that subject, I will have more to say later on, perhaps.

We will share that information with you, of course, Mr. Secretary and General.

There is an old adage that the Army travels on its stomach, but it also travels with its trucks. You have had a lot of experience in that program prior to your appointment as Under Secretary. I am sure you can make a fair and objective evaluation. If there is a remedy, then we are prepared to provide that remedy.

Thank you.

Secretary BROWNLEE. Thank you, sir.

Senator WARNER. Thank you, Mr. Chairman.

Senator LIEBERMAN. Thank you, Senator Warner. Thank you for that. The subcommittee will be involved in trying to respond to the questions you raised.

Senator Santorum.

#### **STATEMENT OF SENATOR RICK SANTORUM**

Senator SANTORUM. Thank you, Mr. Chairman. Just let me say a couple of things: First off, it has not just been 4 years that we have worked together. It is 4 years on this subcommittee.

Senator LIEBERMAN. Right.

Senator SANTORUM. But 2 years prior to that, we worked on the old Acquisition and Technology Subcommittee. It has been really one of the singularly most gratifying working relationships that I have had, working with you on all of those subcommittees.

In listening to your opening statement, I would just say that I will sign my name under that statement, every word of it.

I have the exact same concerns as Senator Lieberman, and I want to thank you, General, and you, Mr. Secretary, for coming here. I am looking forward to a very frank and fresh discussion about these issues.

I think Senator Lieberman and I—we have responsibility not just for the Army here, but other programs and other services—I think I can say that we have the most concern about how the Army is dealing with its move into transformation and its relevancy in the fighting structure of our country.

Most concerns are principally driven not entirely by differences of opinion on how that direction takes, but I think probably more driven by how you pay for it all.

I think that is what Senator Lieberman was trying to articulate. We sit here and look at this budget, and we look at what you are trying to accomplish. You are taking a very significant risk, and I think Senator Lieberman and I would say: Congratulations. We know you have to take that risk, but the risk seems to be pretty much loaded on the Legacy Force, and not the modernizing, and I think Senator Lieberman laid out that situation very well.

But even with taking all that risk, where 97 percent of your funds are going into the Objective Force and you are spending all the new money—at least a big chunk of the new money—on the Interim Combat Teams, you are still short. You are still very short. Regarding Army aviation, the Senator laid out how short you are in getting to your objectives.

You are still short in the research dollars you need and the programs, whether it is military construction (MILCON) or others, to field these Interim Brigades and to field the Objective Force.

That is to make the assumption, which maybe you do, maybe you do not, that somehow more money is going to fall out of the sky and all this is going to happen, and at the same time, you can have this level of risk with respect to the Legacy Force and not modernizing, because you really are not doing a heck of a lot of modernization. The Senator is right. We need to flesh this out and understand the levels of risk and what decisions are being made.

I have a lot of specific questions about how we are moving forward on several systems and several programs, which I will reserve for my question time, but suffice it to say that Senator Lieberman and I are very concerned about this. We want to be helpful.

We support you fully and I think we have backed it up with more money from this subcommittee than from the last two administrations, this one and the prior one. We have put our money where our mouth is.

We have been compliant in waiving requirements. I will ask you about how that waiver process is going. We want to be helpful, but we want to see that this is a realistic plan that does not have too much risk associated with it, where down the road we could be ending up with an unmodernized Legacy Force, an Objective Force

that is not ready, and an Interim Brigade that may or may not work. Then where are you?

That is a real concern. I am not as eloquent as the Senator from Connecticut in laying out all these things, but that is sort of my gut reaction as to where we are.

Senator LIEBERMAN. But right to the point. Well said. Thank you.

Senator Inhofe.

Senator INHOFE. Mr. Chairman, I do not have an opening statement, but I agree with everything that is being said here. While you have been exchanging accolades on this committee, I—  
[Laughter.]

Senator LIEBERMAN. Would you like to throw a dart at us?  
[Laughter.]

Senator INHOFE. I served a few years as the chairman and then the ranking member of the Readiness and Management Support Subcommittee. The issues are the same. Everything you are talking about here is a readiness issue.

It bothers me when I see the very things you are talking about, that we are going to be moving into some kind of a force, but we are not sure what it is. In the meantime, we are at war, at least in one place and I think more than one place.

We have to have the capability today. We have to have it during this interim period. This is a life or death issue. It is a readiness issue. Are we ready?

With the resources we have right now, we are not ready to the level that I think we should be ready. That is the way I will be approaching it in this committee.

Senator LIEBERMAN. Thanks, Senator Inhofe. You tempted me to say that if you concentrate on the pressures on the Army, you could actually make a case—you could probably do it with the other services, as well—that though the \$48 billion increase proposed for the DOD budget is large, you can make a case to go higher than that. Or you have to really squeeze and make some of the tough decisions internally with regard to either the Legacy Force or the Interim Brigades, in this case, the combat teams, to find money to get to where you want to go and where you really need to go. So I echo what my colleagues have said.

We are from Congress and we are here to help. Truthfully, we start with great admiration for the Army. General Shinseki took a real turn here in a very admirable direction, and so we want to help to make it happen.

Gentlemen, it is all yours. Secretary Brownlee.

**STATEMENT OF HON. LES BROWNLEE, UNDER SECRETARY,  
UNITED STATES ARMY**

Secretary BROWNLEE. Thank you, Mr. Chairman, Senator Santorum, Senator Inhofe.

First, let me just thank all of you for the opportunity to come and testify here this afternoon, on behalf of both General Keane and myself.

Mr. Chairman, General Keane and I would like to request that our joint written statement be entered into the record.

Senator LIEBERMAN. Without objection.

Secretary BROWNLIE. With your permission, sir, we both have short oral statements, which we would like to present.

Senator LIEBERMAN. Please proceed.

Secretary BROWNLIE. Senator, I could not come back here for the first time and not make some comment about what an honor it is for me to come here and testify before this subcommittee, which I had the honor of serving on as a professional staff member for many years, contributed something to the naming of it, and have watched over the years. I just have to say that the statements and comments by the members today indicate that the level of knowledge of the members and staff of this committee always exceeds the expectations of anybody who sits here.

I promise you it does. So I believe that is good for us. I know it is good for the committee. It is a tribute to both the members and the staff that serve on this wonderful committee.

Having spent some 18 years and many hours in this room, I have a lot of memories here. I have to tell you that since I left about 4 months ago, I miss the work. I miss the people, both members and staff. I will always be proud to say that I was a member of the staff of this committee.

If you would be kind enough to indulge me, Mr. Chairman, for just a few moments: In the job I had previously, I had the opportunity to observe General Keane on many occasions and I had a very high admiration for him based on those observations. Until I had the opportunity to work next to him on a daily basis and observe what he brings to the Army, I just did not realize how invaluable what he does is for the Army.

The management expertise, the dedication and loyalty, and, probably most of all, the leadership that he brings to the Army is absolutely invaluable. The Army is extremely well served by that; and the American people are fortunate that he serves the Army in the capacity that he does.

I am grateful every day for the opportunity to work with him, and I am honored to accompany him here today to talk about this very important subject of the Army's transformation.

General Keane and I certainly appreciate the support of this committee over the years and especially, not just for the Army, but for all of the Armed Services.

We would also like to thank you for the support shown by the significant increase in funding in the fiscal year 2002 budget, expressed in your authorization bill that the Army received, and we hope to continue to earn your support in the future.

As Senator Warner indicated, I had the privilege a few months ago of visiting our soldiers in Germany, Italy, Bosnia, Kosovo, Kuwait, Pakistan, and Uzbekistan. I had the great fortune of spending Christmas Eve and Christmas Day with our troops in Bagram, Afghanistan. They truly are the very best in the world, and they deserve the very best that we can give them in weapons and equipment.

Today's threats to our Nation's interests are more complex and diverse than at any time in our history. There are dangers on the home front as well as on the war front.

As the world and the nature of warfare transforms, so must the Army. In fact, with the encouragement and assistance of Congress

and the administration, the Army is doing everything possible to accelerate the pace of Army transformation.

However, the pace and challenges we are now facing make the transformation process more difficult and perhaps more important than at any other time during the Army's 226-year history. Successful transformation requires a clear vision. Secretary White, General Shinseki, and General Keane have provided that vision. We will continue to refine it as the development of the Objective Force continues.

Some have argued that the Army is not transforming, that we are only modernizing our force. Yet few can disagree that there is a revolution underway in information technology. We are at the advent of the information age, and we are embedding critical information technology in the Army. It is this information technology, and the management of the information, which leads to the radical changes that characterize transformation.

When I testified before the Senate Armed Services Committee last November at my confirmation hearing, Senator Levin asked for my thoughts on priorities in transformation among the Legacy, Interim and Objective Forces. I told the committee then what a very wise division commander told me once, that there are no priorities among essentials, that we will have to carefully balance the allocation of resources among the essential endeavors of readiness, recapitalization and transformation.

After 4 months on the job, I now can add an additional challenge: The management of the risks associated with this transformation. There are two areas of risks that must be carefully managed.

First, we must manage the risk to readiness brought about by refocusing our resources to support the Army's development of the Objective Force. Second, we must manage the Army's programmatic risks.

Our first priority to the Nation will always be the Army's readiness to respond immediately when called to fight and win our Nation's wars. However, we have accepted some near-term risk in order to free up needed resources for transformation. This required the Army to make some tough decisions. Twenty-nine programs have been identified for termination in the Army's fiscal years 2001 through 2003 budget request.

One of the ways we are managing risk to readiness is through our recapitalization program. General Keane deserves enormous credit for initiating and managing the Army's recapitalization program.

Seventy-five percent of our major combat platforms today already exceed their expected half life. In order to maintain operational readiness and to stabilize the growth in operating and support costs of our aging weapons systems, the Army will recapitalize and selectively modernize 17 critical combat systems.

During the Army's recapitalization process, the programs selected for recapitalization were thoroughly analyzed. I just want to say that when I came to the Pentagon and received a briefing on recapitalization, I was more impressed by this briefing than any I had seen. General Keane initiated and led this effort, and the Army literally put a dollar at a time on the modernization and re-

capitalization of these selected systems. So this is a very finely balanced process that we have here.

It is good in the sense that we are not spending money that we should not be spending to recapitalize systems beyond the period that we would expect to use them. But it has the risk that if the schedule changes, then we will have to go back and reinvest in these systems to ensure that the Legacy Force does not deteriorate prematurely.

The second type of risk with which we will cope is programmatic risk. We are clearly pushing the envelope of high technology in order to achieve the lethality, survivability, tactical mobility, and improvements in strategic deployability envisioned for the Army's Objective Force. Therefore, the Army must closely manage Objective Force programmatic risks. We are working to address the critical issue of fielding systems within budget, on schedule, while meeting the requirements the soldiers deserve.

However, we must also be realistic about the probability of success for these programs when we evaluate these risks. We will no longer refer to programs as just low, medium, or high risk. We will now also estimate the probability of success of a program with a schedule, with the resources and with the level of technology as we can best estimate. We will look for ways to mitigate these risks to give these programs every chance for success.

We may want to decide to mitigate these risks by providing more time, more resources, a review of requirements, or we may want to pursue a spiral development or block fielding approach.

If we do not properly address these risks, our programs may become chronically underfunded, behind schedule, and not perform as expected for our soldiers. Therefore, while we are pushing the envelope of technology, we will simultaneously do everything we can to identify risks, reduce those risks, and optimize our chances for success. Managing both types of risks—readiness and programmatic—is critical to the achievement of our vision for the Objective Force.

Finally, the Army will pursue its goals of transformation while conducting the current war on terrorism at the same time. One thing is certain in this uncertain environment: We will need a broad range of capabilities to meet this challenge.

General Eisenhower, years after World War II, when asked where the next war might occur said, "I hope there will be no more warfare. But if and when such a tragedy as war visits us again, it is always going to happen under circumstances at places and under conditions different from those you expect or plan for."

Mr. Chairman and distinguished members of the subcommittee, I would like to thank you again for this opportunity to return here to this distinguished committee in this wonderful room to discuss this important issue.

Senator LIEBERMAN. Thank you, Secretary Brownlee. You are off to a very good start on that side of the table. I appreciate it.

General Keane, I look forward to your testimony now.

**STATEMENT OF GEN. JOHN M. KEANE, USA, VICE CHIEF OF STAFF, UNITED STATES ARMY**

General KEANE. Thank you, Senator.

Mr. Chairman, Senator Lieberman, Senator Santorum, distinguished members of the subcommittee, I am also honored to be here today, and I am particularly honored to be here with Secretary Brownlee, my new teammate, who has taken hold of his responsibilities faster than anybody else I have ever observed. I appreciate the opportunity to appear, again, before the subcommittee to discuss Army transformation and modernization.

Thank you for your great support of the 2002 budget. We sincerely appreciate your support for Army readiness, the pay increases for our soldiers, and, of course, Army transformation. I truly appreciate your thoughtfulness and your concern for Army programs.

Our Nation has been at war for almost 6 months now. The performance of the United States military clearly indicates that we have the best trained and best equipped military in the world. Our soldiers and leaders have performed magnificently from the outset.

From the attack on the Pentagon, with the outright heroism that was so vital to saving so many lives, to the fortitude and commitment of our work force, both military and civilian, that returned to work the next day despite the horrific loss of their co-workers; to our 30,000 Active Guard and Reserve soldiers, who are defending Americans at home—a black beret has come to symbolize security in America—to the 4,400 soldiers who provided security at the Olympic Games.

A pleasant footnote to that is we had 11 soldiers participating as athletes in the Olympic Games. One received a gold medal, another a silver medal, and 3 received bronze medals—not bad for 11 Army soldiers. But we are all proud of all of our American Olympians.

To the 27,000 soldiers in Enduring Freedom—as we speak, soldiers of the 10th Mountain Division and the 101st Airborne Division, our special operation forces, are taking the fight to the al Qaeda network in the mountains of Afghanistan—their courage and their commitment are nothing less than inspirational.

I have visited our soldiers in Afghanistan, as has Les, and I just came from visiting a number of them yesterday, over here at Walter Reed. I will tell you, in wearing this uniform for 35 years, there is a distinct difference.

First of all, in my 35 years, we have never done anything directly and operationally for the American people. It has always been to relieve a beleaguered nation, where some thug is imposing his will on his people or somebody else's people. When you see our soldiers today doing what we are asking them to do, there is an edge out there that is different.

Their morale has always been high on any operation they have conducted that I have ever observed. But today there is an intensity and a determination there that is just a little different. If you pay close attention to them, you can see it and you can clearly feel it.

Tommy Franks showed me a message he received from a captain, an Air Force special forces officer, who is 30 years of age, and he is advising a general in the Afghani military who is commanding some 7,000 troops, and this general is 15 years his senior. He said, "We have little water and much less food, haven't eaten much in the last 3 days; hardly any sleep in the last two. Our Afghani sol-

diers have less than ten rounds per man. We are attacking. We are attacking” That was the end of message.

A soldier I ran into in the hospital last night took a bullet wound in his leg that fortunately went clear through his lower extremity without a lot of damage. When he landed in his landing zone (LZ) as a soldier in the 10th Mountain Division, he took fire from an altitude higher than his, and his organization was caught in the crossfire. They were a platoon, and their stated purpose was to provide security for the battalion commander and his staff, who were also in this LZ.

So they were brought under fire and they had mortars impacting in the area as well as direct fire. What the soldier was so proud of is—he said, “Sir, just as we did in training,” he said, “we immediately began to respond.” He said, “Without any commands by anybody, we knew that we were going to take the fight to them despite the fact we were outnumbered. We could easily have gone over the ridge behind us. Nobody stood up to move to that ridge. We took the fight to them.”

