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AERIAL COMMON SENSOR PROGRAM

JOINT HEARING

BEFORE THE

TACTICAL AIR AND LAND FORCES SUBCOMMITTEE

OF THE

COMMITTEE ON ARMED SERVICES

MEETING JOINTLY WITH

TECHNICAL AND TACTICAL INTELLIGENCE SUBCOMMITTEE

OF THE

PERMANENT SELECT COMMITTEE ON INTELLIGENCE

HOUSE OF REPRESENTATIVES

ONE HUNDRED NINTH CONGRESS

FIRST SESSION

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AERIAL COMMON SENSOR PROGRAM

HOUSE OF REPRESENTATIVES, COMMITTEE ON ARMED SERVICES, TACTICAL AIR AND LAND FORCES SUBCOMMITTEE, MEETING JOINTLY WITH TECHNICAL AND TACTICAL INTELLIGENCE SUBCOMMITTEE OF THE PERMANENT SELECT COMMITTEE ON INTELLIGENCE, *Washington, DC, Thursday, October 20, 2005.*

The subcommittees met, pursuant to call, at 4:08 p.m., in room 2118, Rayburn House Office Building, Hon. Curt Weldon (chairman of the subcommittee) presiding.

OPENING STATEMENT OF HON. CURT WELDON, A REPRESENTATIVE FROM PENNSYLVANIA, CHAIRMAN, TACTICAL AIR AND LAND FORCES SUBCOMMITTEE

Mr. WELDON. The subcommittee will come to order.

This afternoon the Tactical Air and Land Forces Subcommittee has the pleasure of meeting in a joint session with the Technical and Tactical Intelligence Subcommittee of the Permanent Select Committee on Intelligence to receive testimony on the Army and Navy's Aerial Common Sensor (ACS) Program.

This is a program the subcommittee has been following for some time. I had asked the Government Accountability Office for a report on ACS, and they reported back to us in September of 2004.

We welcome our witnesses representing the Office of the Secretary of Defense and the Departments of the Army and Navy, and I want to thank and welcome our members.

At a previous 1-hour classified briefing, we had 11 Members of Congress, in spite of votes being canceled, who stuck around from both parties to receive an in-depth analysis of the capabilities of the program we are going to be discussing today. And I want to thank the members that are here and those members that made that portion of our briefing.

The ACS program was initiated to upgrade and consolidate the capabilities of three current intelligence collection aircraft types of the Army and Navy: the Army's Guardrail Common Sensor and Airborne Reconnaissance Low programs and the Navy's EP–3.

The program was approved for entry into Systems Development and Demonstration (SDD) in July of 2004. In August of 2004, the Lockheed Martin-Embraer team was awarded an $879 million, 5-year contract to develop electronics and sensors to be carried on a militarized version of the Embraer 145 regional jet aircraft.

Total acquisition costs for the 38 aircraft Army program was estimated to be $8 billion for 38 aircraft. Although the Navy was not a signatory to the acquisition decision memorandum, the Navy

budgeted for the program in fiscal year 2006, with an intended eventual procurement of 19 aircraft.

In the spring of this year it became apparent that weight growth in the mission package would cause the ACS to fall short in meeting its requirements. In September, Lockheed Martin was issued a stop work order, halting all work on ACS. Lockheed Martin was given 60 days to develop an alternative plan for the ACS program. The Army has recently stated that there is now a potential for a 2-year delay in fielding the ACS platform and that the development cost could double to $1.8 billion.

Upon entry in the systems development and demonstration, ACS could have been characterized as a low- to medium-risk program based on declared technology readiness levels. Yet less than a year into the SDD program we are at stop work, with all the attendant costs and schedule ramifications. And with many engineers having been reassigned to other programs, difficult to predict negative impacts to the program are highly probable due to discontinuity in the design teams, if the program is restarted.

This has significant negative implications for this program and potentially similar implications for other programs if this management failure is indicative of shortcomings in the acquisition system as a whole.

Our understanding is that the ACS problem was largely a result of something as simple as a significant underestimation of the weight of connecting cables and racks for the mission equipment, due to "bad parametrics." We also understand that a $4 million cut in risk reduction on integration tasks to "save money" potentially contributed to this $800 million, 2-year slip in the program.

Further, it isn't like the present ACS circumstance comes as a total surprise. The January 2004 Director, Operational Test and Evaluation report stated the following: "There are concerns about the size, weight and power requirements of the aircraft required to carry and operate the multi-intelligence sensor payload. Associated with this issue, there are concerns about the growth potential of the aircraft to add additional systems and capabilities in the future, consistent with the growth experienced with most other U.S. aircraft platforms."

This is not a new story. The Joint Strike Fighter went through a restructure, with the development cost increasing to over $40 billion and adding over a year to the program, largely due to weight problems of fasteners, driven by "bad parametric estimates." If the ACS history is symptomatic of larger acquisition system shortcomings, this also has potentially far greater negative implications for more complex programs like the Future Combat Systems program.

We all agree that we need to shorten the acquisition cycle, but we should not be rushing into SDD for programs without mature technologies and system integration being demonstrated in a relevant environment.

DOD has its 5000 series acquisition regulations. No one is saying that OSD should not have flexibility in enforcement of those regulations, but OSD seems to too often default to waiving the regulations. As an example, the Future Combat Systems program was allowed to enter SDD long before technologies had matured. And vir-

tually no integrated capability for any of its components have been demonstrated. And the requirements for an independent cost estimate has yet to be may et.

We have invited our witnesses here today to how we got to where we are on ACS, what lessons have been learned and what is being done to determine the proper path forward.

Before we begin, I would like to recognize my good friend from Hawaii, Neil Abercrombie, our ranking member, for his opening remarks.

Mr. Abercrombie.

[The prepared statement of Mr. Weldon can be found in the Appendix on page 37.]

STATEMENT OF HON. NEIL ABERCROMBIE, A REPRESENTATIVE FROM HAWAII, RANKING MEMBER, TACTICAL AIR AND LAND FORCES SUBCOMMITTEE

Mr. ABERCROMBIE. I think your remarks essentially cover the circumstances we are to undertake during the hearing.

My difficulty, Mr. Chairman, is with reference to the classified portion of our activities today. And my difficulty here is, although I could not stay, as you know, for other reasons having to do with one of our colleagues in honoring his spouse, Ike Skelton, our ranking member, nonetheless, the information that was given there seems to me to be at odds with the circumstances that brings us to this hearing today.

And I think that is where our difficulty comes. It is one thing to say something; it is another thing to be able to actually bring to fruition substantively what the remarks exchanged referred to. And that is why we have to make a determination today on the basis of the outline that you have presented to us in your opening remarks.

Thank you.

Mr. WELDON. I thank the gentleman.

We are also very pleased to have the distinguished gentlelady as the chair of the very important Technical and Tactical Intelligence Subcommittee. We welcome her back because she has been a very valuable member of this committee. She has an outstanding level of credibility on defense issue and defense issues in general.

And so I am pleased to recognize for any comments she would like to make, Ms. Wilson.

STATEMENT OF HON. HEATHER WILSON, A REPRESENTATIVE FROM NEW MEXICO, CHAIRWOMAN, TECHNICAL AND TACTICAL INTELLIGENCE SUBCOMMITTEE

Mrs. WILSON. Thanks, Mr. Chairman.

And thank all of you for being here this afternoon.

On the Intelligence Committee, most of the programs that we oversee are classified, and our questions take place behind closed doors.

I wish that the problems being faced by the aerial common sensor were unique, but they are not. The program that we are here to review today is just one example of continued problems with the way in which we buy complicated defense and intelligence systems.

We all know that we need to upgrade the Army and Navy aircraft that watches and listens to potential enemies and real enemies. They are very old and they are not up to the demands of the 21st-century warfare. But because we didn't do a good enough job in setting the requirements, getting different agencies on board early and developing an acquisition strategy to reduce the risks, we are not going to have those planes when we want them, and will it cost us a whole lot more to get them.

While all of us are concerned about what the Army and the Navy should do to meet its requirements for intelligence surveillance and reconnaissance, our committee is even more concerned about a bigger issue of which ACS is only symptomatic.

First, what does this experience tell us about how we need to change the way we buy and manage big systems? The outside review that was requested by the Army and done by the Navy after the stop work concluded that the research development tests and evaluation costs would be twice as high as projected, the schedule was unexecutable, the program might not meet Army and Navy requirements, the government and contractor personnel lacked experience on projects of this size, and a flight test program was ill defined. Not a very encouraging report on the management of a major system.

Second, what does this experience tell us about the need to coordinate and plan across the stovepipes as we decide what we will need to build for intelligence, surveillance and reconnaissance.

The Navy joined this project late. The Air Force is replacing JSTARS a few years after we hoped to get this up in the air. Did we have an architecture and a clear definition of roles and requirements? We got the architecture document, at least up here, in May of this year. It doesn't look like to me we did enough talking across the stovepipes early on in the process.

So how can the services work better together to divide up roles and missions or to make sure that we plan together so that we get the capability that you all need at a price that we can afford.

I look forward to the testimony as we look toward answers to these questions. Thank you.

[The prepared statement of Mrs. Wilson can be found in the Appendix on page 39.]

Mr. WELDON. I thank the gentlelady for her comment and thank again all the members that have taken the time to be here. When votes ended some time ago they stuck around, which shows you the importance that is placed on this issue and this program by these members who otherwise would be on their way back to their districts.

Our witnesses for today are distinguished.

Representing the Office of Secretary of Defense, Mr. John R. Landon, Deputy to the Assistant Secretary of Defense for command, control, communications, intelligence, surveillance, reconnaissance and IT acquisition programs.

Assistant Secretary of the Army for Acquisition, Logistics and Technology, the Honorable Claude Bolton. Mr. Secretary, welcome back to this subcommittee. We appreciate your being here.

Major General Barbara Fast, Commanding General and Commandant of the U.S. Army Intelligence Center and Fort Huachuca. Thank you for being here.

From the Navy, Mr. Tom Laux, Program Executive Officer for air anti-submarine warfare assault and special mission programs.

And Rear Admiral Bruce Clingan, Deputy Director for Air Warfare.

Without objection, all witnesses' prepared statements will be accepted for the record.

I understand you have all agreed that three are going to testify but others will be available, as needed, for questions and answers, so members will have a chance to ask whatever questions they would like.

We would like to begin with Mr. Landon. Thank you for being with us. Please proceed with your opening remarks.

Please pull the microphone close to you so we can make sure that you are heard. Thank you very much.

STATEMENT OF JOHN R. LANDON, DEPUTY TO THE ASSISTANT SECRETARY OF DEFENSE FOR COMMAND, CONTROL, COMMUNICATIONS, INTELLIGENCE, SURVEILLANCE, RECONNAISSANCE, AND IT ACQUISITION PROGRAMS, DEPARTMENT OF DEFENSE; HON. CLAUDE M. BOLTON, JR., ASSISTANT SECRETARY OF THE ARMY FOR ACQUISITION, LOGISTICS, AND TECHNOLOGY; MAJ. GEN. BARBARA FAST, COMMANDING GEN. AND COMMANDANT OF THE U.S. ARMY INTELLIGENCE CENTER AT FORT HUACHUCA, U.S. ARMY; THOMAS LAUX, PROGRAM EXECUTIVE OFFICER FOR AIR ANTI-SUBMARINE WARFARE ASSAULT AND SPECIAL MISSION PROGRAMS, DEPARTMENT OF THE NAVY; REAR ADM. BRUCE CLINGAN, DEPUTY DIRECTOR FOR AIR WARFARE, U.S. NAVY

Mr. LANDON. Yes, sir. Chairman Weldon, Chairwoman Wilson, distinguished members of the two subcommittees, thank you for this opportunity to speak to you about the Aerial Common Sensor Program.

As indicated, I am John Landon. I am the deputy to the assistant secretary of defense, networks and information integration. I have responsibility for reviewing acquisitions in the command and control, communications, intelligence, reconnaissance, surveillance, space and information technology areas.

I am here today representing Mr. Ken Krieg, the Under Secretary of Defense for Acquisition, Technology and Logistics (USDAT&L) and the Milestone Decision Authority for the Aerial Common Sensor Program. He is traveling overseas on official business and unable to attend this very important hearing.

The Aerial Common Sensor program is designated a Major Defense Acquisition Program in accordance with Title 10, and my office oversees the acquisition activities of the program in accordance with the Department's acquisition regulations and in support of Mr. Krieg.

In the case of ACS, I also work closely with the Office of the Under Secretary of Defense for Intelligence to ensure the system is delivering the desired capabilities. The Department's acquisition regulations are designed to provide a structured process through

which validated capabilities are acquired, starting with early concept exploration activities, continuing through development and demonstration and leading to a decision to produce and fully deploy the capability.

My involvement in these programs is to ensure the mandates of statute and regulation are adhered to and the programs are on a success-oriented track as they enter the system development and design phase. My office also measures the progress that programs are making as they advance through the phases of the acquisition cycle, with special attention to the program's achievement of its performance, cost and schedule.

I also serve as the leader of the Overarching Integrated Product Team (OIPT), a group responsible for ensuring programs in the acquisition process have satisfied the necessary criteria for entering the next phase of acquisition. For a number of years, the Department has used the Integrated Product Team approach as a process for reviewing its acquisition programs.

The group I lead, as well as the supporting groups, consist of subject matter experts from across the Office of the Secretary of Defense and the services. These experts bring their considerable knowledge and experience to the table as we review the multiple facets of today's critical acquisition programs.

Our OIPT members include representatives from all parts of the Department. For example, the Joint Staff provides advice on capabilities; the Defense Procurement Office assists the program office in development of their acquisition strategy; and the Program Analysis and Evaluation Office is key to the development of alternatives analysis and accurate program cost estimates.

Our key representatives are the Office of the Director for Operational Test and Evaluation; the Defense Research and Engineering Office; the comptroller; the chief information officer; Logistics and Materiel Readiness Office; the general counsel, as well as several others.

Once a program completes the review process, we present the findings to the Under Secretary of Defense for Acquisition Technology and Logistics and his advisors and offer a recommendation as to whether the program is ready to proceed.

With regard to ACS, we followed the process I have described above and collectively concluded that the program was ready to enter the system development and demonstration phase. The results were presented to the under secretary and his advisors, and on July 29, 2004, he approved entry into this phase of development. The decision was forwarded to the secretary of the Army, and source selection and contract award was completed by the Department of the Army.

With that as background, I am here to answer any questions you may have.

[The prepared statement of Mr. Landon can be found in the Appendix on page 41.]

Mr. WELDON. Thank you for being with us.

Secretary Bolton, again, welcome back, and it is good to have you here.

Secretary BOLTON. It is good being back, sir.

Good afternoon, and thank you, Chairman Weldon, Chairwoman Wilson and distinguished members of the Tactical Air and Land Forces Subcommittee and the House Permanent Select Committee on Intelligence for this opportunity to discuss the Army's Intelligence Collection Program, specifically the Aerial Common Sensor Program. We are most grateful always for your wisdom, advice and steadfast support.

The United States Army, with nearly 300,000 soldiers in 120 countries, is meeting the demands of the Global War on Terror, fulfilling our other worldwide commitments and transforming to meet the challenges of an uncertain future. It is our job to ensure that our men and women in uniform have what they need to fulfill their mission today as well as tomorrow.

The Aerial Common Sensor Program, or ACS, is critically important to our future Army. The enhanced battle space awareness that this system will bring to the fight will significantly increase both the lethality and survivability of tomorrow's Army.

Currently, our Special Electronic Mission Aircraft, or SEMA, S-E-M-A, is comprised of the Guardrail Common Sensor and the Airborne Reconnaissance Flow Systems. These aging fleet aircraft, dispersed in five battalions throughout the world, are doing a superb job. However, there are limitations that come with age and in terms of the range of timeliness of information.

ACS will replace these 2 workhorses, bringing intelligence transformation to the 21st-century battle space. We are hard at work to ensure that the ACS becomes the agile, multi-intelligence, multifunctional system that our future tactical commanders require. Simultaneously, with your help, we are making certain that our current systems in the SEMA fleet keep pace with the advancing technology to meet the changing threat until they are replaced by the ACS.