About 14 of them were wounded. They did not suffer any fatalities. They killed somewhere in the neighborhood of 40 or 50 of the enemy, which numbered in the hundreds. The enemy made 3 attacks against them that night over a 12-hour fight, and the soldiers never budged.

He said, “Our mission there was to fight, not to protect ourselves. We were prepared to fight right there, to kill these guys. If it meant our lives, we were going to do it.”

You cannot buy that kind of devotion and that kind of spirit, you cannot put a price tag on it. It is about young Americans who reflect the values of the American people. They truly understand what this war is about.

They are willing to make the ultimate sacrifice to do what is right for our people. So we are all honored, who are in leadership positions, just to be a part of a force like that and an attitude like that.

As to the President’s 2003 budget, in my view, it is a down payment on unaddressed requirements. It does go a long way toward funding the Army’s priorities, which are winning the war on terrorism, preparing for transformation, and certainly taking care of our people.

It does not fund everything, as we all know. We have had to make some tough decisions. Les mentioned the programs that we have had to kill, and 18 of them surround this budget and the Future Years Defense Program (FYDP). We also are reducing our helicopter fleet by 1,000, and we are reducing our headquarters at the headquarters level by 15 percent.

It does represent a \$10 billion increase over the 2002 request. It is a balanced program, in our view, that will allow the Army to remain trained and ready throughout the year 2003, while ensuring our force is protected and we execute the war on terrorism and also to prepare for future wars.

In terms of preparing for future wars, obviously we define them as transformation. The world has changed and it is changing, and the Army must adapt. General Shinseki and the Secretary have made the commitment to that change, and it is exciting to be a

part of it. "Transformation" is the only word that could adequately describe what our Army is doing. We are fundamentally changing the way the Army will fight and how the Army will deploy.

We intend to begin fielding the Objective Force this decade. It is ambitious. There is risk in it, but we are committed to it. Gone, as far as we are concerned, are the acquisition cycles of the past, which are 15, 20 years in length, and we are using new approaches to bringing this Objective Force in.

Instead of the linear sequential operations of the past, the Objective Force will fight in a distributed, dispersed manner. We will be highly responsive and deploy rapidly as a result of reduced platform weight and small logistical formations and footprints. We will arrive early to a crisis to dissuade and deter conflict, or, if necessary, fight.

Superior situational awareness and integrated command and control systems will allow us to identify and attack critical enemy capabilities and key vulnerabilities throughout the depth of a battle space, without the massed formations of the past. The budget supports the development of these capabilities by dedicating 97 percent of our science and technology to the Objective Force and, of course, funding Comanche.

The 2003 budget also supports the Objective Force by funding selective recapitalization and modernization of our Legacy Force. Not well understood by many is the fact that 66 percent of the Legacy Force modernization will transition to the Objective Force to include the CH-47 Chinook, UH-60 Black Hawk, Army Battle Command System, Patriot, and HIMARS, just to name a few.

We have also fully funded Crusader, which will provide the Army significantly enhanced indirect fire support capabilities well into the 21st century. In my judgment, it will contribute to the development of our Future Combat Systems.

The Interim Force is a transition force, and it represents a much needed capability that will combine the best characteristics of the Army's current heavy and light forces organized into Interim Brigade Combat Teams. It will leverage today's technology with selected capabilities of the Legacy Force to fill an operational shortfall and serve as a link to the Objective Force.

The first of these six Interim Brigades will begin fielding this year a company in August, a battalion in December, and a brigade operational capability in May. The second IBCT, also at Fort Lewis, Washington, is funded in the 2002 budget. The 2003 budget funds the third Interim Brigade in Alaska. Three additional IBCTs are programmed for Louisiana, Hawaii, and Pennsylvania.

The third element of transformation is the legacy of the current force. That is the force that is at war today. By selectively modernizing and recapitalizing existing systems, we will guarantee the Army's near-term war fighting readiness through the transformation process. A portion of this force will be with us until 2020.

In conclusion, just let me say that maintaining a trained and ready Army now and for the future is a shared responsibility. With your help, we will remain fully prepared to defend against any near threat. With your help, the Army will transform to face the challenges that lie ahead.

We appreciate your continued support and I will look forward to your questions. Thank you.

[The prepared joint statement of Under Secretary Brownlee and General Keane follows:]

PREPARED JOINT STATEMENT BY UNDER SECRETARY LES BROWNLEE AND GEN. JOHN M. KEANE, USA

Mr. Chairman and distinguished members of the committee, we thank you for this opportunity to report to you on the status of Army transformation.

On behalf of every soldier, civilian, and Army family member we would first like to thank this subcommittee, and Congress as a whole, for the considerable increase in funding associated with the fiscal year 2002 budget. With that budget came a compelling message to the entire Army—America appreciates the commitment that every soldier and civilian has to the defense of our Nation.

Your support provided pay increases of at least 5 percent across the board for soldiers and 3.6 percent for the civilian work force. Additionally, targeted pay increases for selected skills and mid-grade officers, upgraded single-soldier barracks, and improvements to our residential communities have done much to enhance the quality of life throughout the Army.

We also appreciate your continued support of our Army's transformation goals. With your help, the Army is able to fully fund the second Interim Brigade Combat Team and commit greater resources toward science and technology, significantly enhancing our efforts to accelerate implementation of the Objective Force.

#### THE WAR—THE NEED TO TRANSFORM

Today, we are engaged in a global war on terrorism. The conduct of our Army throughout this war clearly indicates that we are trained and ready to fight and win the Nation's wars. Our simultaneous commitment to a significant number of smaller scale contingencies and stability operations throughout the world underscores our military capability and state of readiness. These same missions also illustrate the need for an Army that is more strategically responsive, deployable, and versatile.

The Army has no illusions about the challenges it faces. We must help our sister services win the global war on terrorism and simultaneously prepare for future wars by effectively using the resources you provide us. With the continued support of Congress and the administration, the Army will continue to fulfill its role in the war on terrorism, maintain our near-term readiness for unexpected challenges, and rapidly transform to fight and win our future conflicts.

#### TRANSFORMATION

Transformation is the key to the Army's ability to meet our obligations and challenges. It changes the way we fight and the way we deploy. The transformed Army will be as survivable, as lethal, and as tactically mobile as our heavy forces, but far more strategically deployable. We will transform to a more strategically responsive force that is dominant across the full spectrum of military operations. Developments in technology and our pursuit of network-centric warfare will provide us with unprecedented situational awareness, enabling Army formations to maneuver with greater precision and dispersion. We will know where the enemy is and where our own people are, and we will be able to impose our will on the enemy at the time and place of our choosing. We will exploit vertical envelopment to avoid large movements along predictable lines of communication and focus our efforts on the enemy's strategic centers of gravity.

In effect, we intend to break our ties with the Cold War formations that relied on the principle of mass and the build-up of large forces. With the implementation of change throughout its doctrine, training, leader development, organization, materiel, and soldier systems, the Army is taking a holistic approach to transformation—the result will be a different Army, not just a modernized version of the current Army.

Transformation consists of 3 interrelated elements—the Objective Force, the Interim Force, and the Legacy Force. We will develop concepts and technologies for the Objective Force while fielding an Interim Force to meet near-term requirements and bridge the operational gap between our heavy and light forces. The third element of transformation—the Legacy Force—refers to the selective modernization and recapitalization of existing systems to provide enhanced capabilities that will guarantee our readiness through the transformation process.

## THE LEGACY FORCE

The Legacy Force—the force that is at war today—will guarantee the Army's near-term warfighting readiness for the next 10 to 15 years and is critical to the development of the Objective Force. The leaders and soldiers of today's Army will advance the tactics, techniques and procedures for network centric warfare using enhanced Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C<sup>4</sup>ISR) systems on modified Legacy platforms. They will help to identify the Soldier-Leader skills required in the Objective Force and assess our current ability to cultivate those skills.

The Army's first digitized division, the 4th Infantry Division, has already established the significant role of the Legacy Force in the development of the Objective Force. During two Division Capstone Exercises, the 4th Infantry Division demonstrated quantum leaps in capability and indicate the significant progress we have made toward implementing the warfighting concepts outlined in the Army's new operations field manual (FM-3).

## THE INTERIM FORCE

The Interim Force is a transition force that will combine the best characteristics of the Army's current heavy and light forces. Organized into Interim Brigade Combat Teams (IBCTs), it will leverage today's technology with selected capabilities of the Legacy Force to serve as a link to the Objective Force. Most importantly, the Interim Force will allow exploration of new operational concepts relevant to the Objective Force. The Army will field six of these new, more responsive IBCTs. These units comprise an Interim Force that will strengthen deterrence and expand options for the field commanders.

Over the past 2 years, we have organized two brigades at Fort Lewis, Washington, with additional IBCTs programmed for Alaska, Hawaii, Louisiana, and Pennsylvania. The Army is working to develop wide-ranging changes to doctrine, training, logistics, organizations, materiel, and soldier systems required to field and employ the Interim Force. The first IBCT has completed brigade and battalion level headquarters training with the Army's Battle Command Training Program. Additionally, this IBCT has completed company-level maneuver live fire training and will attain its first incremental war fighting capability—an infantry company—in August of this year. The IBCT will achieve battalion-level capability in December 2002 and full initial operational capability in May 2003.

Training of the Interim Force is proving that the practice of combining heavy and light cultures results in more adaptable and capable leaders and soldiers. The Army has learned from experimentation that technology such as digitization allows the integration of intelligence data with tactical and operational information and gives our leaders and soldiers the ability to seize and retain the initiative, build momentum quickly, and win decisively.

## THE OBJECTIVE FORCE

The end result of transformation is a new, more effective, and more efficient Army with a new fighting structure—the Objective Force. It will provide our Nation with an increased range of options for crisis response, engagement, or sustained land force operations. Instead of the linear sequential operations of the past, the Objective Force will fight in a distributed and non-contiguous manner. Objective Force units will be highly responsive, deploy rapidly as a result of reduced platform weight and smaller logistical footprints, and arrive early to a crisis to dissuade or deter conflict. With superior situational awareness, Objective Force soldiers will identify and attack critical enemy capabilities and key vulnerabilities throughout the depth of the battle space. For optimum success, we will harmonize our transformation efforts with similar efforts by other services, business and industry, and our science and technology partners.

By focusing much of its spending in science and technology, the Army will create a new family of ground systems called the Future Combat Systems (FCS). This networked system-of-systems—a key to fielding the Objective Force—will allow leaders and soldiers to harness the power of digitized information systems. The FCS will allow commanders to bring a substantial, perhaps even exponential, increase in combat capabilities to the joint force without a large logistics footprint. Newer technologies will be inserted into the FCS as they become ready. The Army recently awarded the solicitation for the FCS Lead Systems Integrator (LSI). In coordination with the Army and DARPA, the LSI will select the “best of breed” technologies, components, and sub-components through maximum competition among the sub-contractors. The LSI is a new solicitation and acquisition strategy that will accelerate

Army transformation. In the fiscal year 2003 budget, we invested 97 percent of our science and technology resources toward the design and development of the Objective Force and enabling technologies—technologies that will take us to the system development and demonstration phase for the Future Combat Systems. With this funding level, the Army will begin fielding the Objective Force this decade.

We owe our soldiers the best tools and equipment so they are not put at risk by obsolete or aging combat support systems. The Comanche helicopter, the Objective Force Warrior system, and C<sup>4</sup>ISR initiatives are integral components of the network-centric operations of the Objective Force. They are the infrastructure that allows soldiers to do what they do best—fight and win our Nation’s wars. Comanche will provide an armed aerial reconnaissance capability critical for gathering intelligence for coordinated attacks against targets of opportunity, and the fiscal year 2003 budget supports continued development and flight testing. The Objective Force Warrior system will provide quantum improvements over our current soldier systems in weight, signature, information exchange capabilities, ballistics tolerance, and chemical, biological, and environmental protection for individual soldiers on the battlefield.

Terrestrial systems alone will not enable full spectrum dominance. Space is a vertical extension of the battlefield and a key enabler and force multiplier for land force operations. Objective Force commanders will access and integrate the full spectrum of C<sup>4</sup>ISR and information operations capabilities, to include national agencies, strategic and operational units, tactical organizations, and joint or multinational forces. In short, commanders will draw upon a wide array of capabilities that enable not just overwhelming force projection, but the ability to out-think our adversaries.

Transporting and sustaining the Objective Force will require capabilities that are cost effective, adhere to rapid deployment timelines, and have a smaller logistical footprint over longer distances without jeopardizing readiness. Materiel readiness will be maintained at reduced costs by increasing inventory visibility and integrating automated systems.

#### FUNDING TRANSFORMATION

The Army has made difficult choices in the last three budgets in order to resource those programs that will enable the Army to accelerate transformation with a goal of beginning to field the Objective Force this decade. In concert with increased funding, we have altered our investment strategies, terminated programs, focused our science and technology, and targeted selective systems for modernization and recapitalization—measures that balance near-term readiness with the timely development and fielding of the Objective Force

#### INVESTMENT STRATEGY

Beginning in 1999, the Army’s investment strategy reflects a significant shift from resourcing legacy capabilities to resourcing the Objective Force. The Army terminated heavy ground combat systems such as the Command and Control Vehicle and the Grizzly obstacle breaching vehicle, but kept lighter and Objective Force capable systems such as the Land Warrior, Tactical Unmanned Aerial Vehicle, High Mobility Artillery Rocket System, Crusader, and Comanche. Crusader represents an example of a system that we have modified by significantly reducing its weight while retaining its dominant range and firepower. The Crusader will provide critical indirect fire support to the Army for the foreseeable future.

The Army generated more than \$13 billion in transformation funding by terminating, or restructuring 29 different research, development, and acquisition programs over the past 3 years. These cost savings, in concert with Congressional and OSD funding increases, enabled the Army to fund our key transformation priorities.

#### RECAPITALIZATION AND MODERNIZATION

Recapitalization is the cornerstone of the Army’s strategy to sustain its warfighting capability throughout the fielding of the Objective Force. We are compelled to pursue this course of action because 75 percent of the current force exceeds its expected half-life and is becoming increasingly expensive to maintain. Our strategy is to selectively rebuild or upgrade 17 systems that will remain in the inventory for the next 15 to 20 years and achieve an average fleet age of no more than half of a system’s expected service life. These systems include the M1 Abrams tank, M2 Bradley fighting vehicle, AH-64 Apache, UH-60 Black Hawk, and CH-47 Chinook. If sufficiently resourced, this investment in future readiness will sustain warfighting capabilities, reduce the cost of ownership, and extend the service life of systems until the Objective Force is fielded throughout the Army.

Aviation modernization and restructuring will eventually reduce our helicopter inventory by 25 percent and allow the Army to retain only 3 types of helicopters. The plan calls for the divestiture of 1,000 helicopters (all Vietnam-era UH-1 Iroquois) by fiscal year 2004 and permits savings in training and logistics to be used in support of the recapitalization of our remaining fleet—the AH-64 Apache, UH-60 Black Hawk, and CH-47 Chinook.

#### RISK MANAGEMENT

For transformation to be successful, we must balance the boldness of our desire for an Objective Force with the requirement to be ready to fight a major conflict at any time between now and the fielding of that Objective Force. Our investment strategy, however, does entail a certain degree of risk—a risk we must accept to fund transformation.

Our first concern is to balance the requirement to remain ready while we transform. The Army has made tough decisions in terminating or restructuring many programs during the past 3 years, accepting near-term risk to free up resources for transformation. A portion of those savings is paying for modernization and recapitalization of the Legacy Force.

The Army has accepted risk by funding the Legacy Force modernization and recapitalization at only 60 percent of its validated requirement. Our recapitalization program, however, is based on in-depth analysis to determine the right systems and levels of modernization for the 17 selected systems. This process will enable the Army to make essential adjustments if the schedules for either the IBCTs or the Objective Force change significantly.