We have spent countless hours developing our requirements documentation, specifically the operation requirements document and the key performance parameters, and have exercised programmatic control and management oversight at each step of the process. I believe the Army has been proactively raising and addressing some very difficult issues concerning the ACS Program.

Our goal remains unchanged: To recognize and mitigate the risks at the earliest possible stage and to ultimately fill to our war fighters this critically important and needed system that will continue to allow our commanders the ability to gain and hold the advantage and to conduct decisive operations on their terms and not that of the enemy's.

And that concludes my opening remarks. Again, I thank you for this opportunity and your continued wisdom, guidance and support, and I look forward to your questions.

[The prepared statement of Secretary Bolton can be found in the Appendix on page 58.]

Mr. WELDON. Thank you, Mr. Secretary.

Our final witness is Mr. Laux.

Welcome back to the subcommittee. We appreciate you being here, and you can proceed with your opening statement. Thank you.

Mr. LAUX. Chairman Weldon, Chairwoman Wilson, distinguished members of the subcommittees, thank you very much for this opportunity to appear before you to discuss the Department of the Navy's EP–3E and Aerial Common Sensor airborne intelligence collection programs.

The written statement I provided for the record describes the Navy's objective to recapitalize the EP–3E by leveraging the ongoing Army-led ACS Program.

The Army's operational requirements document and the Navy's annex to that document fulfill Navy requirements for maritime and national missions in support of FORCEnet and Sea Strike Sea Power 21 Pillars. ACS will provide the combatant commander with 72-hour response capability for worldwide intelligence, surveillance and reconnaissance prior to entry of forces.

Since the chief of naval operations saw an opportunity for the Navy to leverage the Army's ACS Program, the Navy provided support within the Army's process for source selection, contributed to Army-assigned Integrated Product Team responsibilities and developed unique Navy documentation with the ultimate goal to be fully integrated into the Army ACS Program.

In January 2005, the Navy requested deferring co-signing the ACS acquisition program baseline agreement until Navy concerns about schedule and cost risks could be mitigated. Our joining the program is indefinitely delayed pending resolution of the schedule breach and potential cost growth addressed in the Army program deviation report of May 2005.

To help assess the overall program's help, the Army service acquisition executive, Secretary Bolton, accepted my offer to use the services of the Naval Air Systems Command's non-advocate review. NAVAIR's chief engineer led this review with a team comprised of a broad array of acquisition experience. The review team assessed that the ACS Program is currently unexecutable. Specifics are detailed in my prepared statement.

Considering this finding, the Navy is requesting fiscal year 2006 funds to conduct an analysis of alternatives, revalidate operational requirements and update documentation. Recently, we updated our 2004 analysis of options and determined that the new ACS costs leveled the affordability field with other manned options. Therefore, an analysis of alternatives is recommended to define discriminators among the potential solutions.

The Navy's current challenge is keeping the EP–3E viable and relevant until an ACS initial operational capability is established. We requested funds to begin work on mission systems sustainment and relevance of legacy EP–3E aircraft. If required funding is made available for the above, we will be able to position ourselves for the results of the ongoing Quadrennial Defense Review.

Mr. Chairman, Ms. Chairwoman, thank you again for this opportunity to discuss with the subcommittee the Navy's EP–3E and ACS airborne intelligence collection programs. We stand ready for your questions.

[The joint prepared statement of Mr. Laux and Admiral Clingan can be found in the Appendix on page 78.]

Mr. WELDON. Thank you.

Thank you all for your testimony, for your statements. They will all be accepted. If you want to add additional follow-on to any of the questions that are asked today, you will be free to do that as well.

Let me start off with Secretary Bolton. In my opening remarks, I quoted from the fiscal year 2003 Director of Operational Tests and Evaluation Report about the concerns that he had regarding size, weight and power requirements of the aircraft required to carry and operate the mission intelligence payload.

Can you specify any interaction with DOT&E and/or changes to the ACS Program that took place based on the comments in that report?

Secretary BOLTON. Yes, sir. In fact, we agreed with the report, and as a consequence, that and our own review of the program asked the program manager and the Program Executive Officer (PEO) that they negotiated the contract, whichever company that would be or team, that there be a proviso in that contract to report on a monthly basis progress and tracking the size, weight and power. We had a baseline that we wanted to stay within, and so it was a contract requirement which was fulfilled by the contractor and it was as a result of that report and our own investigations.

Mr. WELDON. I will just ask one other question at this time and give all of our members a chance.

Mr. Laux, per your written statement, in January of 2005, via a memorandum for USDAT&L, "The Navy requested deferring co-signing the ACS Acquisition Program Baseline Agreement until completion of a program integrated baseline review and preliminary design review, at which time concerns about schedule and cost risk could be addressed."

Was the Navy just clairvoyant? What schedule and cost risk concerns were you referring to? What did the Navy know that the Army didn't know, Mr. Laux?

Mr. LAUX. Mr. Chairman, we had ongoing concerns, which were then communicated with the Army, and they were certainly aware of them as well.

I would offer that it was perhaps a matter of degree of the amount of risk that was out there, and we were simply not happy at that point that we had enough knowledge and insight into the program at that point to join up, if you will. And so we requested more program execution and the fact-finding and the information that would come out during the design review and the cost elements during the baseline review, as we annotated.

Mr. WELDON. The gentleman from Hawaii is recognized.

Mr. ABERCROMBIE. Thank you, Mr. Chairman.

Mr. Bolton, you have to help me here. I don't remember, I am sorry, are you an aeronautical engineer?

Secretary BOLTON. Electrical engineering, sir.

Mr. ABERCROMBIE. Okay. I am not.

Secretary BOLTON. Well, me either.

Mr. ABERCROMBIE. I am not either. I went to a small school whose reputation was built on the idea of a liberal arts education with engineering—Union College in Schenectady, New York.

Secretary BOLTON. Yes, sir.

Mr. ABERCROMBIE. And for those of us who did not have a talent for what was then known as the hard sciences—I don't know if that is still a phrase that is in vogue or not—but those of us who were involved in the other sciences, social sciences, the object was to try and understand the implication of technology in the social structure of our society, attempt to become somewhat at least familiar with the advancing of technology, i.e. the scientific method as it evolved as a philosophy.

I always thought that the scientific method was intelligent design, but I now understand that that is probably passe for some people. But it affected me and it affects me now.

I give that to you by way of background, because my question to you comes from my own background and my understanding of how science moves forward as potentially a layperson trying to deal with it.

Now, one thing I understood from all of that in this context is how much an airplane weighs, and I am referring back to the chairman's remarks, and if I heard him correctly, it refers to the 2003 report that came from the director, the operational test and evaluation report.

"There are concerns about the size, weight and power requirements of the aircraft required to carry and operate in the multi-INT sensor payload. Associated with this issue there are concerns about the growth potential of the aircraft to add additional systems and capability in the future consistent with the growth experienced by most other U.S. aircraft platforms."

I hope that is contextual enough. I am not trying to pull a fast one on pulling something out of the context.

Now, here is my question: How much an airplane weighs, considering the context I just outlined, is a basic engineering aspect that has to be taken into account. Having gone to Kill Devil Hills in the past myself, I understand explicitly in three dimensions now what the Wright Brothers had to deal with in terms of weight, and probably weight was the principal consideration that they had, at least my understanding of it is. The aerodynamics and so on they had down pretty well. It was a weight problem, how were they going to transpose and translate their knowledge and understanding of the physics of that into a practical application for the construction of that airship.

That is in 1903. So I cannot understand how it was possible that so many engineers and so many managers, right up until essentially 2005, could get this wrong. And we still don't have an answer.

Now, I made reference in my opening remarks to the classified briefing that we had just previous, and obviously I can't go into that and you can't go into what the substance of that was, but what concerns me and disturbs me is the tenor of the remarks and respective answers to questions that were raised were such that one would be led to believe that these issues had been addressed and that things were on track to accomplish the tasks set out therein, which we don't have to go into in any detail, doesn't matter for purposes of our conversation.

How is it possible that we are where we are if someone like myself understands that the weight question in conjunction with the

mission requirements is at least fundamental before you move forward into the kind of contracting that we are now having to confront in terms of apparently the incapacity to move forward on those contract specifications?