In the case of the Objective Force, we are truly embarked on a process of transforming the Army. Our efforts will push the technological envelope in order to achieve the lethality, survivability, tactical mobility, and improved strategic deployability the Army seeks. Some of these acquisition programs are clearly high risk. While we are pushing the envelope of transformation, we will do everything possible to reduce risk and give these programs every chance for success.

#### CONCLUSION

For over 226 years, the Army has kept its covenant with the American people to fight and win our Nation's wars. In all that time, we have never failed them and we never will. The war on terrorism, the requirement to secure the homeland, and the need to maintain readiness for possible near-term contingencies have validated the need for a new kind of Army—a capabilities-based ground force that can fight and win battles across the full spectrum of military operations.

The Army cannot predict what other changes the future will bring, but what will not change is the need for our Nation to have the best trained, best led, and best equipped soldiers on the ground, deployed rapidly at precisely the right time, the right place, and with the right support structure as part of a joint military team.

Building and maintaining an Army is a shared responsibility between Congress, the administration, those in uniform, and the American people. Working with Congress, we will keep the Army ready to meet today's challenges and continue to make significant strides toward achieving the vision announced in 1999.

Mr. Chairman and distinguished members of the committee, we thank you once again for this opportunity to report to you today on the state of your Army. We look forward to discussing these issues with you.

Senator LIEBERMAN. Thanks, General Keane.

Let me begin with the broad question that is implicit in our opening statements. How, in a resource limited environment—even though it is increasing, it is still limited in terms of the demands on you—do you prioritize among the requirements to develop and field the Objective Force, to field the Interim Force, and to selectively modernize and recapitalize the Legacy Force? What is the overview of values that you apply in that tough job?

Secretary BROWNLEE. Mr. Chairman, as I indicated, one of the critical challenges is maintaining the right balance here. Again, I look back to the recapitalization program that General Keane had the Army put together to ensure that we were not spending any more dollars than we had to on the Legacy Force, but that it, in fact, was ready to go to war.

Second, the Army has been encouraged and has received the assistance from Congress and the administration to try to transform itself into something that is totally different than the force we all know today. That is why we are looking toward this Objective Force, described to most of us as a system of systems.

The Interim Force, as you indicated in your statement, sir, will hopefully provide a touchstone for the Army to get to the Objective Force, while at the same time providing badly needed forces that are more deployable and yet still more effective than the light forces—to be more deployable than the heavy, still more effective than the light.

So the Army is, as I have indicated, incurring high risk here. The alternative is, as Jack indicated, to use the old acquisition programs and to throttle back into a schedule that is not high risk. But it does require careful management, so that at points in time decisions can be made and if, for some reason, the schedule changes and the Objective Force might slip to the right, then we are going to have to make the decision to go back and reinvest in some of the Legacy Force and to ensure that it is ready to go.

Senator LIEBERMAN. General Keane, does the balance mean that there is equal priority given to the three elements: Legacy, Interim, and Objective Force?

General KEANE. Certainly. Clearly in terms of priority the future of the Objective Force is the most important, because it redesigns and reorganizes the Army and it changes the way we fight.

Senator LIEBERMAN. So you would say that would be the priority?

General KEANE. In terms of a future—

Senator LIEBERMAN. Right.

General KEANE.—future readiness. But the thing that we always have to—and this problem has been faced by our predecessors as well—is you have to balance against the readiness of the current force.

Now, what is aggravating our situation certainly is the pace at which that current force is demanded for use, which is a little different than what many of our predecessors had to face post-World War II.

Senator LIEBERMAN. Sure.

General KEANE. That is a reality that is here. So when you look at our budgets, you will see that as we receive the increased money, when you take a look closely at that money, most of it goes to direct the programs. So what the Army had to do to maintain its readiness account, we moved money into those readiness accounts. So the killing of those systems was not just for transformation, but was also to keep the current force ready.

It is the same dilemma that our predecessors have been dealing with for close to 14, 15 years, as you are painfully aware of.

The bill payer for all of that has always been two places—one, our installation support accounts, and also our modernization accounts. Obviously, we are still doing some of the same, but in the same regard, we are attempting to conduct the transformation.

Now, we had choices, and we have made those choices. We revisit those choices continuously.

The first choice that we had to make as it pertains to transformation was we recognized we have had an operational shortfall for a number of years in terms of moving this force more responsibly and getting it to respond with good, effective tactical mobility and yet be survivable, to have the characteristics of the light force combined with the heavy force. So we knew that problem has been there. We knew we had to solve it.

We know that the Objective Force will solve that problem for us. But do we do something about it in the near term? That was choice one. Choice one for us is that in our minds we have—just to be frank with you, and we have had frank discussions before—we have already waited too long to solve that operational shortfall problem.

We felt we could ill afford to continue to not give the National Command Authority this capability to employ so that they have choices themselves to make when it comes to employing forces, deterring conflict or fighting, if necessary. That was choice one, and that was Interim Brigade.

Then what is the requirement with what we looked at? We took a hard look at that requirement. You have to balance the war fighting requirements and those are to the major MTWs. We would deploy these initially there.

Remember the shortfall we had in the past. It was very obvious in Desert Storm when we put the 82nd in, and we did not have this kind of capability to deploy early on. We have solved some of that problem there, because we have prepositioned equipment there. But in other places of the world where we may fight, we still do not have that capability that we would like to have. So one, war fighting requirements.

We also know that as you deploy this force to meet the operational requirements in peace time, you have to have some rotational base to deploy that force. In other words, if you deploy an IBCT, you have to have the capability to rotate another one in there. You cannot keep those soldiers there indefinitely in a peace time rotation.

So we took war time requirements and also looked at the rotation base that we have to have, and that is how we arrived at the number six.

Senator LIEBERMAN. All right.

General KEANE. Actually, we could use more than that. But we watered that down to six also because we are always making decisions based on what we believe are fiscal constraints as well.

The second choice we had was the Objective Force. How fast do we go after this? Our examination on this thing was that—and we said to ourselves, having looked at this for years—first of all, the FCS, as a concept and a system, was out in 2020 by our predecessors. We brought that into 2010.

Senator LIEBERMAN. Right.

General KEANE. We said, “We can ill afford to continue an acquisition cycle like that. Let us put pressure on this system as much as we can.”

Our own acquisition people who work with industry were belly-aching over this in a big way right from the beginning, and truth

be known, they still do it. They just do not do it to our faces anymore.

The fact of the matter is that we have to change this acquisition system. The use of the lead system integrator is a step in that direction.

We learned from watching BMDO as it proceeded with the national missile defense and their lead system integrator, how it has helped them in their process. So we are hopeful. We have never done it before. We think it is a risk that is acceptable to us to help to get this system in faster than what it is.

So those were tough decisions we have made. What we are attempting to do in each budget year that we are facing is balance the program across those requirements—the requirements of a trained and ready force, and also the requirement to prepare for future readiness by transformation.

We intend to do that each succeeding year, so we will have tough choices in the future as well, and we understand that.

Senator LIEBERMAN. My time is up on this round. I wonder if I can indulge myself, I guess, and ask my colleagues' indulgence and ask you to see if you can give me a brief answer.

Maybe you have answered this, but it leads me to say that this is the third year since the Army launched its transformation effort that the budget has come to Congress with unfunded requirements for Future Combat Systems; in this case, \$190 million for S&T, and \$200 million for RDT&E.

So the question is: How did the process you have described—and I understand you are trying to squeeze a lot into not as much as you should have. Why did it end up not fully funding the Objective Force?

General KEANE. That specific point was—it dealt with affordability, and it dealt with what we thought we could accept as risk.

Ninety-seven percent of our S&T account is in there. That money was actually offered to us by our people who are in charge of acquisition and said to us in our own budget council meetings we were having, that "We think this is an acceptable risk," and gave that money back to us to use in other places. I was not even asking for it.

So we think we are okay there, Senator. It is a risk that is bearable, as far as we are concerned.

Senator LIEBERMAN. Okay. Thanks very much.

Senator Santorum.

Secretary BROWNLEE. Senator, if I could just add to that?

Senator LIEBERMAN. Yes, sure.

Secretary BROWNLEE. Of course, what is in the unfunded requirements (UFR) list is not in the present budget, of course, but anything that would be added in that sense might help to reduce some of the risk. So that is the reason I think the rationale was to put it in.

Senator LIEBERMAN. Okay.

Senator Santorum.

Senator SANTORUM. Okay. I mentioned in my opening remarks that I was going to ask you for a status report on your ability to obtain a waiver of the side-by-side. I just wanted to know how that was proceeding.

Secretary BROWNLEE. Yes, sir. Sir, the Army is working as we speak to put together a package to comply with the provisions that were put into law last year by this committee in conference. That package, once it has been reviewed, will be forwarded to the Secretary of Defense.

The information that is within that package will comply in every sense with both the spirit and intent of the law. It will describe what might be yielded from a comparative evaluation, that the information provided in there would be complete, and that other useful information would not be.

It will provide sufficient information to the Secretary of Defense so that he can make those certifications that are required by law so that those waivers can be enacted.

Senator SANTORUM. Okay. I appreciate that.

I have an additional concern with the Interim Force, and the Interim Brigade Combat Team. It's my understanding that you have declared your intent to go to IOC before you go through Initial Operations Test & Evaluation (IOT&E).

Now, that is—at least to the members of the staff here, this is a new idea. I just have to say that I am a little concerned that we are sort of moving things out of the way to get to where we need to go and not looking at what is, whether we are really ready to move forward.

General KEANE. Yes, sir. Can I take that?

Secretary BROWNLEE. Yes, sir.

Senator SANTORUM. Is that a waiver? Do you need to get a waiver to do that, or you can just go ahead and do it?

General KEANE. Well, we are prepared to do it, and for a couple of reasons. We gave that a lot of thought and here is our rationale behind it.

First of all, the vehicles that we are acquiring, in the sense—except for the MGS, the mobile gun system—are not developmental items. The vehicles that we are acquiring, the IAVs and its eight variants, are vehicles that have basically existed before.

That was one of the reasons to go with this program in the beginning. We wanted to shorten the time when we can get this operational capability into the force. So we did something historically that we have not done in the Army, which is to go some place else and find vehicles that other people were already using.

Essentially, that is what we have done here. So that is point one. The commonality among these vehicles is very significant.

The other thing is we are not being the least bit cavalier about this. As we speak, safety, survivability, and lethality tests are being conducted on the vehicles.

Senator SANTORUM. You say they are being conducted on these vehicles. Are these the vehicles that meet the weight limitations that you are talking about, or the vehicles that do not meet the weight? Because we have a problem with weight on a lot of these vehicles.

General KEANE. Yes.

Senator SANTORUM. So what are we testing?

General KEANE. Let me deal with weight as a separate issue, because if there is something that has been completely misunderstood about weight, it is that, and I can deal with it.

Senator SANTORUM. Okay.

General KEANE. So we believe we are taking a calculated risk here. It is very acceptable to us because right now we are finishing the live fire testing on these vehicles, as an example.

The IOT&E takes place after we have certified the operational concept of the vehicles and we will go back and do some further testing on the platforms themselves. We feel very comfortable, because it is a non-developmental item, and we are putting government equipment on those vehicles that we have already tested. We are going to be in pretty good shape here.

So the IOT&E, while it comes after the operational certification of the vehicles, which is in April and May, does not present a problem to us.

The weight of the vehicles, sir, is misunderstood. There was a *Defense News* article, I think, that has led to the misrepresentation. We have established the C-130 as the crucible for this vehicle for a lot of reasons.

One is that it is a way of slimming down the whole Army. That is one. Two, operationally, we want to be able to move this vehicle into unimproved landing strips and so on throughout an operational battle space to give us huge flexibility. The requirement that we assign to ourselves is that we want to at least be able to move the vehicle 1,000 nautical miles in the C-130.

For it to move 1,000 nautical miles, it cannot weigh more than 38,000 pounds. We can get the IAV and all of its variants, except the MGS, underneath that 38,000 pounds. We can do that.

Now, if we add the nine infantry soldiers and add all the ammunition that is going to be required for a 15-day operation and fully upload the vehicle with fuel, then the vehicle will go over the 38,000 pounds—true statement. That is what got misrepresented in that article, and it is an unfortunate misrepresentation.

Senator SANTORUM. But is it a misrepresentation if the whole objective of this force is to have force projection in a very easily and quickly deployable fashion?

General KEANE. Sure.

Senator SANTORUM. Well, if that is the objective, how can you leave all this stuff out and deploy this and meet your objective?

General KEANE. Well, no. We would not leave it out. What I am suggesting to you is that we could still move it the 1,000 nautical miles. It will take you more airplanes to do it. All of that would not fit in that single airplane. That is the issue.

Now, the MGS is 3,000 pounds overweight. It cannot fit in a—what our standard is of 38,000 pounds. We are going through some tests and studies to get that weight down, changing the hatches and a few other things.

We are looking at about 190 different pieces on the MGS. What I think will happen as a result of that, frankly, is that some of that study will work. We will probably take it and apply it not only to the MGS but to some of the other vehicles as well.

Senator SANTORUM. Okay. Let me ask you about the Objective Force, and a couple of my concerns there. I just have to tell you, just from the seat of the pants looking at this, and one of the concerns I have in looking at General Shinseki's famous chart that he wished he had never put together—[Laughter.]

—is: Now I am beginning to think that what may be happening as you take what I think and maybe, as you have explained, you are not taking, additional risk on your S&T budget for the Objective Force.

But it sounds to me like you are moving it up dramatically, and yet you have programs like Comanche that keep getting pushed back dramatically, and you talk about the life cycles of programs, and you say “We are going to shorten them.”

Well, you do not have a very good example in this case of shortening development cycles. You have a pretty bad example here of how that is not being done on one of the most crucial elements of making this whole system work. So I have doubts.

Now, you are accelerating from 2020 to 2010, now to 2008. We are not funding it as robustly as some have suggested. What I fear is that this interim combat system becomes the Objective Force, that what we are doing here is just tweaking it a little bit at the end and we are going to declare this as our transformation.

Now, that may well indeed be where we end up. My time is up, and I know Jim has a round of questions. It’s probably best if I just hold this thought.

Senator INHOFE. Go on.

Senator SANTORUM. You sure you are okay?

Senator INHOFE. Yes. Go ahead.

Senator SANTORUM. My concern is that you have a lead system integrator—and I think that is great. Now, I commend you for going in that direction, and I think it is wonderful that you are going to have some outside eyes who are not interested in procuring the product look at it.

I just want to make sure that these folks can look at what is available in technology, and what is out there in the next 5 to 7 years, and can make the determination that, you know what? There is not a leap forward right now that we can do.

Is that something they can come back with? Is that an option that is available to them? I am concerned we are pushing this thing and not putting the resources behind it to get to where we want to go. That is my concern; and that we are going to end up with just an Interim Brigade that will be your Objective Force.

Secretary BROWNLEE. Senator, if I can respond, I certainly agree that when we accelerate programs like this, we tend to increase the risk in the program. That is one of the reasons that I have asked the Army staff now whenever they brief the Secretary and myself, the Chief and the Vice, and they come in and they tell us a program is high risk. They now have to also tell us the probability of success of that program on that schedule with that amount of money, with the technology as we know it.

So not only will they say “This is high risk,” then they will have to give an estimate of the overall probability of success. It will be a subjective estimate in many cases. They are trying to struggle now for the best way to quantify it.

But that way if they tell us that it is high risk and the probability of success is .5 or .25, then that provides the opportunity for us to consider at that point “What can we do to mitigate this risk?”

There are decision points and milestones during the concept development stage, which is what we are about to enter right now.