How did this happen?

Secretary BOLTON. Mr. Abercrombie, first, it is good seeing you again.

Second, you ask some of the most interesting questions that a technical person like me has to answer succinctly and clearly.

Mr. ABERCROMBIE. Not too much praise, the chairman says.

Mr. WELDON. You praise him too much and we will be here till 9 o'clock tonight.

Mr. ABERCROMBIE. But you understand what I am doing. Every person here sitting in these chairs doesn't have a clue. You could get up there and literally say, "The moon is made of green cheese," and there is not a whole hell of a lot we can do to refute it if it is based on a technology-based, science-based answer.

So someone like myself who has to vote on this, has to try to take a responsible position, has to understand how in the hell did this happen and what are we going to do about it at this stage?

Secretary BOLTON. Well, I will tell you, I asked the same question when I received the status of the program a few months ago. And I will tell you, though I have a technical background and though I have been a pilot, test pilot and so I understand weight, balance, power on air frames, I will tell you, I also have a brother who is not technical. He has four masters and a Ph.D. and they are all in the soft sciences. So he has counseled me over the years to be able to translate this, at least for him.

When the program manager and the executive officer came to me, I asked the same question, "How in the heck did we get here?" I realized in regards to the chairman's opening comments on the risk of the program, when we entered SDD it was moderate to high, and it was high because of the risk and the weight area. That is why we asked the contractor to come to us each month and tell us how they were doing as we did the designs.

To your point, what we did not do in the previous phase was really to take the operation requirements and break those down into the design technical requirements.

Mr. ABERCROMBIE. But that is just fundamental. If you can't do that, then you have to come and tell us, "We can't do this. We have got to go in another direction."

Secretary BOLTON. It was our belief at the time that we had done enough in that phase in terms of computer simulations, in terms of some preliminary design work, paper design work, using tools that we normally use in all the other programs that would allow the risk to be where it was and then go ahead and track that risk. We had plans to do that and that is what we were doing.

In addition, there was pressure on the services. I mentioned upfront, and it has been mentioned before, that we do have a very old fleet. That fleet is maxed out today in the area of responsibility (AOR) and we really do need a capability to help our tactical commanders over there.

So from the Army's standpoint, it was worth taking a higher risk program in, given all the things that we had done and then just monitor it.

The other thing I will say, and then I will give you my reason why I think we are here, which is not technical, it is more a people thing than it is a technical thing, but in the programs that I have seen over the years, what we are doing here today we typically wouldn't do for 2 or 3 years. We would have spent a lot of time and effort for me to sit here to eventually tell you we got something wrong.

Unlike that, in this program, within the very first years, at my urging to my folks, I said, "If you have a problem," in fact, we established on this program what I call a termination criteria and there were two of them. If you cannot meet the key performance parameters and/or you cannot meet critical milestones like the preliminary design review, which was supposed to have taken place earlier this year, or the critical design review, that is grounds for you to come back to me and tell me that and I will look seriously at whether or not we are going to continue this program.

Now, for most program managers, they don't like establishing things like that, because they are viewed as failures if they come in to do this. But as a result of that, in the last 3.5 years that I have been here, I have terminated or stopped 70 different programs, because I want to know right away. I do not have the time, and we certainly don't have the resources, to do things in the wrong direction.

So I am pleased with what those two gentlemen did in coming and saying, "We have got a problem. We have got to stop. We have got to figure out what we are doing," and do it now rather than coming into you 2 or 3 years later.

Now, why is this happening, my view, and the reason I asked the Navy to go do the review. I asked the Navy to take a look at two things. First of all, take a look at the technical side, technically why didn't we understand this. And I want you to take a look at it from the government's viewpoint and the contractor's.

And what I got out of that is what I surmised: Yes, hindsight being what it is, we could have done some things certainly in the other phase which would have required more money and actually prototyping. That is the only way you could really understand size, weight and power. There have been cost and schedule implications to that.

The other is looking at the various processes we have today that are people-oriented, good people in these processes: The requirements community, resourcing community, the acquisition community, Very good people. And I will foot stomp that. We have the world's best people in there.

What we have trained those people to do over the years is to work in stovepipes. Successful programs are very good at the people level of breaking across at the top and making that work. But from an institutional standpoint, we in the Army—I won't speak for the Department of Defense—haven't done that in nearly 50 years in breaking those stovepipes down. We are doing that now in other programs. It was not done well enough on this program.

And when I say break the stovepipes down, it is not only a matter of let's organizationally do something, but within those stovepipes it would be really neat if you would really educate, train and provide the right tools for those people. If we had done that, I think this program and a host of other programs would have less problems.

And, in fact, in the Army, that is what we are trying to do right now, is to break those stovepipes down to make sure the requirements community, sitting with the resourcing community, sitting with the acquisition community from day one are looking at those operational requirements to try to understand what really are the technical and financial implications of trying to do that.

Which, by the way, we are doing right now in the stop work. All those communities are getting together to do that work right now.

Mr. ABERCROMBIE. Appreciate it. I am past my time, and I will follow-up.

Mr. WELDON. The gentlelady is recognized.

Mrs. WILSON. Thank you, Mr. Chairman.

Secretary Bolton, I was struck by something that you just said. You said the only way to really understand the tradeoffs for cost, weight and power is to build a prototype, but as I understand the timeline here, you awarded the contract to Lockheed Martin in August of 2004 and knew by December of 2004 that you were running into weight problems.

How far were they into building the first aircraft?

Secretary BOLTON. Oh, not at all. We are just doing the detailed design work, so we are not building.

Mrs. WILSON. Then you didn't need to build a prototype to figure out you had——

Secretary BOLTON. Oh, I disagree. The platform is a platform. We are trying to do a commercial platform, as you know. The boxes, those are being built. And let me give you an example or two of what we mean by this.

We are trying to put onto one platform a number of different sensors. We have Signals Intelligence (SIGINT), Imagery Intelligence (IMINT), Measurement and Signatures Intelligence (MASINT) and so forth, and rarely have we done that before. We did a lot of study up-front to say "Yes, that looks good." We had three contractor teams who told us, "We can do this. And, by the way, we can do it reliably, so you don't have to buy a lot of aircraft, and we can do it on one platform." So it wasn't just this contractor. There were at least two others who were saying the same thing.

So we went through the demonstration phase, the concept phase, now we are ready to go into SDD. When we take the operational requirement, like the notion, okay, on this multi-INT aircraft, on each mission, are you required to have every black box on at the same time? The answer came back, "yes". "Oh, we didn't understand that." If that is what you want, now we are going to have more air conditioning, and we are going to have to have more power, which will add to the weight of the aircraft.

Mrs. WILSON. I guess my question is, and this is a fairly short time when you realized there was a problem——

Secretary BOLTON. Yes.

Mrs. WILSON [continuing]. Looking back at it now, and the great thing about being able to look back is you get a magic wand to decide what it is you might have done differently in your acquisition strategy, would you have changed anything or do you think it is inevitable that we are at this point?

Secretary BOLTON. Well, as I said earlier, and I will foot stomp this again, I think you really need the communities together better. They are doing it now. We are not cutting metal right now. We are not writing any software. But we really are understanding the impacts of the operational requirement.

And what I am saying is, why don't you get that group earlier? Wouldn't it be nice if you got that group together, say, down at Fort Belvoir, at the school down there, had a case study like this and we would sit around in the afternoon thinking about how you actually do this. How did those folks get into that position? How should we correct this on the next program? What tools should we be using? What policies should we have in place? What oversight should we have in place, rather than doing it right now when there is a lot at stake here.

We do not train our folks to do this. We don't. The requirements community doesn't train that way. By law, I have to train the acquisition community. They have to be certified and experienced before I can put them in there, so they do go down to Belvoir and do that.

Mr. ABERCROMBIE. Would you yield for one moment?

Mrs. WILSON. Sure.

Mr. ABERCROMBIE. Are you telling Representative Wilson that this was contractor driven and you folks went along? Is that what you are telling her?

Secretary BOLTON. No, that is not what I am saying.

Mr. ABERCROMBIE. Well, it sure sounds like it.