It is a 16-month program wherein the lead systems integrator in conjunction with the DARPA, who is very much involved in this, and the Army, will work to develop operational requirements documents, specifications, architectures, and integrations. Keep in mind this is not buying one vehicle or one radio or one weapon. This is buying a system of systems.

You might say, and I have said, "Does that not increase the risk also?" It may. But it also, I think, provides more justification for the process.

I said in my statement that the Army was pushing to accelerate the pace of transformation as much as possible. I believe that is true. But everybody involved understands that there are milestones here, where we have to make what I would call cold-blooded and hard-bitten decisions.

If we get to the point where, as you assert, the technology may not be there, then we will have to look at what we do at that point. It may be that we adopt a block fielding approach. It may be that the first iteration of the Objective Force is a threshold capability. It may be that that threshold capability may not offer obviously a lot more capability than you would have in the IBCT. But it is a threshold capability.

As we move to future blocks, then it would be more capable. So yes, it is ambitious. Yes, it is high risk.

The alternative is to throttle it back and give it more time and use some of the older ways of doing things. The Army has chosen to move forward at this pace, and I can assure you that there will be some of us in the process who are looking very closely—I know General Keane and myself have discussed this—to watch this process and be sure that as we proceed from point to point, we not only ensure that, as near as we can determine, the technology is there and there is a good chance for success; but if there is not, we have to go back and look at the other force.

General KEANE. Senator, your comments are—it is like you have been eavesdropping on our meetings, because we have—

Senator SANTORUM. As a matter of fact—no. [Laughter.]

General KEANE. We have much of the same concerns ourselves. We express them to ourselves. I think we are intimately aware of our track record, and some of that is painful to look at.

Certainly, the Comanche is no exception to that. Much of the problem with the Comanche is the Army, if we are honest with ourselves about it, in terms of delays that we incurred and so on. We do have a management structure problem with Boeing and Sikorsky now. We brought both of those CEOs in and sat them down. We think we have solved that problem.

But in terms of the technology, that is a great question, and 2 years ago, we asked the Defense Science Board to go out and look at the advanced technologies that were available to us and come back and give us some sense of whether we really are doing something here that is not realistic, or are we grounded in technology that is truly going to help us? What is out there?

Their report to us was very encouraging. In the lethality area, dealing with kinetic energy, with two and three times lethality that we currently have, we can dramatically reduce the weight of our systems, cut it by more than half for sure, by reducing the weight

that is associated mainly with survivability, using advanced ceramics. Some of the programs are classified and we cannot discuss them, but it deals with low observable technology and stealth.

We are very encouraged by those technologies. Also we, like others, wanted to move away from fossil fuel. The technology will not permit us to do that, not in the next 10 years or so. But we can go to hybrid-electric systems that are clearly out there and being used in other places very successfully, but not all that much by the military. We are excited by the prospects of doing that as well.

So in terms of technology indicators, we keep very close contact with this. We will make a technology decision in June of 2003, which will be a key decision point for us that Les Brownlee was referring to.

In June of 2003, we will make this technology decision as to whether we can proceed on the schedule that we have outlined to you, and that will take place in June. It will be based primarily on the available technologies and our capacity to bring them into the Objective Force on a timeline that we think we can.

Senator SANTORUM. Yes. Thanks.

Secretary BROWNLEE. Might I add to that, Senator?

Senator SANTORUM. Okay.

Secretary BROWNLEE. That decision Jack referred to, which would be a decision to proceed to the next step of systems development, the decision maker in that case is actually the Under Secretary of Defense for Acquisition, Mr. Aldridge, who is the final decision authority.

Senator SANTORUM. Thank you, Mr. Chairman.

Senator LIEBERMAN. Thank you.

Senator Inhofe, you have been very gracious and tolerant.

Senator INHOFE. I have learned a lesson too, you see. [Laughter.] Thank you, Mr. Chairman.

Let me just approach this whole subject from a different perspective. I am just one member of the United States Senate, and I look at some of the programs and the systems that are in the United States Army, and I think the Army has gotten the short end of it.

I could announce to you right now, as I did in my office yesterday, that another Army veteran and myself are going to form the Army Caucus. We are going to try to focus a little bit more on what the Army is doing, about what they have and what they do not have.

I can remember when we were going through this same discussion about a side-by-side competition with the IAV and the M113. So I decided since I could not seem to get any consistency in the reports I was reading, to go out and do my own side-by-side competition.

So I went to Fort Lewis, Washington. Mr. Chairman, I did my own side-by-side comparison. Now, they did not have an IAV. They had an LAV-3, which is the Canadian version, which I believe is essentially the same thing. It was the closest thing we had at that time.

So I spent that time and came back thinking it just did not seem reasonable to me that we would be sending our kids out there with something that was not as good as the potential adversaries had. I would say the same thing about the Crusader.

There are right now five countries that are building artillery pieces that are better than the Palladin, in terms of rapid fire, rate of fire, and range. Yet, the Crusader has been under attack for years now.

We have something out there—everyone I have talked to in the Army said “We have to have the Crusader.” Here they are out there right now with the Palladin, which is inferior in most ways to what the competition had.

I took the time a couple of weeks ago to go to Germany and get a comparison with the PZH2000 so I could see how that compares to the Crusader. The Crusader is better.

We have to have something that is better. So they said, “Well, it is going to have to be lighter.” So what do we do? We cut it down from 60 tons to 40 tons.

It is lighter now. It does the job that needs to be done. Now, we are in this very complicated discussion as to: What is Interim Force? What is Objective Force?

I do not care if the Objective Force does end up as a modernized Interim Force. I just want to be sure that as we are going along—here we are in war, and we have equipment that is not as good as the opposition has.

Now, I would like to ask both of you your opinions—and let us just stay with, for a minute, the Crusader. What would have been different so far in Afghanistan and what we are doing in Afghanistan and planning to do in Afghanistan if we had had the Crusader?

General KEANE. Well, that is a good question. What we could do if we had the Crusader, particularly in this last fight where we employed conventional forces south of Gardez, with the Crusader you can put two of them in a C-17, so we could obviously bring them into Kandahar and then transit them up also to Bagram, probably three or four of them, drive them down the road with security to Gardez, all of which was secure. We had no difficulty moving ground forces down there. Gardez was relatively secure, and it is a flat area.

We could have used Crusader in support of our troops who were attacking in the mountains and get responsive artillery fire with that degree of precision at considerable range and distance that we cannot do with any of our other systems.

The other systems we had to get considerably closer to the mountains than what we can today, and we would have had more forces to protect them.

The problem up in the mountains also is that when you are fighting at 8,000 to 10,000 feet, the amount of weight that you can carry on the aircraft, trying to move artillery pieces, is a challenge. So the weapon of choice in those mountains are 120 mm mortars, 81 mm mortars, and 60 mm mortars.

But we could have kept the Crusader, with that kind of range that it has, outside of the immediate battle area in a secure area and it could still range it. I mean, the truth is we can put it on the Beltway out here and it can hit between homeplate and the pitcher's mound in Camden Yards.

Senator INHOFE. Yes.

General KEANE. The range of the system is pretty significant as well as its accuracy.

Senator INHOFE. I know it is difficult to quantify risk, but would it have a fairly dramatic effect on what you had perceived to be the risk that was out there if we had had that piece of equipment?

General KEANE. Well, we had to use our Apache helicopters a lot more to provide close air support for our ground forces, particularly in that fight I was just telling you about that that youngster was in.

Senator INHOFE. Yes.

General KEANE. That is a tough, rugged airplane, and thank God that it is.

Senator INHOFE. Go ahead, Secretary Brownlee.

Secretary BROWNLEE. I just might add one point, sir. I think Jack has covered it very well, except one point, and that is that there were cases due to weather when the aircraft were limited in what they could do. But artillery is not limited by weather.

Senator INHOFE. That is right. Yes. That is right. In fact, as I recall from our previous conversations, it was about 50 percent, was it not?

Secretary BROWNLEE. It was 50 percent of the time in this last battle that we had challenges with close air support and weather impeding on the capacity to bring close air support to ground troops, correct.

Senator INHOFE. Yes. I guess what I am saying—and both of you in your opening statements talked about, you know, the quality of our troops and the commitment that they have.

I went there 3 weeks ago, I guess. I was at nine different training facilities in both the Balkans and in Europe, went to Landstuhl, talked to all of them that were there. You talk about Walter Reed, but the ones—before they got to Walter Reed, they were there.

Without exception, each one of them—and some of them had gone down in that helicopter—said that they were anxious to get back to their unit. They all said they are going to make a career. All of them, every one of them.

Now, you look at those guys and gals that are out there doing that and it is inconceivable to me that when they go into a combat environment, they do not have the very best with them. That is the reason I bring this up.

I think, Mr. Chairman, it is going to have to cost more if we have that commitment that we are going to send them out with the best. This is not just the Army. The same thing is happening in the Air Force right now. We have potential adversaries that have better air-to-air and air-to-ground capability than we have with the F-15 and the F-16.

So we are going through problems as we develop new platforms, the same ones we went through with the C-17. Now, look how it is proving itself. So I have strong feelings that we need to give them the very best that they have, and I know everyone on this committee feels the same way. Frankly, I think it is going to cost more.

Let me just take one other subject—

Senator LIEBERMAN. More than happy to let you.

Senator INHOFE.—because—and this is more of a readiness issue, but still I think it is pertinent to this hearing.

Last year at a similar hearing, I asked General Kernan a question about end strength of the Army, and General Shinseki had just been quoted in a newspaper article stating that “The Army could use another 40,000 troops in order to accomplish the current mission in profile.”

Well, we are talking about an escalation in the number of missions. Our deployments, instead of an average of one every 4 years, have been, what, one every 14 weeks or something like that.

What I have observed out there is the toll it is taking on our Guard and Reserve, and knowing full well that they cannot continue. It is not a lack of patriotism. It is not a lack of desire, but they cannot do it and hold onto their jobs. The very nature of the Reserve component is that they are to be called in the case of an all-out war.

I would like to hear you respond to what I consider to be a real serious end-strength problem in the United States Army and how it is affecting the Reserve component. Do you have any comments to make on that?

Secretary BROWNLEE. Well, Senator, first of all, in addressing that, I ran into the same situations you did. Obviously when I was out, going from place to place here and I went to about 10 locations in 11 days, I found Reserve components in places that I never dreamed they would be serving.

The first thing I would want to say is how very lucky we are that we have these kinds of citizen soldiers and the employers that they have who support them in what they are doing.

Now, you make the point of asking how long can that go on? I think there is a limit to it, but I did find some young soldiers out there, Reserves and National Guard, whose employers were paying their full salaries while they were deployed on duty or who were at least making up the difference between their military pay and the pay they would have been receiving at home. So—

Senator INHOFE. But that is right now.

Secretary BROWNLEE. Yes, sir. Yes. That is what I am saying. I think that there is a limit to that. Sooner or later, just because of bottom line and businesses are in business to make money, there is a limit to that. I think we will be facing that. I do not know when, but certainly at some time in the future.

Senator, the end strength problem is, of course, a very difficult one. Some of the solutions that have been talked about would be to try to get us out of some of the commitments that the Army has. Nobody has been able to do that.

All I can say is the Army is stretched very thin, and almost everywhere I went I found the 10th Mountain Division and I know they also had a battalion in the Sinai.

Senator INHOFE. Yes. Since 1990, the Persian Gulf War, the Army has been cut by more than 34 percent and they are undergoing a 300 percent increase in mission rates, and so, it is just something I would like to get into the record at any committee hearing that we have.

Mr. Chairman, I am sorry to get off into another subject, but it is one that I think is very significant.

Senator LIEBERMAN. No problem.

Secretary BROWNLEE. Could I add one thing to that, Senator, because I think it is important when you start talking about the Army's strength and force structure and sometimes we do focus on end-strength, but I guess one of the lessons I hope we have learned from the war in Afghanistan is that the Army is pretty thin, as you indicated, but it does have a set of capabilities.

It has an Airborne division. It has an Air Assault division. It has a light division. Then it has heavy forces. It also has the special operating forces, which consists of Rangers. It consists of Delta Force. It consists of special forces, who can do direct action, who can do strategic intelligence, and also the unconventional warfare capability to go behind the lines and work with indigenous forces.

Now, quite honestly, that capability had not been used by the Army or the special forces for several years. There are always people around town, in think-tanks and otherwise, who speculate about going into the Army's force structure to pay for other bills.

Some of them use what I call the cleaning-out-your-closet method of force structuring, "If you have not used it in 2 years, get rid of it." These kinds of capabilities cannot be recreated in weeks or months. They take years.

We found, when we got on the ground in Afghanistan, the indispensable element was the Army's special forces unconventional warfare capability to go behind the lines and work with these indigenous forces in the sense of the vignette General Keane described. Their ability to do that is what enabled the success in that war.

So I only make the point that the force structure is important, the end-strength is important, the capabilities that the Army has—we have to have this broad range of capabilities, because as General Eisenhower said, "We do not know where we are going next, but it will probably be in a place, under conditions for which we are not prepared."

Senator LIEBERMAN. Thank you, Senator Inhofe.

Secretary Brownlee, you sort of took me off the train on which I was going to go with my next series of questions, but I cannot resist asking you, having heard this answer, whether the Army intends to convert completely to the Objective Force in the future or whether there will still be roles for special operations and Airborne, Air Assault, and light infantry forces in the transformed Army.

General KEANE. Yes. That is a great question, Senator. I think our thoughts will probably evolve over time as well. But our current thoughts are that the role for special operations forces will continue in the future.

We are certainly going to keep those forces as modern and as enhanced as we possibly can. We are looking at some end-strength increases for those forces based on the demand and needs for them.

Second, in terms of airborne and parachute forces, we still see a need to have that capability. That is our forced entry capability to seize a piece of ground or terrain that you need at very long strategic distances and be able to achieve at least operational and tactical surprise in doing that. So we will continue to maintain Ranger forces and parachute forces to do that.

Our thinking right now dealing with the Air Assault division is to keep it in its current configuration. However, as we evolve over time, we think we are going to do more vertical envelopment in the United States Army, not less.

How we evolve in terms of vertical envelopment in the Army remains to be seen. So we will have some future decisions to make in reference to that. But those unique capabilities that you describe right now we intend to keep in the force.

Senator LIEBERMAN. So the transformation to the Objective Force will not mean that the Army will be totally the Objective Force or only the Objective Force?

General KEANE. That is correct. We think those forces that I just described obviously will be enhanced to a degree that they will also have C<sup>4</sup>ISR capabilities and do network-centric warfare and operate considerably more dispersed than they currently have the opportunity to do.

So all of the attributes that we value in the Objective Force we will try to embed in those forces as well. Except for the special operations forces, because they are so unique themselves.

Senator LIEBERMAN. Right. Let me raise a few of the questions with you directly that I asked in my opening statement.

I am sure it is obvious from our point of view of accepting and embracing the vision that you had in the Army of the Objective Force and trying to play a role as advocates, if you will, and to ask why some of those tough decisions—these are all tough decisions, and they are not being made, which would free up more resources to fully fund the Objective Force and move to it more rapidly.

You began to talk a little bit about this, General Keane, a little bit earlier, but not in terms of the numbers. You talked about the recommendation of the Interim Brigade Combat Teams, the obligation or responsibility to National Command Authority to give this kind of capacity before we got to the Objective Force.

My question is: Do we really need six, particularly since we have moved the Objective Force date up closer and that is a bold and constructive move? Why not field fewer than six of the IBCTs to free up resources for the future combat systems, or even for aviation priorities?

General KEANE. That is a good question, Senator. I was trying to answer it before. Let me see if I can do a little better job with it.