Secretary BOLTON. No. I am not understanding, sir, how we are getting the contract, because this is all on the government's side right now. It is not driven by the contractor. What I am talking about is us before we ever write a contract for SDD. And it is a matter of getting the requirements right, really understanding that. And I can say that because I used to write requirements. I didn't have class one on it.

Mrs. WILSON. Thank you. I appreciate that, and I appreciate the directness of your answer.

Mr. Laux, would you also comment on that as well, on this issue of joint requirements, and particularly whether there was any signoff by senior intelligence folks in the services to say, "These are our requirements?" Because what I read through this is the Navy all the way through saying, "I will have what he is having," but coming at it from a very different point of view. And are you there as well saying, "All right, let's sit down and figure out what we really want."

Mr. LAUX. If I could defer to Admiral Clingan to take that one.

Admiral CLINGAN. Chairwoman Wilson, the requirements process is derived from the operators on the ground, as they look forward to meeting the threat of the future. And as we develop those requirements, we codify them in key performance parameters.

In the case of the ACS Program, as we look to the challenges of recapitalizing the aging EP–3 fleet, we had an opportunity to partner with the Army. Maybe if we could rationalize the requirements across the services which were extraordinarily common. In fact, we departed initially in only one way and that was our requirement to have six workstations as opposed to four. And those requirements have been stable throughout the process up until this point as we have gone through the acquisition elements which follow from the requirements.

Mrs. WILSON. Why does the Army think this is an Army program and the Navy think this is a joint program in your budget documents? I am struck by the way that language is—or maybe I have got that reversed. This has never really been described as an, "we are all body and joint program." This is an Army program that the Navy is partnering with. I think that is the word you just used. Why are we doing it that way?

Admiral CLINGAN. It took that tenor because we came into the process subsequent to some progress being made by the Army. We liked the requirements, as I mentioned earlier. They harmonize with what we were looking for, and so we looked for an opportunity to join the program at the time when we viewed the challenges to have been overcome.

Mrs. WILSON. Thank you, Mr. Chairman.

Mr. WELDON. I thank the gentlelady.

The gentleman, Mr. Tiahrt, is recognized.

Mr. TIAHRT. Thank you, Mr. Chairman.

In full disclosure, I am from Wichita, Kansas, the air capital of the world, where we have Boeing, Bombardier Learjet, Textron Cessna, Raytheon-Beech, Spirit Aerostructures, the largest standalone aerostructure facility in the world, an Airbus design shop and 150 machine shops, electrical shops and test equipment shops that support the industry. So if you have flown, some part of that airplane originated in Wichita, Kansas. I just want to make sure you are aware of that.

We are limited in here to talk about really two things: The schedule and the platform. And the platform, it is clear that it is inadequate with the current platform that was proposed. The weight capabilities, the power capabilities, the cooling capabilities, it is just not enough for this mission-critical requirements. And we can't afford to dumb down the package.

I think what we are looking for here is so critical that we can't afford to have anything less. In fact I think we need to expand our thoughts about what other growth is out there.

And, schedule, we are on a stop order now, so schedule is kind of TBD, to be determined. Now, we don't know what we don't know. We don't know about the growth of technology, we don't know about the growth of threats that will come out of that new technology, and we don't know the number of users per the requirements that this mission has. So I think we need to look beyond just what our current little problem is, because we are looking at costs now, and I think we are being penny wise and dollar foolish, because there is a long-term growth that has not been, I think, addressed or acknowledged.

Now, there has been, I think, a bias toward a heavy jet for this role of this mission, and I know during Quadrennial Defense Review (QDR) there was some concern about mission duplication and there was an article in Defense News and Army Times, published October 3, and it quoted the light transport that the Army is going after in the ACS Program. General John Jumper said that there is no reason to build a new Air Force because we already have one.

Now, I think that is an excellent statement for the chief of the Air Force, but as I look out there, I know we have got somebody from the Secretary of Defense but I don't see any blue suiters out there or any people from the Air Force. So I think we need to address that issue, whether there is a bias against a heavy jet. Is there a question or a concern of encroaching into another services that would bias the size of the airframe, is one of the questions I have.

The other question I have is on schedule. How much longer would it take to try to put these requirements into a commercial business jet or a regional jet? Because there is a big difference between a militarized aircraft and a commercial aircraft. And when it comes time to build an airplane, if it comes off a militarized production line, it has a shorter schedule than it does if you take a regional jet line or a business jet line and try to put all these military specs and other requirements into it during that process.

So I would like you to answer, is there a bias? Are we addressing the growth? And how much longer is it going to take if we try to put this in too small a package?

I would like, of course, Secretary Bolton, also Mr. Landon to address that.

Secretary BOLTON. Mr. Tiahrt, it is good seeing you again. And as you may recall, one of my assignments was at McConnell Air Force Base there in Wichita, so I had a chance to understand the aviation part of that community, which as you mentioned, is key and very important.

In terms of why, I don't have a bias. What I do have a bias for is I have a prime contractor and the onus is on that contractor to do as I have asked him to do, and that is put a program together. I do know they are looking at all sorts of alternatives in terms of a platform that will accommodate the requirements, the operational requirements. And I am anxious for them to come in in about a month's time and tell me what we have in terms of a program, in terms of a platform accommodating the requirements, not dumbing it down, as you indicated, and also what is affordable, because we are not looking at just the up-front costs here.

This system will be around at least 20 years. And can we afford to do this? I will ask if there are any other alternatives outside of that and what the contractor comes up with. But I do not have a bias one way or the other.

And in fact, in terms of the Air Force, depending on how things go over the next month, we would love to sit down and chat with the Air Force to see if we can bring some things together on that side and make sure it is affordable for everybody.

Mr. TIAHRT. Mr. Landon, you want to address that?

Mr. LANDON. Yes, sir, I would be happy to. I think with regard to the bias, let me comment particularly on the way the capability

or the requirement was developed. It was taken from a mission perspective, and the platform was not an entering argument for the first of the program. And so we really looked at it in the requirements process, looked at what is the capability required, how do we get that, and then what platforms will accommodate it.

So in terms of bias, I would say it just didn't enter and still has not entered an argument.

Mr. TIAHRT. In terms of schedule, you know, the Navy has a militarized line going on for a heavy jet through the Multi-mission Maritime Aircraft (MMA) Program, and that is something that I think would expedite, help you buy some time on the schedule. Has that been measured between going down a line that is militarized versus taking a regional jet that is in a commercial facility, in another country?

Secretary BOLTON. What I have asked as part of the stop work order is that when the team comes back in, what the alternatives are. I am concerned about meeting the operation requirements. I am also concerned about, can I afford it, up-front and the outyears? And to your point, would it be cheaper to do it, as you have suggested? Is there another way of doing it? I don't know the answer to that until the team really comes in. I am not biased one way or the other.

Mr. LAUX. Mr. Congressman, if I could comment. The initial operational capability for the MMA is currently the year 2013. When we evaluated the ACS candidates last year, that was factored into the available options, if you will, of what could be considered, how much bang we would get for the buck, as Secretary Bolton points out.

Given where we are now, we certainly expect to work with the Army in reevaluating all the options, and we expect the MMA will be revisited as a potential candidate.

Mr. TIAHRT. Thank you, Mr. Chairman.

Mr. WELDON. I thank the gentleman.

The gentleman from Maryland, Mr. Ruppersberger.

Mr. RUPPERSBERGER. Thank you, Mr. Chairman.

First, I am not a rocket scientist either. Now, we have Rush Holt is a rocket scientist, Todd Tiahrt is an engineer and Heather Wilson was in the Air Force, so I guess you have some expertise.

I want to break this down into common sense and from what I understand, like the way Mr. Abercrombie wanted to do. What I see is the issue here that you had two different contractors. One contractor, I believe it was Northrop Grumman, their platform was Gulfstream, which their statements are basically that, "We would have been able to handle all of the expansion and whatever you needed if you would have gone with our platform." However, theirs was more expensive. Then the Lockheed Martin was a cheaper platform.

Now, one of the things that I heard through the whole process, and I am not taking either side here, we just want end game, is that during the process and past history that the Army has a reputation for going on the cheap. That is good sometimes, that is bad sometimes. It is bad when it doesn't work.