The number six was derived from the warfighting requirements we believe we have and also the rotation base requirements, the war fighting requirements to respond to MTWs or also small scale contingencies that require immediate war fighting. But we also know we do other kinds of operations.

In the Army, we pay a disproportionate bill for stability operations post-conflict. I mean, we are 55 years in Europe. We are 50 years in Korea. We are 16 years still in Honduras, of all places. We are down in the Sinai some 19 years, and 11 years in Southwest Asia, and the list goes on, 6 years in Bosnia and close to 3 years now in Kosovo.

So we are painfully aware of post-conflict operations as it impacts on the Army, and our tendency to stay for a number of years. So we must maintain a rotational base to be able to do that.

We also know that the IBCTs will be ideal forces to put into some of these contingencies that we are doing in the post-conflict stage, as they are in the conflict stage. To do that in peacetime, we have to have a rotation base, if we expect the follow-on force to have the same capability as that one does. So that contributed to it.

There are two other factors. One is we also felt the National Guard should play a role in this, that they should be a part of transformation. We are committed to them not just in the Interim Force, but also in the Objective Force. So we wanted to bring them into the picture as well.

Then the last issue dealt with—the sixth one in a sense—is that we are really cleaning up old business here. We have a cavalry regiment that is assigned to the 18th Airborne Corps, the Second Armored Cavalry Regiment. It has been improperly organized, improperly designed and equipped for a number of years, ever since it used to be a heavy armored cavalry regiment and we made it a light cavalry regiment.

Essentially, all it has in it are Humvee TOW missiles with which to fight. That is not an assault capability. It has been a pregnant problem for us for years.

We are using the IBCT concept to design an organization with the equipment in the IBCT and form something we describe as the Interim Cavalry Regiment. That is the sixth one of these as well. It will look a little different, but all the equipment strategies will be the same.

That will give the 18th Airborne Corps the capability that they truly need, that we have been depriving them of for a number of years. That is how we settled on the number six.

Senator LIEBERMAN. Okay. So the bottom line in balancing the risk, in what I know is your desire to get to the Objective Force, you do not feel you can cut that below the six IBCTs?

General KEANE. No, we do not, not to meet the operational shortfall and to be able to give the National Command Authority the options we believe they should have.

Senator LIEBERMAN. Let me ask the other question. Why would it not make more sense to limit modernization to fewer than the three and a third divisions in the counter-attack corps, and, again, take that money and fully fund the Objective Force? Either one of you.

Secretary BROWNLEE. Jack, go ahead.

General KEANE. Well, first of all, that is the counter-attack corps, as you well know, and that was a major decision that we made. We are obviously taking some risk by not recapitalizing some of the equipment that would go to the other forces in the Army.

Senator LIEBERMAN. Right.

General KEANE. But with the strategy of the Objective Force and when it comes on, we believe that we are maintaining a strategic hedge, and therefore an acceptable risk by recapping that counter-attack corps and selectively modernizing the equipment. We have gone through all of the equipment strategies to do that.

The three and a third divisions, the third is the armored cavalry regiment for the corps, will maintain a hedge for us up until 2024 when that organization also goes into the Objective Force.

We think it is reasonable that we are doing it. It was one of the tougher decisions that we had to make, and it is frustrating, because there is always tension around these decisions.

On the one hand, we get criticized for maintaining too much of our Legacy Force. People do not recognize what we are doing to it, and the risk that we are accepting with that Legacy Force, that the selective recapitalization only applies to about 30 percent of it.

Senator LIEBERMAN. Sure. Thanks, General. My time is up on this round.

Senator Santorum.

Senator SANTORUM. I just want to follow up on what Senator Lieberman was saying. I would take the other side of that question, which is I think a question I have asked in the past. Maybe I do not remember the answer, but if you give me such a good answer this time, I will remember it.

What happens to the other six and two-thirds that, as we move forward with the Objective Force, and we move forward with digitization, as we move forward with upgrades, who would basically just get left behind? What relevance do they have to your capability to do your mission?

General KEANE. Well, I think that is where the risk is that we are accepting—we are saying to ourselves that the strategic hedge will be one of the last forces to transform to the Objective Force. It is not 2024, by the way. It is 2020. So I was mistaken in that.

The IBCTs at some point will transform as well. The planning figure for that is 2028. So the issue for us then is: With those organizations, can we accept the risk in the near term, while we are waiting for the Objective Force to begin to arrive in 2010?

Senator SANTORUM. My question is: What is the relevance of those forces now? Going forward, what is the relevance of all of these forces that are not being recapitalized?

General KEANE. If the issue is “Are they trained and ready to fight,” the answer is yes. If we had to get involved in conflicts larger than what we are currently involved in, I think you would see those forces being employed and doing very well against the threat that is out there.

Secretary BROWNLEE. Senator, we have equipment, pre-positioned and afloat. If, in fact, heavy divisions had to fall in on that equipment, some of those divisions might be the first ones to fall in on that equipment. The counter-attack corps would come behind them with its own more digitized modern equipment.

But they might be the first forces to fall in on that equipment, because it will not be digitized and have the kind of capabilities that the counter-attack corps will have. So they would be very relevant in that fight. In fact, they might be the first forces on the ground.

Senator SANTORUM. Okay. A question about UFRs, and the close to \$10 billion on your UFR list. You have killed, going through my papers here—how many programs is it? Eleven programs, I guess, with seven programs in the FYDP.

My question is: Are there any programs which are terminating that are also on the UFR list? Are there any programs that you have terminated that you changed the requirements so they are not on the UFR list?

General KEANE. No. The answer to that is that the programs we killed or terminated—and some obviously, we restructured—our plan is to not come back and make a request of you in the following year to initiate that as an unfunded requirement, so they are not on the UFR list.

Secretary BROWNLEE. Senator, could I add one thing here? While it is not the same program, there are capabilities that we clearly need in the aircraft survivability equipment area, and we have asked for additional funds to do more in that area.

The program that we terminated is terminated. But actually, it is not. The special operations forces are going to buy a little bit out of it before it is terminated, through the end of the year. The Army is going to continue to manage that.

But recognizing that we still need to modernize our aircraft survivability equipment, the money that you see requested in that UFR, I understand, is—

Senator SANTORUM. Is for a different program or for—

Secretary BROWNLEE. Well, it is to pursue whatever capabilities we can.

Senator SANTORUM. Something. Obviously with what is going on, what we have seen is the vulnerability that we have, which, obviously, seems to be something we need to be pursuing.

Secretary BROWNLEE. Yes, sir. We want to be careful here, in that the aircraft that were hit in Afghanistan were hit by small arms and rocket propelled grenades (RPGs) primarily, not by any of the kind of sophisticated systems that these kinds of aircraft survivability equipment would defend against.

The facts are that in that program, the Army was in an aircraft survivability equipment. It was a joint program. Technical difficulties arose. The Navy and the Air Force pulled out of the program. It left the Army with the cost of the system being doubled for the Army. It went from \$1.4 million to \$2.4 million. So the Army simply could not afford that alone. That is per system.

So the Army is now going to, if they can come up with any additional money, they would pursue other alternatives. They have a little money to do that, but this would allow a more robust effort. I believe that is true.

General KEANE. That is true. There is—

Senator SANTORUM. Is that a request to us?

Secretary BROWNLEE. It is on the UFR, sir.

Senator SANTORUM. Right. But is that—

General KEANE. Aircraft survivability is very important to us, obviously. There was the fact that there were material and design problems with that program that led us to back away from it. The other two services have, as well.

I will say to you in fairness to it, though, that they appear to be making some progress with it. So we are going to be taking another look at it when we start building our 2004—

Senator SANTORUM. The old program or a new system, or—

General KEANE. It is the new program that we terminated. It appears that they may be solving some of the technical solutions and material problems that they were having with that program. It was called Advanced Threat Infrared Countermeasures (ATIRCM).

If that, in fact, is the case, we may be taking another look at it as we go into the next budget cycle. To do that, I think that to be frank about it, we will have to get our sister services involved on here to get the bill down as well, and get them back into it and get interested in it. If the solutions are there, they will be interested.

Senator SANTORUM. Okay. There are two people here who are very interested in Comanche. Why do you not just, if you can, give us sort of an update of where we are on that program? Then I will sort of pick at you from there.

Secretary BROWNLEE. Senator, the Comanche program is one that, as you know, has a long history. Some of it is very troubled. The program got in trouble and Congress took some money out, and the Army took some money out. It has a long history of trouble.

I know that it has the Secretary's and the Chief's attention, and it certainly has the Vice Chief's and my own, as well as our new acquisition executive, Claude Bolton. We have all conferred on this program and we have some very intense work going on right now in that program.

There are some decisions to be made in the next few months that I think are critical to that program. Some of the troubles that it has had are self-induced by the Army. Some of them are contractor problems. Some of them are things like software development.

But I believe the Army is going to make some key decisions on that aircraft over the next several months. When we have some of those things worked out, we will certainly be up here to discuss it with you.

Senator LIEBERMAN. Well, let me follow up. Obviously, I appreciate—

Senator SANTORUM. I am not too sure that told me a whole lot. [Laughter.]

Can you be a little clearer as to what—

Secretary BROWNLEE. Senator, one of the problems with the system is that we are looking at some alternatives, and one of those may be a block fielding approach, as I discussed earlier. The original Comanche was intended to be a scout reconnaissance helicopter.

When the Army decided to make it a scout attack helicopter, that meant that we were going to put a Longbow radar on it, and hang Hellfire missiles on it. That has created some capabilities so that the vertical rate of climb of that helicopter, because of the power/weight ratio—this is primarily a weight problem now—is on the margin.

We have had some discussions about the desirability of fielding a helicopter with an engine that is already on the margin. So if I went further than that, I would be going further than what we have really decided to do here. But I can only tell you that these are the kinds of evaluations that are being made.

We are going to work, of course, closely with the contractor, and with the people in Congress up here. But I do believe that this is the year of decision for Comanche. It is possible that with a block fielding approach, at least the first versions of this may only be scout reconnaissance.

Senator SANTORUM. As a reconnaissance helicopter only?

Secretary BROWNLEE. Yes, sir.

Senator LIEBERMAN. What does "block fielding" mean here?

Secretary BROWNLEE. I am sorry, sir?

Senator LIEBERMAN. Explain "block fielding."

Secretary BROWNLEE. Block fielding means that the threshold capability, the first sets of helicopters we would produce and begin to test and maybe even deploy, would not have the full-up capability. So if you had a helicopter and the first ones you deployed were only scout reconnaissance helicopters, and then later you solved the weight problem, then you could go back and retrofit those and make the future models more capable. Perhaps they could have the added capabilities of scout/attack. But we are looking right now at alternatives of how to do that that would be acceptable.

Senator LIEBERMAN. Okay. Let me ask—and I think the question is still relevant. There is the \$1.7 billion shortfall, and I know that the Army put more money into this fiscal year 2003 budget, \$159 million to address part of the shortfall. The other part of the proposal is to increase the production rate by about 50 percent from 62 to 96 a year.

Can either of you talk a little bit about that, and whether you think that is feasible to accomplish?

Secretary BROWNLEE. I think the increase in production rate would not occur until 2007 or sometime around that. In my view, Senator, that presumes that we solve the problems I just described.

Senator LIEBERMAN. General Keane, do you want to add anything to that?

General KEANE. Well, we have the money in a program we believe we should have. The 96 production rate is only something we want to go to because of the significant savings that are involved and the production rate, because it just makes sense to us.

We are not at that decision yet. But that is clearly where we are heading, and I think some of the other decisions we have to make about this program would also shape that decision. So we have a few more months before we get to that point.

Senator LIEBERMAN. Okay.

General KEANE. I do not want anyone to misunderstand that the Army is very committed to the Comanche program. We are not backing away from it one iota here. What we are committed to is making certain that we solve some of the challenges that are in that program.

Senator LIEBERMAN. So you might put it up initially with less than the fully desired capabilities. Is that what I am hearing?

General KEANE. Well, it would have the capabilities that the Comanche program always started out with.

Senator LIEBERMAN. Right. Which we—

General KEANE. Be an armed reconnaissance helicopter, which is very achievable.

Senator LIEBERMAN. Right.

General KEANE. Then what we started doing is what we have been doing for many, many years, starting to ask more of that system.

Senator LIEBERMAN. Can it do more, yes?

General KEANE. We were doing that obviously—looking at it in terms of that being a multi-functional helicopter, which would create some savings for us down the road if it could do two functions at once. So it was economy that got us into looking at that realistically. That thought, while initially entertaining and attractive to us, under closer scrutiny is going to cause us some trouble. We have to eventually make a tough decision here.

Senator LIEBERMAN. But you are also saying obviously that that does not diminish the priority that the Army puts on the armed reconnaissance function?

General KEANE. Absolutely not. I am not—

Secretary BROWNLEE. No, sir. It is essential. That kind of capability is essential to the Objective Force.

Senator LIEBERMAN. To the Objective Force. Okay.

Let me ask about the Crusader, which we talked about briefly. Do you see it now as part of the Legacy Force, the Interim Force, the Objective Force or in some sense all three?

General KEANE. Well, I think that is a great question. Crusader has been a real challenge for us. It became, early on, the poster child for what was wrong with the Cold War Army and much of it has been misrepresented ever since.

To be frank with you, Senator, when I joined the Department here, I had many of the perceptions that others have had outside the Army. We put it on the chopping block to take a look and see if we could cut it so we could do transformation sort of things with it.

When I examined the requirements of where we were in artillery and what we needed on the battlefield, it was blatantly obvious that we needed the capability. So we restructured it and we brought it down and cut the program in half so it supports the counter-attack corps and also forces in Korea.

Then I think we made another mistake with it, to be frank, because we started billing it as a Legacy Force system, when clearly it has such advanced technology in that turret that I am convinced that that turret and its capabilities, which are almost robotic, there will be a two-man crew in there. But it is more like an aviation cockpit than an artillery turret in terms of its capabilities.

That turret has advanced technologies and it will bridge us to the Objective Force. I am absolutely convinced of it, that there are much of the turret qualities we will find in an FCS gun system of the future. That is step one.

The second thing is that, in responding to Senator Inhofe's question, once Crusader is in the Army inventories and given its rapid rate of fire and its precision and the range it fires at, I cannot imagine us being in any conflict where we would not throw a number of those things on C-17s and take them to war with us to support the Interim Force, to support Legacy Forces, regardless of type, whether they are heavy forces or light forces, or initially even to support the Objective Force as we are waiting to get more of the FCS gun systems into the inventory.

So I think it will be with us and supporting all three of those forces as we transition the Army. It was a mistake on our part, I think, to not be clear about that and unsort our own jargon on this issue.

Senator LIEBERMAN. This tempts me—and I will go forward, yielding to temptation, to ask you a provocative question, but I do it only to get what I know will be your brilliant and eloquent answer on the record.

There are some who might say that precision guided missiles fired from the air have been so brilliantly successful in Afghanistan, Operation Enduring Freedom, for instance, that we do not need sophisticated artillery like Crusader anymore.

General KEANE. That is true. We have heard it ourselves and there has been enormous progress with precision weapons, just in the ensuing 4 years since Kosovo. We can now put joint-direct attack munitions (JDAMs) on virtually every type of strike aircraft, versus only one that we did 4 years ago, so it is a tremendous advance.

The other thing is that in Desert Storm, precision munitions accounted for less than 14 percent of the bombs that we dropped. Today, it is probably 80-plus percent.

All that aside, the fact of the matter is that when troops are in close contact with the enemy, to be able to support troops in contact with the enemy you need immediately responsive fires, and the direct fire nets that we have with artillery provides us that responsive fire.

We need it regardless of weather. We cannot wait. A half hour could be an interminable amount of time to a force that is engaged with a much larger force and that needs artillery support.