Now, based on the fact that if you were a betting man, you would have bet who would have gotten that contract, it was going to be

Lockheed Martin because their program was cheaper. And now looking back, the fact that we are where we are now, that when Lockheed got the contract and now you have to stop it, that means that we are way far behind, and we are probably going to have to spend more in the long run.

So I am interested—and I am just making a statement, I am not going to ask you to answer this question—to make sure that when the Army evaluates in their acquisition they look at all the relevant factors and the analysis to make sure that we do it right.

Now, let me get this in specifics. One logical question is that when the problems with the RJ145, the Lockheed chosen platform—when should they have been identified? Are you familiar with Edward Bair, he is the PEO? Now, he made a statement, it is my understanding, that he saw the problem with the RJ145 that the modeling tools used by the Army and Lockheed underestimated the weight of cables, harness and the cooling required onboard the aircraft by nearly 50 percent. Do you agree with that or not?

Secretary BOLTON. Mr. Bair works for me, so I know him very well.

Mr. RUPPERSBERGER. Do you agree with that comment?

Secretary BOLTON. What he is referring to are, as the chairman mentioned in the opening, the parametrics. Industry standards, not Army standards, not DOD standards, were used. When we got into this, we found that industry standards no longer apply. We are changing industry standards, and so that model does not work for this type of work, and it wouldn't work for the industry.

With regard to the other competitor, the other competitor failed out not because they are more expensive, because their aircraft couldn't carry the weight during the source selection. Couldn't carry the weight. And that is how they were debriefed.

Mr. RUPPERSBERGER. Okay. I am not taking sides here.

Secretary BOLTON. I understand. I just want to make sure——

Mr. RUPPERSBERGER. I do want to point out, though, as it relates to that, that it is my understanding that Israel has gone with the Gulfstream and that they are going through the process and it is going pretty well right now. Are you familiar with their——

Secretary BOLTON. Not familiar with their program. I am familiar with mine. I am familiar with the weight that we have. That Gulfstream cannot carry it, period.

Mr. RUPPERSBERGER. Okay. Now, if that is the case, whatever. Now, the issue of—or the implication that Lockheed's chosen jet didn't have a lot of extra capacity and at the Army's request to add two more stations and lengthen endurance, didn't this make the choice of that platform questionable?

Secretary BOLTON. No. What we debriefed to that team and what was debriefed to me was that on the day of the award we had about 3,000 pounds, according to the contractor, margin. Our estimate was that it was less than that but still doable to fly the mission, fly with the weight and so forth. So on the day of the contract award, we had margin. But realizing that was a watch area, we requested that the contractor respond on a monthly basis on that margin.

Mr. RUPPERSBERGER. After they responded, it is my understanding that they only proposed minor modifications, leaving them al-

most no wiggle room for eventualities like Bair's statement. Why might that be?

Secretary BOLTON. Well, I am not sure I understand that part of the question.

Mr. RUPPERSBERGER. Let me get to the question again. Lockheed, even after these issues were there, only proposed minor modifications. Now, that didn't give them the ability to expand, which is where you wanted them to, which is why the program is stop now. Do you see that as the case?

Secretary BOLTON. I still don't understand but let me see if I can put this in perspective. On the day of the contract award, we were looking at an aircraft that met all of the operational requirements—all of them. There were no requirements that caused us to add anything to the aircraft.

As you got into the detail design review and the technical requirements and realizing that the model that we were using, the industry standard no longer applied, the cabling is going up by 50 percent, or the fact that the aircraft now has to be stressed to 16 Gs, which is not normal for any aircraft, Gulfstream or anybody else. They are normally 9 Gs, that is the FAA standard. That drove the weight up. Those are all things that we discovered as we took those operational requirements and broke them into——

Mr. RUPPERSBERGER. Let me ask you this: Where do we go now? I mean, we need this.

Secretary BOLTON. Absolutely. Absolutely.

Mr. RUPPERSBERGER. In general, would you admit we do need this capability?

Secretary BOLTON. Yes, sir.

Mr. RUPPERSBERGER. Where do we go now? Do we go with a new platform? I mean, where is the next move?

Secretary BOLTON. The move is ongoing right now, as we speak. As you know, I have a stop work for 90 days. At the 60-day point, the contractor, the prime, comes back to me and tells me what the alternatives are—platforms, meeting the requirements, cost schedule performance. And I am waiting for that.

Mr. RUPPERSBERGER. But based on your expertise or anybody else on the panel, do you feel that in order to do what we need to do, we need to go to another platform that can handle this?

My time is up, Mr. Chairman? Oh, okay.

Secretary BOLTON. There is a high likelihood of that, but as to which platform, I do not know.

Mr. RUPPERSBERGER. But then if we do go to another platform, how far behind does that put us, and how much more money is that going to cost? A lot more?

Secretary BOLTON. I don't know the answer to that. It will be more time, and it will be more money, but I don't know.

Mr. RUPPERSBERGER. Well, what I am asking, and, again, I am not on Armed Services, I am on the Intelligence Committee——

Secretary BOLTON. Yes, sir.

Mr. RUPPERSBERGER [continuing]. I am asking that there be an evaluation of this whole process to find out why we are where we are now, why we didn't anticipate that, do we have the proper expertise who is there to put together the program that was necessary? When the contract was there, we had to stop at 90 days.

So we can't continue to make these mistakes. I mean, we need intelligence, and we need these capabilities. So I really hope that there would be an evaluation of this, where we go. In the meantime, we need to focus.

I have one question that is entirely different from this, I have to get this out. This is a staff question.

Mr. WELDON. Will the gentleman yield before he asks his final question?

Mr. RUPPERSBERGER. Yes.

Mr. WELDON. Would you at some point in time explain why the change was made from the requirement of 9 Gs to 16 Gs?

Secretary BOLTON. Yes, sir. The original interpretation by all the design teams was that when the 16 Gs was put in there, it was for the seat, for the survivability of the crew members, and that is understandable. When we got into the design and asking the question again, it was, "No, 16 Gs for the entire aircraft because we have racks in there and we have other things hanging in the aircraft. And if we can beef those up so that if we do have a crash, we won't have projectiles flying around and injuring the crew."

Okay. Well, that is no longer standard for any commercial aircraft, and that drove the weight up.

Mr. RUPPERSBERGER. Thank you. One of my concerns when I looked at this in the very beginning stage was that the other alternative, the Gulfstream, has a longer ability to stay in the air, which I thought from an efficiency point of view. Was that ever considered, the duration of the ability to stay up?

Secretary BOLTON. Quite frankly, we have a requirements to loiter for X number of hours. However, in this case, when we loaded the Gulfstream that was proposed, we essentially couldn't' fly the aircraft; we were beyond the structural limits. So you couldn't fly at all.

Mr. RUPPERSBERGER. Well, I understand that. I hope that we learned so we can move forward, and whatever we do, we do it quickly and we do it the right way. And, again, the reputation that I talked about, I haven't observed you enough to find out whether you do do it on the cheap. Sometimes it is good, sometimes it is bad, but you want to do it right.

Secretary BOLTON. Yes, sir.

Mr. RUPPERSBERGER. And you get what you pay for when we are dealing with this.

Secretary BOLTON. The emphasis is on doing it right.

Mr. RUPPERSBERGER. All right. Just one question, Mr. Chairman; I have to get this on record. It is no secret that Congress has concerns over transformation satellite communications to provide the bandwidth for future military communications. Does ACS depend on TSAT for its bandwidth to disseminate data collected on the platform? And if so, is DOD's plan to mitigate risk if TSAT fielding is delayed?

The House cut $40 million from TSAT in fiscal year 2006, and the Senate cut $250 million.

Secretary BOLTON. You want to take it? Go ahead.

General FAST. Thank you, sir. We are not dependent upon TSAT. We do have mitigation strategies in place. ACS was not designed initially to depend on that capability. There are other options that

are available to us, a combination of military as well as commercial options. We have a program that is in play right now, a multi-role tactical common data linkage, as you are aware, that should also help us mitigate any slippage or cessation in the other program. So we are not viewing that as being a showstopper for us for ACS in terms of communication.

Mr. LANDON. If I might add a little bit more to that comment. I agree with the general that ACS is not dependent on TSAT, but we are looking at the ability for these big collection programs, the sensor programs, to be able to bring that information and data back to the CONUS so we can process it. Gives us a smaller footprint in theater, allows us to do our processing back here and then forward the process data. And so the idea of being able to reach back is an extremely important part of our future programs.

Mr. WELDON. I thank the gentleman for his questions.

The gentleman from New York, Mr. McHugh, is recognized.

Mr. MCHUGH. Thank you, Mr. Chairman. As a 13-year member of the Armed Services Committee, it is a new experience for me to be in this room with a number of the Intelligence Committee where I have standing today. So if I seem confused, it is not just the complexity of this issue, it is the dual hat situation which I am in.

Most of the questions that I had have been asked. I am not sure they have been answered or certainly answered in the way in which I have come to grips with this, but let me just pull a point or two from various places.

Mr. Secretary, did I understand you to say that the 16 Gs standard was something of a surprise and that added to the cost?

Secretary BOLTON. Well, surprise from the standpoint of it is for the entire aircraft, not just the seats in the aircraft.

Mr. MCHUGH. But don't we have platforms up there right now, the RC–135, the EP–3 and others, that are at 16 Gs crash standard? I mean, it is a military standard, is it not? I am surprised why apparently you all were surprised.

Secretary BOLTON. Well, remember that the going in position was use a Commercial of the Shelf (COTS) aircraft, which meant a commercial aircraft. That is not standard for commercial aircraft.

Mr. MCHUGH. But I am confused, who should have known that? Who should have understood that going into the contract phase that you obviously had a commercial platform picked by the contractor that couldn't meet a standard that the military was going to impose upon it?

Secretary BOLTON. Well, if you are the contractor and I will tell you I am going to use a COTS aircraft, FAA-approved aircraft, and I want 16 Gs in, what would you assume? FAA doesn't do 16 Gs.

Mr. MCHUGH. Well, but then you weren't clear enough. Can we agree on that?

Secretary BOLTON. Absolutely. I agree with that.

Mr. MCHUGH. Well, in that regard, let me read something, a quote here, from the Army program executive officer responsible for the ACS. He stated, "In hindsight, the Army should have done more detailed design work before awarding the SDD contract to understand the implications of the airframe medications essential to accommodate power cooling and cabling for these size payloads."

Would you agree with that?

Secretary BOLTON. He and I discussed that, and the reference on there is absolutely right: hindsight, 20/20 hindsight. Perfectly agree with it. But given——

Mr. MCHUGH. You and I just agreed upon the fact that the Army perhaps wasn't as clear as they should have been on 16 Gs. What parts of this challenge that we are facing right now were inexplicably brought upon you?

Secretary BOLTON. Well, I would go back in terms of a solution, because there are a number of area, whether you talk 16 Gs, whether you talk about the cabling and a number of others. I think if you sit down at a phase before this with at least three of the five or six communities talking and really going from the operational requirements—and please don't get me wrong, I am not challenging the operation requirements. They are what they are, and the operators need that.

What I am saying is we need to do a little bit more work in understanding what those mean from a technical requirement standpoint. And the only way you do that is to do more detailed work up-front with people who understand how to do that. And in order for those people to understand it, they all need to be trained with the right tools and have experience. We haven't done that for at least two of those communities.

So it doesn't surprise me on programs like this that are very complex that you have misunderstandings. And my push, at least for the Army, is to stop that by making sure that our requirements community—and you can begin to see that down in Fort Monroe in our Futures Center—have acquisition types in there with the requirement types, that they get some education and training as to how to talk to one another so we don't have these misunderstandings.

Mr. MCHUGH. Well, I sure agree with that. I think you would agree, based on your comments a few moments earlier, I believe it was to Mr. Ruppersberger, that you probably—and I don't want to prejudice this—but you are probably going to have to change platforms. That is a big misunderstanding on a design award like this. So we have got to start being very, very clear whether you are talking about 16 Gs or cabling size or whatever. It is a terrible situation.

And let me say for the record, I am not attacking you in any way on your action on the stop work. I don't see what else you could have possibly done, and I commend you for that. And as you noted earlier, perhaps under previous systems it would have taken many more months, maybe years, but it is still a huge problem.

Let me ask you: What is the project termination cost? Have you had a chance to look at that?

Secretary BOLTON. Yes. I would hesitate to give you a cost, not that I don't have one. And here is why: If I have to terminate this contract—I am not terminating the requirement, that stands, but this contracted effort—the letter that I sent out asks for a proposal from the contractor. And if I give you what I think it is, I think that contractor would put me in an interesting position when I start negotiating what the costs ought to be. But I do have a handle on what it should be.

Mr. MCHUGH. Well, maybe we can talk offline.

Secretary BOLTON. Yes, sir, we can do that.

Mr. MCHUGH. You got me on that one. I don't disagree with that. Probably flashes back on my second question as to what the contractor liability is here, if at all, in terms of——

Secretary BOLTON. We go along the same lines; yes, sir.

Mr. MCHUGH. See above? Okay.

Secretary BOLTON. Yes, sir.

Mr. MCHUGH. Thank you, Mr. Chairman. I yield back.

Mr. WELDON. Thank the gentleman for his questions.

The gentleman from New Jersey, Mr. Holt.

Mr. HOLT. Thank you, Mr. Chairman. Although it is an honor to sit up here on the upper tier in the Armed Services Committee, I must say, I don't envy you if you have to put up with this sort of acquisition stuff frequently.

I am astonished that it is written here how the electronics package would be fitted into the airframe was deferred until after the contract was awarded, that the design was not frozen, continued to add requirements, evidently: Flight duration, number of black boxes, number of workstations, number of crew, acceleration standard. Those are some pretty basic things that should be in place before the contract is awarded, it seems to me.

And then when the test and evaluation (T&E) folks raise these serious questions, it takes, by my calculation, 21 months before a stop work order is issued.

Have you seen this sort of thing before, Mr. Chairman? Well, maybe we ought to—maybe this is a job to call in Donald Trump or Martha Stewart.

Well, let me get to my question.

Mr. Laux, you called for a couple of tens of millions of dollars for Research, Development, Test and Evaluation (RDT&E) funds to conduct an analysis of alternatives, and I want to find out where we are going from here. This would be for EP–3 aircraft or successors. And in fact you go so far as to mention potential joint programs.

Now, I am a little surprised that given your experience here you would be talking about joint programs. As an outsider, as a layman, in theory, I find the idea of these joint programs attractive, but I wonder whether the jointness has provided any advantage here and whether in the future, for what we are going to do next, if we are concerned about creeping requirements and changing numbers of workstations and acceleration standards and so forth, whether that is improved, whether control over that sort of thing is improved with a joint program or not.

Mr. LAUX. Yes, sir. The reference to the joint program recognizes the fact that the ongoing Quadrennial Defense Review may in fact report out in this area with a recommendation along those lines. The suggestion that the service needs to pursue an analysis of alternatives is to address all the potential candidates, sort of relook at the playing field of what the ongoing programs and potential future programs could bring to bear in light of the hindsight that we have now with where the ACS is in terms of capability and affordability.

I would like to be clear that from our perspective, at least, the requirement has not been a moving target. How the contractor has

chosen to address the requirement has been, but the requirement has been set, certainly from the Navy's perspective, since we first started working with the Army in this area.

Mr. HOLT. If it had been more joint—I mean, I gather this is sort of, not truly a joint program. If it had been more joint, would you have been more on top of the contractor to prevent his creep, this mission creep, I mean, the design creep?

Mr. LAUX. The program is not yet joint in that the Navy has not formally signed up to the acquisition documentation and the review process, to that end. This was an Army program, it is an Army program. The Navy intends to join this program, and we have turned in the President's budget request to reflect that.

Mr. HOLT. All right. Thank you.

Well, let's see, turning back to Mr. Landon, as I understand it, the stop work really applies to everything here, even though the sensor work, the various packages on board, that work was going along all right. Doesn't it make sense to continue that work? Do I misunderstand? Has that been stopped also? If so, shouldn't that be allowed to continue so that you will be closer to your understanding of what to do if and when you have to change aircraft?