So the qualities of a ground force are always tied to artillery systems and those artillery systems will take the form of tube artillery and also rocket munitions for responsiveness. They are just integral to a ground force's capacity to fight.

Senator LIEBERMAN. Your answer was as convincing as I knew it would be. Thank you, General. My time is up.

Senator SANTORUM. Thank you. I just want to—

Secretary BROWNLEE. Could I just make one point on that, Senator?

Senator LIEBERMAN. Please.

Secretary BROWNLEE. It is true that the precision guided munitions did a terrific job over there. I think one has to point out that there were not formidable air defenses there and had there been, it might have changed the picture somewhat. The artillery is unaffected by that.

Senator LIEBERMAN. Thanks.

Senator SANTORUM. Since we are on Afghanistan, let me just follow up with a question on lessons learned from Afghanistan and how they apply to the Interim Brigade. Can you envision how you would utilize this new force that you want to create in what seems to be an environment that may very well be the future threat that faces us and the Army?

Secretary BROWNLEE. I think I will let Jack address it, but I do want to go back to something I said earlier. As far as a lesson learned from Afghanistan, again, I would indicate that a lot of people, as I said, had already started to look at the Army's unconventional warfare capability as not needed anymore, because we had not used it for a few years.

When it became the indispensable element on the ground, it was fortunate we had this proxy Army, these indigenous forces on the ground, but that is when the air strikes became effective. When they were able to move and the special forces with them synchronized their movements with the air strikes, that is when the air strikes began to be effective. As Jack has said in meetings I have been in before, it caused the Taliban and al Qaeda forces to have to mass to cope with these ground forces. When they did that, then they became susceptible to the air strikes.

Well, before we got the special operating forces on the ground operating in that mode, the air strikes were not nearly as effective, nor did we have the success on the ground that we had when the movement of troops on the ground and the air strikes were synchronized. This all happened because the capability of the Army was retained. Thank God, it was retained.

General KEANE. I would add to that by saying, you know, we have to stop beating ourselves up about lack of jointness. The reality of this war was the uncommon goodness of jointness and the integration of our capabilities. So we really, as a military, should start taking some credit for this now.

We have turned the corner in a lot of our integration of capability. Certainly noteworthy, as Les pointed out, was the integration of special operations and conventional Army forces and air power, a pretty remarkable achievement, and particularly when you think that we were introducing special operations forces to essentially strangers on the battlefield. Within a matter of days, they built up trust and were able to synchronize and coordinate their activities throughout all of northern Afghanistan. That was a remarkable achievement.

This business of ground forces is a fascinating discussion and it is one that is much misunderstood. Kosovo, I think, led to a lot of the misunderstanding because, Milosevic, clearly when he calculated the expulsion of the Albanians, and he moved about a 40,000-man army in there to do that, knew that response would probably get precision strike against his forces.

While he used mass to move out the Albanians, he quickly reorganized those forces and distributed those forces in and among the people and used advanced camouflage techniques to hide from what he knew was inevitable precision strike operations.

What is very different in Kosovo as compared to Afghanistan is: He was very successful in doing that. The reason why he was successful in doing that is there was no ground force there to force his ground force to mass to protect the things that they value. That would have required a ground force presence, whether it was the KLA, who was not capable of doing it, or a coalition ground force which would have forced those forces out of those cities and out of those ridge lines that he was hiding in to mass.

At that point, that force can be fixed by another ground force and becomes very vulnerable to air power, and would be summarily destroyed. That is what happened to the Taliban so quickly. It is a lesson that people clearly do not understand at times.

In terms of the IBCT, I think, if we had the IBCT force, we clearly would deploy it. I think it would be ideally suited to operate in Afghanistan, in all of the terrain that is in Afghanistan, even in

the mountainous terrain, because of the presence of foot infantry that is in that force, and our clear understanding that that force would be augmented with helicopters, that we could move that infantry around in those mountains.

So the IBCTs will be a very versatile force for us, operating in different types of terrain and operating very dispersed on the battle field, which Afghanistan clearly is. Thank you for the question.

Senator SANTORUM. You are welcome. Regarding the Chinook, we have a problem with a Nunn-McCurdy breach. How do you plan to address that?

Secretary BROWNLEE. Senator, the Army is also committed to the program. There was some contractor price increases that really caused that. This program is critical, the CH-47F. There simply are not any alternatives in the near term. While we have taken some losses, is because we have used it so extensively in Afghanistan.

It has truly been a workhorse there and some of the things that have occurred with the Chinook, which Jack could probably describe in much more detail than I, have almost been miraculous—some of the ones that have flown out of difficulty and flown after taking hits and things like that. This is a good airplane that we need to upgrade and continue to buy.

Senator SANTORUM. Well, how are you going to address the breach and is the breach going to have the impact on the—

Secretary BROWNLEE. Have what, sir?

Senator SANTORUM. What impact will it have on the low-rate production?

Secretary BROWNLEE. I do not know yet, sir. I know that we are in discussions with the office of the Secretary of Defense (OSD) about it, and we are going to have to negotiate with the contractor, but we are going to have to proceed with the program, I believe. I know there was this breach and it has to be reported and we are doing that. But there have been other programs with these kinds of breaches that survived, and I believe this one will.

General KEANE. We do not see it as a major issue, Senator. March 19 is our notification date to Congress on the Nunn-McCurdy breach. It is due mostly to labor rates and we will be continuing with that program as planned.

Senator SANTORUM. Thank you.

Senator LIEBERMAN. Thanks. This has been a very productive afternoon. It strikes me that I should say what I suppose is self evident and—it has been said elsewhere—that we are extremely grateful for the service that the Army has given in Operation Enduring Freedom. On this committee, we say that we are very proud of it.

Thank you for an important and very constructive discussion here this afternoon. You are both very well informed and responsive and we want to continue to work with you through this subcommittee to help you, as best we can, to achieve what you want to achieve and all we are asking you to achieve with a limited number of dollars, large though they are, nonetheless limited. So I appreciate it very much and we look forward to continuing the dialogue.

The hearing is adjourned.

General KEANE. Thank you for what you do for our soldiers, sir. We appreciate it.

Secretary BROWNLEE. Thank you, sir.

Senator LIEBERMAN. You are quite welcome. Thank you, both. [Questions for the record with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATORS JOSEPH I. LIEBERMAN AND RICK SANTORUM

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION FUNDING

1. Senators LIEBERMAN and SANTORUM. Secretary Brownlee, the Army's fiscal year 2003 \$91 billion budget request—approximately 24 percent of the Department of Defense (DOD) budget—represents a \$9.9 billion increase over fiscal year 2002 levels. The Army's share of the DOD budget was not varied by more than 1.1 percent over the last 10 years using a fiscal year 1992–2003 average of 25.1 percent. The procurement portions of the budget has fallen from 20 percent over the last two decades to just under 17 percent this year. Research, development, test, and evaluation (RDT&E) funding has fallen from 21 percent to just under 13 percent in the same time period. The Army's \$9.9 billion budget request increase includes a \$1.7 billion addition to procurement funding, a 14 percent increase, but RDT&E accounts were reduced \$134 million compared to last year's appropriated level, and increased by less than 1 percent relative to last year's requested level. Despite an almost \$10 billion increase, the Army was still required to terminate 11 programs in fiscal year 2003 and seven programs in the Future Years Defense Program (FYDP). Despite submitting a \$9.5 billion unfunded requirements (UFR) list last year and receiving a \$9.9 billion increase this year, the Army has once again submitted a \$9.5 billion UFR list.

How will the \$134 million reduction in RDT&E affect Army transformation—in particular, the development of the Future Combat System (FCS) and the Mobile Gun System-variant of the Interim Armored Vehicle?

Secretary BROWNLEE. The \$134 million reduction in RDT&E will not impact the Mobile Gun System-variant of the Interim Armored Vehicle.

For the Future Combat Systems, the President's budget submission was delivered to Congress before the Army had received and costed proposals from industry for the FCS Lead Systems Integrator agreement. Subsequent cost estimates identified additional requirements over and above what we requested in the President's budget. Consequently, the Chief of Staff of the Army submitted a \$390 million dollar unfunded requirement request for science and technology and system development and demonstration efforts to support FCS development. Because of this situation, the Army is assuming additional risk to attain our goal of fielding an FCS-equipped unit of action with threshold capability within this decade. Regardless, we will continue to make the tough decisions and tradeoffs in order to transform the Army within the resources made available to us.

FORCE STRUCTURE IMPLICATIONS OF TRANSFORMATION

2. Senators LIEBERMAN and SANTORUM. Secretary Brownlee, because the Army's share of the Department of Defense's Total Obligation Authority varies little from year to year, how do you expect to fund the Future Combat Systems, Crusader, Comanche, and Interim Brigade Combat Teams (IBCT) when these programs all reach production in roughly the same time period? Do you see any force structure implications?

Secretary BROWNLEE. The fiscal year 2003 budget recently submitted to Congress adequately funds all of the Army's known Interim and Objective Force Transformation requirements. First, the budget, and its associated FYDP, funds the procurement of six IBCTs and its associated equipment. Next, the Army is funding over \$8 billion in the FYDP for science and technology, 95 percent of which is oriented on the Objective Force. Additionally, the Army has fully funded Comanche, Crusader, and Warfighter Information Network-Tactical.

The Army's force structure is driven by assigned missions and the capabilities of the forces to carry out those missions. The Army reexamines its force structure requirements in a biennial process called Total Army Analysis and makes adjustments to its force structure to execute assigned missions. As the Army moves forward with transformation, it will have to make more tough funding decisions and where possible, seek additional funding from the Office of the Secretary of Defense and Congress.

## EXPERIMENTATION PLAN AND FUTURE COMBAT SYSTEMS

3. Senators LIEBERMAN and SANTORUM. Secretary Brownlee, the Objective Force is the Army's future full spectrum force and the Army's top transformation priority. The Army intends to achieve Initial Operating Capability in fiscal year 2010—a 2-year acceleration of the program. The key component of the Objective Force is the Future Combat Systems (FCS), a networked system-of-systems. The Army intends to make a decision regarding technology maturation for the FCS in fiscal year 2003 versus fiscal year 2006. On March 8, 2002, the Army selected the Boeing Company and Science Applications International Corporation as the Lead Systems Integrator (LSI) for the concept and development phase of FCS. In the fiscal year 2003 budget, the Army invested 97 percent of its science and technology (S&T) resources toward the design and development of the Objective Force and enabling technologies. The National Defense Authorization Act for fiscal year 2002 included a provision which directed the Secretary of the Army to develop and provide resources for an experimentation program that will provide information as to the design for the Objective Force and a formal linkage of the Interim Brigade Combat Team to that effort. What is your current concept for Objective Force experimentation?

Secretary BROWNLEE. The Army's approach for Objective Force experimentation is to enhance proven experimentation processes. These processes are closely coordinated and synchronized through the cooperative efforts of the U.S. Army Training and Doctrine Command (TRADOC), the Department of the Army, the Army Test and Evaluation Command, and the Program Manager's Office. The Army exploits operationally focused experiments to develop and refine operational and organizational concepts, incorporating advances across doctrine, training, leader development, organization, materiel, soldiers, installations, institutions, and infrastructure (DTLOMS-I<sup>3</sup>).

Objective Force integrating centers composed of enhanced battle labs execute these experiments. Additionally, the remaining traditional battle labs provide support as the Army fully examines the cumulative interactions across echelons of command, DTLOMS-I<sup>3</sup>, battlefield operating systems, and Joint interoperability. These experiments can be broadly defined in technical, systems, and operational experimentation categories. Technical experimentation addresses emerging S&T to determine its feasibility for application in the Army over the near term. System experimentation looks at specific materiel solutions to an identified requirement and determines its feasibility as a solution. Operational experimentation allows the Army to look at emerging concepts, new organizational designs, systems, and technologies in a holistic manner. The Assistant Secretary of the Army (Acquisition, Logistics, and Technology) is primarily responsible for S&T experimentation. The LSI, in coordination with the Army, will be primarily responsible for systems experimentation, while TRADOC is responsible for the Army's Experimentation Campaign Plan and operational experimentation.

Finally, operational testing of the Objective Force maintains two key linkages. First, the Interim Brigade Combat Team will serve as the "bridge to the Objective Force" by providing live and simulated headquarters and forces for operational experiments. Second, the Objective Force experimentation plan is integrated into the Joint Forces Command's (JFCOM) concept development and experimentation strategy. All insights and lessons learned will be cross-walked between the Army and JFCOMs concept development process, and JFCOM will have the latest Objective Force concepts and capabilities represented in their major events.

4. Senators LIEBERMAN and SANTORUM. Secretary Brownlee, when can we expect to see this congressionally-directed experimentation plan?

Secretary BROWNLEE. TRADOC is writing the Army's Experimentation Campaign Plan. It is currently scheduled for TRADOC internal review during the fourth quarter of fiscal year 2002, with Headquarters, Department of the Army and Joint/service staffing in the first quarter of fiscal year 2003. We should have a final product by the end of the first quarter of fiscal year 2003.

5. Senators LIEBERMAN and SANTORUM. Secretary Brownlee, what changes in S&T have led you to believe that there are sufficiently mature technologies that allow you to accelerate the Objective Force?

Secretary BROWNLEE. The Army has carefully reviewed all FCS technology efforts and focused resources on the highest priority technologies that also have the greatest probability of being transitioned in time for the FCS Milestone B decision. The Army has requested \$654 million in the fiscal year 2003.

The President's budget matures and accelerates FCS, enabling technologies such as advanced armor and active protection, hybrid electric vehicle drive components, advanced sensors, and signature management.

Technologies still needed, but requiring further development and continued investment for insertion into future versions of FCS include: compact kinetic energy missile; extended range precision attack missile and increased endurance loiter attack missile with netted inter-missile connectivity; advanced multi-spectral payloads for unmanned aerial vehicles; fully-autonomous unmanned ground vehicles; and multi-role cannon with extended range ammunition suite.

6. Senators LIEBERMAN and SANTORUM. Secretary, Brownlee, how will the \$190 million shortfall in S&T and the \$200 million shortfall in RDT&E affect the program?

Secretary BROWNLEE. The \$190 million shortfall in S&T and the additional \$200 million shortfall in RDT&E for system development and demonstration (SDD) may limit the Army's ability to accelerate transformation to the Objective Force. The \$190 million S&T shortfall in fiscal year 2003 is attributable to the decision to accelerate the fielding of the Objective Force this decade with first unit equipped (FUE) and initial operational capability (IOC) in fiscal year 2008 and fiscal year 2010, respectively. Advancing our transformation efforts by 2 years resulted in calling forward various technologies. Thus, without the additional funding, the Army's acceleration in transformation will result in less than desirable capabilities due to potential delays in advancements for critical technologies and provide limited advancements in lethality, survivability, versatility, and sustainment.

The \$200 million SDD shortfall in fiscal year 2003 is based on the LSI's initial assessment of funding required for FCS hardware and software development, systems integration, test and evaluation, and systems and operational architecture design. Without the additional RDT&E funds, the program will be at risk of achieving the FUE in 2008 and our ultimate goal of attaining the IOC in 2010. Without the FCS program, the Army will not have a strategically and operationally deployable force capable of full spectrum operations this decade.

7. Senators LIEBERMAN and SANTORUM. Secretary Brownlee, how will the Army manage the LSI contract?

Secretary BROWNLEE. The agreement between the Defense Advanced Research Projects Agency (DARPA)/Army team and the LSI is not a conventional contract. The contract type is an Other Transactions Agreement Authority contract. The government will manage the LSI through an integrated, collaborative, integrated product team structure staffed by government and LSI personnel. The government will participate as a full partner in all make/buy and subcontractor competitive selection decisions. The government and LSI will implement and maintain an earned value management system where we require monthly cost and performance reports from both the LSI and appropriate subcontractors. We will use this mechanism to provide program, DOD, and congressional leadership the ability to track and manage the program at all levels based on metrics focused on cost, schedule, performance, and risk.

8. Senators LIEBERMAN and SANTORUM. Secretary Brownlee, what will be the LSI's role in the development of the Future Combat Systems and the Objective Force?

Secretary BROWNLEE. The LSI is the government's partner that will team with our requirement and material developers to design and build the FCS supporting our mutual goal of fielding a FCS-equipped unit of action by the end of this decade. Boeing, as the LSI, will have total systems integration responsibility for designing, developing, producing, fielding, and supporting the FCS systems of systems and will employ best commercial practices in their performance. Specifically, the LSI will assist the government to develop the system of systems architecture for the FCS equipped unit of action and design the command, control, communications, computers, intelligence, surveillance, and reconnaissance architecture necessary to provide a robust near real-time communications capability. The LSI will develop a material solution to satisfy the FCS organizational concept that is both strategically responsive while providing a more versatile, agile, lethal, and survivable combat system.

9. Senators LIEBERMAN and SANTORUM. Secretary Brownlee, will the LSI be precluded from developing and bidding on equipment for the FCS or Objective Force? Please provide a summary of the Statement of Work.

Secretary BROWNLEE. There is no restriction precluding the LSI from submitting an offer for Objective Force development or production. Boeing's division of Ad-

vanced Space and Communications managing the DARPA/Army Lead Systems Integration agreement is “firewalled” from the rest of the corporation so they can compete in the process set up by the LSI. The LSI will document and maintain a best value competitive process to select major systems and subsystems. The government reserves the right to participate in all program decisions, to include make/buy and competitive selection decisions. The government reserves the right to disapprove any action taken under that process.

The scope of the agreement between the DARPA/Army team is for execution of the concept and technology development phase of the FCS program. The LSI, in concert with the government, commits to provide the demonstrations, documentation, and tests required for a successful Milestone B decision accomplished in accordance with the statement of objectives and agreement deliverable schedule to provide a smooth transition into the SDD phase.

Subject to negotiation, the LSI agreement may be modified to include the SDD of the FCS program.

#### THE INTERIM BRIGADE COMBAT TEAM

10. Senators LIEBERMAN and SANTORUM. General Keane, the Interim Brigade Combat Team (IBCT), equipped with a family of Interim Armored Vehicles (IAV), is the centerpiece of the Interim Force. The Army has fielded a portion of one IBCT using surrogate vehicles at Fort Lewis, Washington, and is developing the tactics, techniques, and procedures for operational employment of the IBCTs using the Fort Lewis IBCT. The Army’s fiscal year 2003 budget request includes \$812 million for the procurement of 332 IAVs for the third IBCT. The first IAVs should be fielded in June 2002, the last in fiscal year 2008. The Quadrennial Defense Review (QDR) recommended that an IBCT be stationed in Europe. The National Defense Authorization Act for fiscal year 2002 included a provision granting the Secretary of Defense the authority to waive a side-by-side comparison of the IAV and the M113A3, the medium-weight armored infantry carrier currently in the Army inventory, dependent on several certifications, including an IBCT operational evaluation (including deployment to the evaluation site and execution of combat missions across the full spectrum of potential threats and operational scenarios), prior to deployment and prior to obligating funds for any more than three brigades.

The Secretary of Defense testified that part of the \$48 billion increase in the defense request was for “realistic costing” of programs to meet the cost position of the DOD’s Cost and Analysis Improvement Group. Has the Army fully funded the IBCTs? How many IBCTs has the Army funded?

General KEANE. The Army has fully funded the procurement costs for the six IBCTs.

11. Senators LIEBERMAN and SANTORUM. General Keane, how do you intend to resource the \$276 million shortfall in IBCT military construction and the \$283 million shortfall in IBCT training identified in the UFR list the Army provided Congress this year?

General KEANE. We will utilize existing facilities and equipment on which we can train and convert IBCTs as we work toward the objective requirements. In lieu of not receiving funds for our shortfalls, we will look at opportunities to leverage any cost offsets and allocate revealed resources toward our most critical requirements while retaining a balanced budget.

12. Senator LIEBERMAN and SANTORUM. Secretary Brownlee, the National Defense Authorization Act for Fiscal Year 2002 included a provision granting the Secretary of Defense the authority to waive a side-by-side comparison of the IAV and the M113A3, the medium-weight armored infantry carrier currently in the Army inventory, dependent on several certifications, including an IBCT operational evaluation (including deployment to the evaluation site and execution of combat missions across the full spectrum of potential threats and operational scenarios), prior to deployment and prior to obligating funds for any more than three brigades. Can you describe the actions you have taken in preparation for this operational evaluation and when do you expect to conduct this operational evaluation?

Secretary BROWNLEE. We are currently developing our strategy for the operational evaluation to assess the Stryker’s operational effectiveness, suitability, and survivability. This strategy will combine live testing, virtual simulation, constructive modeling, and other data sources as required and will compare a Stryker-equipped unit with a light infantry unit. Testing will be conducted in fiscal year 2003.

13. Senators LIEBERMAN and SANTORUM. Secretary Brownlee, could you describe, in general terms, how you plan the testing of the full spectrum capabilities of the IBCT within the context of the operational evaluation?

Secretary BROWNLEE. The Army plans to evaluate the capabilities of the IBCT through the assessment of operational events, modeling and simulation, and other events required for the acquisition of the Stryker Interim Armored Vehicles, and the fielding, training, and initial operational capabilities of the IBCTs.

14. Senators LIEBERMAN and SANTORUM. Secretary Brownlee, is the IBCT a separate brigade or is it part of a division? If it fights as part of a division, will the division headquarters have adequate digital communications resources to support IBCT operations?

Secretary BROWNLEE. In July 2001, the Army announced the designation of the six IBCTs. This was based upon operational and strategic considerations. The units designated were a combination of divisional brigades, cavalry regiment, and separate brigade. The IBCT can be task organized to operate as either a divisional brigade or as a separate brigade. The Army is conducting analysis to determine the appropriate command and control relationships for these five interim brigades and the one interim cavalry regiment. During this analysis, due consideration will be given to ensure that appropriate digitization, logistical support, and command and control infrastructure are in place to provide higher control and support to each interim brigade.

15. Senators LIEBERMAN and SANTORUM. Secretary Brownlee, if it is a separate brigade, how long can the IBCT sustain operations? Is the IBCT fully equipped to perform as a separate brigade?

Secretary BROWNLEE. The support structure of the IBCT is purposely austere to enhance deployability and force mobility. The IBCT is designed to be capable of sustaining itself for 72 hours under combat conditions. The IBCT is a divisional brigade that is designed to fill a capability gap between the Army's heavy and light forces. It is optimized for employment as an early entry combat force as well as for a wide range of small-scale contingencies. However, it was not designed to operate as a separate brigade and requires augmentation for sustainment. In a major combat operation, the IBCT will participate as a subordinate maneuver component within the division or corps.

#### LEGACY FORCE SYSTEMS

16. Senators LIEBERMAN and SANTORUM. Secretary Brownlee and General Keane, in the Army's plan, the Legacy Force will continue to provide overmatch and near-term warfighting capabilities out to the 2030 time frame. The Army estimates that 75 percent of its major combat platforms exceed their service life. However, because of affordability concerns, the Army has taken risk in the Legacy Force by limiting the focused recapitalization program only to those systems supporting the three and one-third divisions of the counterattack corps. In the fiscal year 2002 budget, the Army planned to recapitalize and selectively modernize 21 systems. In the fiscal year 2003 budget, the Army reduced that number to 17. The Army's UFR list includes a \$2.4 billion shortfall for force modernization. Despite an almost \$10 billion increase, the Army was still required to terminate 11 programs in fiscal year 2003 and 7 programs in Future Years Defense Program. Most of the program cancellations and restructuring is related to the ground component of the Legacy Force.

Why did the Army find it necessary to reduce the number of Legacy systems for recapitalization from 21 in fiscal year 2002 to 17 in fiscal year 2003, in light of the \$3 billion increase to Army procurement accounts?

Secretary BROWNLEE and General KEANE. The four systems that were removed from the recapitalization list are the M915 Line Haul Tractor, Small Unit Support Vehicle (SUSV), D7 Dozer, and D7 Scraper.

All four systems were low priorities on our recapitalization list. The M915 Tractor was removed from the recapitalization program because it was more cost effective to purchase new tractors than to recapitalize old vehicles. The Army decided to remove the SUSV from the recapitalization list because it was a low-density fleet with no immediate readiness issues or concerns. Additionally, funding was never applied to establishing a recapitalization program for this fleet. The D7 Dozer and Scraper were removed from the recapitalization list because they were being adequately addressed in the construction equipment service life extension program.

## FORCE MODERNIZATION SHORTFALL

17. Senators LIEBERMAN and SANTORUM. Secretary Brownlee and General Keane, the Army's unfunded priority list includes a \$2.4 billion shortfall for "Force Modernization." Can you please describe what constitutes this shortfall and the impact on the recapitalization program if this funding were provided?

Secretary BROWNLEE and General KEANE. Critical force modernization programs that appear on the Army's unfunded requirements list include MH-47 helicopters, soldier modernization, tactical radios, and others. However, these requirements do not impact the Army's recapitalization program or funding for recapitalization systems. All 17 of the Army's recapitalization systems are funded.

## MODERNIZATION BEYOND THE COUNTER ATTACK CORPS

18. Senators LIEBERMAN and SANTORUM. Secretary Brownlee and General Keane, while the Abrams and Bradleys in the Counterattack Corps will be modernized, those that reside in Army Prepositioned Sets (APS) will not be. How does the Army intend to mitigate this risk?

Secretary BROWNLEE and General KEANE. The Army is committed to making transformation as transparent as possible to the warfighting commanders in chief (CINC). All facets of transformation are first assessed against their impact on the Army's ability to support the warfighting CINCs. The Army closely manages its prepositioned equipment sets to ensure the timely arrival of an appropriate mix of forces to deter an adversary or support the rapid halt of an enemy advance.

In addition to the decisive counteroffensive capability the modernized III Armored Corps will have, the balance of the legacy heavy forces will be selectively upgraded and will be available as early deployers to ensure enemy forces do not achieve their initial objectives. The upgrades planned for armored forces other than the Counterattack Corps do not prevent them from falling into our prepositioned sets. These selected upgrades will ensure the early deploying force maintains combat overmatch in the regions where the prepositioned equipment will likely be employed by taking the key combat systems to a "zero hour/zero mile" status, not changing the equipment types.

Forward deployed divisions and selected continental United States-based units will maintain compatibility with prepositioned equipment until they are transformed to the Objective Force. With the arrival of more strategically responsive Objective Force units, the Army will modify its prepositioned equipment sets based on emerging CINC requirements.

19. Senators LIEBERMAN and SANTORUM. Secretary Brownlee and General Keane, will less capable forces which draw the APS equipment be first to the fight before the modernized forces of the Counterattack Corps which must deploy by sea?

Secretary BROWNLEE and General KEANE. The fully modernized Counterattack Corps will deploy by sea with their equipment to provide a decisive counteroffensive capability well into the Objective Force timeframe. The equipment in our prepositioned sets provides a combat overmatch capability for the foreseeable future and into the beginning of the Objective Force timeframe. The early deploying heavy forces must ensure enemy forces do not achieve their initial objectives. In addition to the decisive counteroffensive capability, the fully modernized Counterattack Corps will have the balance of the legacy heavy forces will also be selectively upgraded and will be available as early deployers.

20. Senators LIEBERMAN and SANTORUM. Secretary Brownlee and General Keane, in your joint statement you assert that "the leaders and soldiers of today's Army will advance the tactics, techniques, and procedures for network centric warfare using enhanced command, control, communications, computers, intelligence, surveillance, and reconnaissance (C<sup>4</sup>ISR) systems on modified Legacy programs." Do you intend to digitize all platforms in the Legacy Force or will this modernization initiative be limited to the Counterattack Corps?

Secretary BROWNLEE and General KEANE. The fiscal year 2003 Future Years Defense Plan continues the Army's digitization program with fieldings to the Interim Brigade Combat Teams (IBCT) and the Counterattack Corps. While sustainment and improvement of legacy systems will focus on the Counterattack Corps, information superiority is a cornerstone of Army transformation across all of the Legacy Force.

21. Senators LIEBERMAN and SANTORUM. Secretary Brownlee and General Keane, is the digitization program fully funded to complete this initiative?

Secretary BROWNLEE and General KEANE. For the period covered by the President's budget, the digitization initiative is fully funded and provides for fieldings within the IBCTs as well as the Counterattack Corps. Beyond this period, funding decisions have yet to be made in the normal budget process.

22. Senators LIEBERMAN and SANTORUM. Secretary Brownlee and General Keane, if this applies only to the Counterattack Corps, how will units not included in the digitization plan be incorporated into operations?

Secretary BROWNLEE and General KEANE. While current funding only supports platform level digitization in the networks for the Counterattack Corps and IBCTs, C<sup>4</sup>ISR modernization continues across all units. Information superiority ensures the translation of raw information into superior knowledge through the integration of a network-based C<sup>4</sup>ISR and target acquisition system-of-systems, so we will bring digitization down to battalion level in all of our tactical units. When operations require a mix of these forces, we will use a variety of means to ensure interoperability. These include using semi-automated systems-to-systems information exchanges, backwards compatible messaging built into our most modern systems, liaison officer teams, and other manual techniques and procedures to include voice information to non-digitized platforms. This capability to work across platforms will help maintain an ability to work with non-digitized platforms and will also help maintain an ability to work with non-digitized allies.

#### BLACK HAWK BUY-OUT

23. Senators LIEBERMAN and SANTORUM. Secretary Brownlee and General Keane, we understand the contractor has proposed a plan to complete the procurement of the remaining 102 Black Hawk helicopters requirement by fiscal year 2006 vice the Army's schedule of fiscal year 2011. While requiring an additional \$428 million expenditure between fiscal year 2003–2005, that action would save the Army \$126 million. Why would it not make sense to fund this buy-out, if necessary, by shifting money and delaying the planned recapitalization program for existing Black Hawks to do so?

Secretary BROWNLEE and General KEANE. Delaying the UH–60M recapitalization/upgrade (R/U), or the UH–60A–A recapitalization/rebuild (R/R) programs to accomplish the early buy-out would have a major impact on the Army's efforts to transform the utility fleet to a digitized force and retard our efforts to reverse the aging trend of the UH–60 fleet, which is currently at 15.2 years.

Moving 3 years of funds currently allocated to the R/U program—which upgrades UH–60As and Ls to UH–60Ms—to accomplish the buy-out would not equal a 3-year delay. The loss of momentum and the institutional engineering knowledge incurred by shutting down the RDT&E effort would likely add 2 to 3 years of effort to recover the lost momentum, in addition to the 3-year slip. This could move the first fielding out as far as 2012, rather than 2006 as currently projected.

Also, the UH–60 recapitalization programs include funds needed to modify the overall UH–60 fleet and the Army's medical evacuation (MEDEVAC) aircraft. To execute the buy-out and continue scheduled fleet modifications would force us to look to other Army programs to cover the difference between the recapitalization dollars and the early buy-out requirements. We believe the amount required to execute the buy-out is \$482 million—by year, the contractor requested \$150 million in fiscal year 2003, \$152 million in fiscal year 2004, and \$180 million in fiscal year 2005.

In fiscal year 2003, the UH–60 R/U program has a total of \$141 million. \$99 million of that is for UH–60M RDTE; the other \$42 million is going toward upgraded MEDEVAC kits, crashworthy external fuel tanks, and other modifications required by the fleet. In fiscal year 2004 the R/U program has a total of \$234 million. Of that, \$99 million is earmarked for the UH–60M production line. \$54 million is allocated to UH–60M RDTE, \$64 million to upgraded MEDEVAC kits, crashworthy external fuel tanks, and other modifications required by the fleet. \$17 million is going toward upgrades of training aids, devices, and simulation systems.

In fiscal year 2005, UH–60 R/U is budgeted for \$263 million—\$161 million for the UH–60M production line, \$23 million for UH–60M RDTE, and the remainder is for upgraded MEDEVAC kits, crashworthy external fuel tanks, and other modifications required by the fleet.

The UH–60 recapitalization/rebuild program at Corpus Christi Army Depot has been designed to extend the service life of the UH–60A fleet until those aircraft can be inducted in the UH–60M upgrade program. The Army currently has 364 aircraft that are at or beyond their 20th year of service. Reprogramming the dollars allo-

cated to the service life extension of these aircraft would not only require us to pay the increasing operations and sustainment costs associated with old aircraft, but place soldiers in aircraft which have exceeded their useful service life.

#### THE BATTLEFIELD COMBAT IDENTIFICATION SYSTEM

24. Senators LIEBERMAN and SANTORUM. Secretary Brownlee and General Keane, in the fiscal year 2003 budget request, the Army has canceled the Battlefield Combat Identification System initiated as a result of the “friendly fire” fratricides of the Gulf War (now over 10 years ago). Why was this program terminated and how will the Army address this critical issue until the FCS is fielded?

Secretary BROWNLEE and General KEANE. The Battlefield Combat Identification System (BCIS) program was originally funded for one division in the 2003–2007 Program Objective Memorandum. As structured, the program was considered unaffordable, and funding was redirected to higher priority programs. BCIS was designed as part of a dual approach for combat identification, which includes through-the-sight target identification and situational awareness.

In lieu of BCIS, the Army will continue to field the Counterattack Corps with combat identification thermal panels, second generation forward looking infrared, and Force XXI Battle Command Brigade and Below. The BCIS millimeter wave technology will be evaluated for inclusion into the Future Combat Systems and Objective Force. As the technology matures and, if proven affordable, it will be considered for retrofit as a combat identification capability in Interim and Legacy Forces. This program strategy supports Objective Force priorities, while currently providing limited combat identification capability for the Legacy Force.

#### COUNTERMINE CAPABILITY

25. Senators LIEBERMAN and SANTORUM. Secretary Brownlee and General Keane, the January 21, 2002 edition of *Inside the Army* quoted an internal Army review that stated: “The service faces countermine capability ‘shortfalls’ in four key areas: see and detect from stand-off ranges; mine neutralization; force protection; and demining and clearing.” What capabilities do our soldiers have currently for standoff mine detection from a vehicle or aircraft?

Secretary BROWNLEE and General KEANE. U.S. soldiers do not presently have a stand-off detection capability from a vehicle or aircraft. The Army is assessing a stand-off detection technology from a rotary wing unmanned aerial vehicle (UAV) known as a camcopter. This is expected to be a limited capability for detection of changes in routes that would indicate the presence of mining activity. Development of a minefield stand-off detection capability from a UAV is slated to be initiated in fiscal year 2003. Stand-off detection from a vehicle in a pure sense is not achievable today. What is planned in the near term is the use of an unmanned ground search platform to remove the soldier from the vehicle during search operations. This is the Ground Stand-off Mine Detection System (GSTAMIDS) program under development today.

26. Senators LIEBERMAN and SANTORUM. Secretary Brownlee and General Keane, what is the fielding status of the Army’s current next-generation mine detection systems, the Ground Stand-off Mine Detection System and the Handheld Stand-off Mine Detection System?

Secretary BROWNLEE and General KEANE. GSTAMIDS is currently in development with a planned transition to production for the Block 0 version to occur in February 2003. The Handheld Stand-off Mine Detection System (HSTAMIDS) is currently in development with a planned transition to production at the end of fiscal year 2003. As a result of Operation Enduring Freedom, the Army initiated an acceleration of the program to provide 200 production units of an interim variant to be delivered by the end of calendar year 2002.

27. Senators LIEBERMAN and SANTORUM. Secretary Brownlee and General Keane, what measures has the Army taken to mitigate risk until these systems are fielded?

Secretary BROWNLEE and General KEANE. The Army has committed \$29 million for urgent operational requirements in support of Operation Enduring Freedom to mitigate risk until these systems are fielded. The forces have deployed mine sniffing dog teams on the ground in Afghanistan. D7 bulldozers have been equipped with armor protection for use in clearance of some areas with mines. Tele-operated mini-fails have been deployed to clear areas of antipersonnel mines. We have procured state-of-the-art metal detectors from Australia that are more effective in the highly

mineralized soil conditions found in some parts of Afghanistan. This is an interim measure until the HSTAMIDS mine detectors are available.

28. Senators LIEBERMAN and SANTORUM. Secretary Brownlee and General Keane, what are the countermine capabilities for the IBCT?

Secretary BROWNLEE and General KEANE. In addition to the HSTAMIDS and GSTAMIDS systems, countermine capabilities for the IBCT consist of a suite of equipment to be deployed with the Engineer Squad Vehicle Variant of the Interim Armored Vehicle. Each engineer vehicle will be equipped with lightweight rollers or lightweight full width blades. As part of the ensemble, each vehicle will also be equipped with a magnetic signature duplicator to deal with magnetic influence fuzed mines. Six of the vehicles in the nine-vehicle engineer company will also tow a Mine Clearing Line Charge (MICLIC). The MICLICs will be replaced starting in the fiscal year 2005 timeframe with the explosive standoff mine clearance system, which is also known as Mongoose. Mongoose will provide a more robust capability across the full spectrum of the threat.

#### SPECIAL OPERATIONS

29. Senators LIEBERMAN and SANTORUM. General Keane, Army participation in Operation Enduring Freedom early on consisted of a Delta Force and Ranger raid in the vicinity of Kandahar and the use of Special Operations Forces in a traditional liaison and support role to indigenous forces. New, of course, was the employment of high-tech communications and targeting capabilities and improved sensor-to-shooter linkages which allowed these forces to be even more effective. Lately, in Operation Anaconda, conventional Army light infantry forces from the 10th Mountain and 101st Air Assault Divisions have been employed. One of the more striking aspects of that fight is the use of the special operations version of the Chinook cargo helicopter (rather than Black Hawks) to effectively conduct combat air assaults, and the absence of field artillery indirect fire support to supplement fixed wing, helicopter, and mortar fire support. Are there considerations for expanding Army Special Operations Forces and Ranger battalions?

General KEANE. The Army uses the biennial Total Army Analysis (TAA) process to evaluate its force structure in light of the current or changing strategy. During the last TAA, the Army recognized some key shortages resulting from the move away from the two major theater war strategy to a more inclusive strategy. Nearly one-quarter of the proposed active force structure changes were increases to the special operations forces. We are increasing their training base, adding additional capabilities to the Ranger battalions and special forces groups, building two new civil affairs and psychological operations companies, and doubling the special forces logistical support structures.

#### LESSONS LEARNED FROM OPERATION ENDURING FREEDOM

30. Senators LIEBERMAN and SANTORUM. General Keane, do lessons learned from Operation Anaconda, or the overall Operation Enduring Freedom, indicate that the Army should move more aggressively toward a future transport rotorcraft?

General KEANE. The Army strongly supports development and fielding of a vertical or very short take-off and landing aircraft that can deliver payloads in the 15 to 20 ton range. In Operation Enduring Freedom, we entered an underdeveloped theater. Afghanistan lacks adequate infrastructure on which to base ground lines of communication. That presented a challenge to get into the areas we needed to put significant forces and to keep those forces resupplied. Most of our insertion efforts were by air. That meant using the limited airfields.

The available intra-theater airlift we have today requires a 2,500-foot strip. We were not able to get the desired throughput into Bagram or Kandahar because we had to repair the runways, and that takes time as well as materials and equipment, which we could not get there rapidly. In short, the hardware we have today limits our options and ties us to inefficiencies. Army rotary wing aircraft are great but have limitations, particularly in terms of the lift capacity and "legs," or distance we can fly. A single material solution could perhaps address both the Air Force mission (intra-theater airlift) and the Army mission (tactical movement and resupply). The Army would support an aggressive joint program to develop such a solution.

31. Senators LIEBERMAN and SANTORUM. General Keane, do lessons learned from the Afghanistan operations lead you to new insights into low density/high demand items?

General KEANE. Current operations in the war on terrorism have shed some insight into our force structure, particularly high demand/low density (HD/LD) forces. In exercising force management, the Army must pay close attention to our HD/LD forces, such as special operations forces, chemical/biological detection, and Patriot air defense forces in order to balance current requirements with deliberate planning.

A key insight from Operation Enduring Freedom for the Army is the increasing requirement for force versatility as we prepare for tomorrow's challenges. We believe the current operations reinforce that we are on the right course with Army transformation. As the OPTEMPO of our Active component forces increases, the link to, and management of, our Reserve component forces becomes critical to successful force management.

The current operations clearly present a challenge, especially in the allocation and usage of HD/LD forces, requiring the Army to very carefully manage all of its forces. The force in existence today was built over the last 10 years to fight under a different set of assumptions than we have today. There are some mismatches in the number, type, and component mix of forces that we need to sustain the global war on terrorism, and the Army is addressing these issues to the best of our ability. Some improvements to our HD/LD forces are already occurring by selective increases to special operations aviation, civil affairs, biological detection, and technical escort units, with more planned over the next several years. In short, the Army is able to meet its requirements by carefully managing and leveraging all of our forces in both the active and Reserve components. We will continue to balance near-term HD/LD challenges with the broader demands of the new strategy.

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#### QUESTIONS SUBMITTED BY SENATOR JOHN WARNER

##### FAMILY OF MEDIUM TACTICAL VEHICLES DUMP TRUCKS

32. Senator WARNER. Secretary Brownlee and General Keane, recently it was brought to my attention that engineer units in Afghanistan have complained about some of the engineer equipment that is being used in the Afghanistan operations. The vehicles that were identified as poor performers were: the Family of Medium Tactical Vehicles (FMTV) 5-ton dump trucks, the Light Medium Tactical Vehicle 2½ ton cargo vehicle, the Deployable Universal Combat Earthmover (DUECE), and the Tractor Dozer D5. What is the Army doing to address these complaints?

Secretary BROWNLEE and General KEANE. The challenge on any deployment is to balance the size of equipment to best match the limited transportation assets. The comments were not intended to imply that the equipment did not perform as designed, but rather the smaller, more transportable DUECE and D5 were not the optimal pieces of equipment for the missions, conditions, and environment given to the engineer units.

When performing earthmoving and excavation missions in the most extreme soil conditions, vehicle horsepower and weight become critical to earthmoving operations—bigger is better. The comments need to be taken in the context of comparing D7 dozers to the smaller DUECE and D5 that are not as capable due to reduced size and horsepower.

33. Senator WARNER. Secretary Brownlee and General Keane, do you agree that there are problems with this equipment and if so, what are the specific problems, and what is the Army's plan to address these shortcomings?

Secretary BROWNLEE and General KEANE. The Army recognizes problems with the older, A0 model FMTV dump trucks' ruggedness and truck bed and payload capacity. The Army implemented a design upgrade in A1 model production to include a thicker impact resistant bed, heavier duty rear springs, adjusted hydraulic pressure for heavier loads, and changed the dual swing tailgates from aluminum to steel for impact strength. The phased upgrade should mitigate the problems that we experienced.

The 17 FMTV dump trucks of the 92nd Engineer Unit in Afghanistan are non-upgraded A0 model trucks that were deployed before the upgrades. The concerns were about load spillage on the move, capacity, and ruggedness. The Army has proposed two approaches to the unit to improve their capability in Afghanistan: ship 12 new and upgraded A0 models from the United States; or ship 17 sets of upgrade kits with support equipment and contractor personnel to Afghanistan to perform the installation. We are also investigating improvements in operator training and procedure. A decision on implementation of the options is pending a decision by the theater and unit commanders. Please note that the readiness rating of the FMTVs con-

tinues to be over the 96th percentile, and the Army has confidence in the system as a whole.

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QUESTIONS SUBMITTED BY SENATOR JOHN MCCAIN

APACHE

34. Senator MCCAIN. Secretary Brownlee and General Keane, the role of the AH-64 Apache attack helicopter in the United States Military's ability to project power was recently validated in Sha-e-Kot, Afghanistan. The Apache performed remarkable feats in the close air support arena for U.S. ground troops under fire from al Qaeda positions. The skill and fearlessness exhibited by Apache aircrew were directly responsible for saving countless American lives.

While the role of the Apache is not in question, I am concerned with the damage those first 7 aircraft received during the battle of Sha-e-Kot, especially given the concern by so many members of Congress to the circumstances surrounding the Apache's deployment to Yugoslavia. I am interested to know what you feel can be done to make the Apache even more survivable. What are your plans to make the AH-64 Apache a key weapon system in the Army's Objective Force.

Secretary BROWNLEE and General KEANE. The close combat role of Army aviation will, at times, require our helicopters to engage the enemy at ranges much closer than our systems are optimized. The battle of Sha-e-Kot is an excellent example. The Apaches in Afghanistan are AH-64A models. The Apache's current survivability design of redundant systems, 30-minute "dry run" transmission, blast shields, and crew armor plating provided the crews in Afghanistan the capability to complete their mission, return unharmed, and get the airframes into the hands of our maintenance personnel.

The AH-64 Apache is a "Legacy to Objective Force" airframe. The RAH-66 Comanche will start displacing the Apache by fiscal year 2015. The Army's plan to improve the Apache program is two-fold. First, we are currently fielding the AH-64D Longbow Apache, which adds the additional capability of the fire control radar and radar frequency interferometer, increasing stand-off capability against armor and air defense threats, as well as numerous system improvements. As a part of the Army recapitalization initiative, the Apache recapitalization program increases reliability, reduces fleet half-life and procures the second-generation forward-looking infrared radar for the fleet. While the AH-64A Apache continues to be the world's most lethal attack helicopter, the Longbow Apache improvements increased the effectiveness and survivability of the Apache as we transform to Objective Force.

35. Senator MCCAIN. Secretary Brownlee and General Keane, what is the level of effort with respect to the full complement of threat countermeasure upgrades, such as infrared, radar, and laser detection, to make this aircraft fully transformational.

Secretary BROWNLEE and General KEANE. In the fiscal year 2003–fiscal year 2007 Program Objective Memorandum, the Army zeroed out the Army Procurement Appropriations funding for the infrared and radio frequency countermeasures programs. The zeroing of these programs was due largely to high cost and affordability issues. Additionally, the Army did not fund the laser warning program. Research, development, test, and evaluation funding for infrared and radio frequency was left in place to develop cost-reducing mechanisms while further refining the systems.

The Army recognizes the proliferation of surface-to-air missiles and recently completed an aircraft survivability study that developed cost-affordable options for defeating the threat. Although pre-decisional, the Army is planning to counter infrared missile threats by upgrading the Apache Longbow helicopter with a common missile warning system, an advanced infrared countermeasures munition, and an advanced threat infrared countermeasure. Radio frequency countermeasures will remain as currently configured while the Army continues to review solution sets in this spectrum for the Apache helicopter. In addition, final fielding of an advanced laser warning system could be accomplished by the end of fiscal year 2006. The net effect of these actions will ensure that the modernized Apache fleet has a viable threat countermeasure capability.

[Whereupon, at 4:34 p.m., the subcommittee adjourned.]