Mr. LANDON. Yes, sir. The stop work was issued by the Army, and so the conditions of the stop work—I think it would be better if Mr. Bolton commented on that particular aspect.

Mr. HOLT. Fine. Let's ask Mr. Bolton then.

Secretary BOLTON. Yes, sir. With regards to the black boxes and the avionics of it, no, I stopped everything. And the reason was if we don't understand the requirements well enough to go into the detailed work for the boxes, why I am doing stuff on the boxes? Until we really understand what is driving the design of those boxes——

Mr. HOLT. I think because you know what the requirements are for interceptions for video, for whatever sensors——

Secretary BOLTON. No, sir. No, sir. No.

Mr. HOLT [continuing]. And surveillance you will be doing.

Secretary BOLTON. No.

Mr. HOLT. I thought those requirements were pretty well set.

Secretary BOLTON. The operational requirements are set.

Mr. HOLT. The intelligence folks and others had set those requirements.

Secretary BOLTON. No, sir. No, sir. The operation requirements are set. The detailed electronic technical requirements are not. I understand what the operator wants, written that down, that hasn't changed. I am not into the detailed work of drawings, putting circuits together, running cables, and what we have found as we got into that is that we did not understand the requirement. Well, if I allow the boxes to continue today, I could wind up in several months with something that doesn't fit the requirements as I understand this better.

So my position was, everybody stop. You leave enough folks in there to figure out how we got here and what are good alternatives for the future, which will include all of the work, platform as well as the payloads.

General FAST. I just want to add something, sir, if that is all right.

Mr. HOLT. Please.

General FAST. As the secretary said, all options really are on the table, and everything is going to be examined. But that said, we know, at a minimum, we are going to have a slippage. In the meantime, as you have heard from our Navy colleagues and from us, we are asking for some ability to modernize the existing fleets that we have with our Guardrail Common Sensor and our Airborne Reconnaissance Low and the EP–3.

In that regard, many of the technologies that we will ask to have modernized are the same technologies that we have in the ACS Program. And so if we were to receive funding for this modernization, some of the benefits of the modernization could spill over, could spiral over into the ACS Program, so you wouldn't have, from a technology development standpoint, a total cessation of work.

Mr. HOLT. But the same people would be doing that work under a new contract or a modified contract; is that——

General FAST. Sir, I can't say that it will be the same people, but the technology would be developed.

Mr. HOLT. Right. That would be an option in terms of the contracting of it.

Mr. Chairman, I yield back my time with my sympathy. [Laughter.]

Mr. WELDON. We thank the gentleman.

Mr. HOLT. Thank you, sir.

Mr. WELDON. Welcome to reality, and we invite him back anytime to help us in the oversight of many programs where we have similar problems.

The distinguished gentleman from Texas, our financial wizard, is recognized for whatever time he might consume.

Mr. CONAWAY. Thank you, Mr. Chairman, appreciate that.

Gentlemen and lady, thank you all for coming this afternoon. Your previous answer may have answered my question.

Looking at the overall ACS Program, you expect to have certain, what I refer to as, choke points. One of those would be whether or not you get the airplane off the ground. We kind of beat that one to death today, and that would be a pretty significant choke point.

Looking at the rest of the system, do we have other equivalent, "Oh, good grief, how did we miss that kind of choke point in this system," and if that is the case, are we going to—and I hope the answer is yes—are you going to relook at the entire process to make sure that you have addressed those and that we are aware of. A year ago, whenever this was all going on, everybody said, "Look, the airplane we have picked only has 3,000 pounds of excess capacity." What is the total capacity or weight load of the aircraft? Is 3,000 pounds 10 percent, 20 percent extra?

Secretary BOLTON. It is probably less than 10 percent, closer to 5 percent.

Mr. CONAWAY. Okay. So we have got 5 percent tolerance on the weight, and we are all sort of, "Okay, do we go forward?" So the idea is that if you did come across other things that you don't really want to sit—by the way, thank you for your straightforward answers. Appreciate the straightforwardness of your answers, but are there other things in this overall ACS Program——

Secretary BOLTON. I have had the same thoughts.

Mr. CONAWAY [continuing]. That we will drag you back in and harass you again for?

Secretary BOLTON. Well, that is quite all right. I should be wire brushed. No, I ask the same question so that as the teams are working over the last month and this month, that question will be asked by me when the team comes back in. I look at this as one thing but are there other things that we need to be looking at that could cause a problem. Let's mitigate those things now rather than later. And I don't know what they are.

And I am also challenging some of the interpretation of the operational requirements, so we really understand if the operator really needs it, because it makes a difference on the battlefield. Fine. The operator is saying, "Well, that is what technology tells us we can get. Do we really want to pay for that?" So we will be looking at everything—everything.

Mr. CONAWAY. And one last final question: You have got a stop order on the entire project. Do you anticipate a full release of the entire stop or a staged——

Secretary BOLTON. It really depends on what the contractor comes in and gives me the middle of next month. It is a 90-day stop work. At the 60-day point, they come see me, and so in the middle of December we will make a decision, maybe earlier depending on what we get from the contractor. We had 360 people working it. We are down to 75 to do this work for me, and obviously I am concerned about that team, the folks who have been farmed out to other areas right now.

Mr. CONAWAY. All right.

Thank you, Mr. Chairman. Yield back.

Mr. WELDON. I thank the gentleman. We are going to do another round if members have questions. I just have one additional one, and we will put some in for the record, which we would ask you to answer.

Secretary Bolton, you have hit around this but I don't know whether you have actually directly answered it. I know the Navy has suggested it. Is it the Army's intent to accomplish another analysis of alternatives for the ACS mission or not?

Secretary BOLTON. It is not planned now, but I will raise that when I get back.

Mr. WELDON. Thank you.

Secretary BOLTON. Yes, sir.

Mr. WELDON. I will go to Mr. Abercrombie.

Mr. ABERCROMBIE. I am still having some difficulty with this. When I said to you before this seems to be contractor driven, do you recall?

Secretary BOLTON. Yes, sir.

Mr. ABERCROMBIE. But everything that has been said since then leads me to that same conclusion. Now, what I mean by that is, that if the platform, if the vehicle, if the frame, whatever the correct terminology is, is incapable of dealing with the requirements that are being sought, whether it is by the Navy, by addition or inclusion, another set of conditions that you think need to be met, if military standards, by definition, are different than commercial standards, one would think going back to what we have been trying to do here for a number of years here in the committee is where

you can find commercial products, or I think the phrase is, "off the shelf"——

Secretary BOLTON. Yes, sir.

Mr. ABERCROMBIE [continuing]. That can be successfully integrated with military requirements, so much the better. That is grand.

If you can take like with the—and we have seen stuff that increased in cost before—it slipped my mind now—the submarines, Advanced SEAL Delivery System (ASDS), that when you went from batteries and you had to change the actual mode of propulsion, well, the cost increased enormously. But we came up with the money for that because the people came back and said, "We are changing everything, and here is why we are changing it, and we would like you to back us up on this." And we did.

And they changed numbers of people as a result. You know, I am sure, from the Navy side. I am just drawing a parallel here. I am not trying to draw a comparison or an analogy, but I am drawing a parallel.

I think the committee is perfectly capable of dealing with significant design changes and significant vehicle modifications if it is required for something like a propulsion system that was thought to be adequate and turns out to be not only inadequate but actually irrelevant to what the mission now becomes and so on. So that is not a difficulty.

Here, though, particularly when you go over the transition from the early models to what we want to get to, I still cannot comprehend how the contractor is not in charge if you can see or I can see or Mr. Holt could see, Dutch could see that, "Wait a minute, you are not able to—how the hell are you going to take this commercial? How are you going to take this Dodge viper and turn it into a Bonneville salt flat sound barrier breaker?" They are both fast, they both look pretty slick and all that, but one's clearly not built to do that for the kind of speed required.

So, all right, I will have to accept the fact that you are going through all this now and you are saying, "Well, if we only knew now what we knew then." Well, I still don't understand why you didn't know then what you know now.

But accepting that for the moment for our discussion's sake, the contractor can't do this with the frame or the vehicle, at least this is my understanding. Now, there are liability implications, I presume; maybe, maybe not. What we need to find out here, do you get to say to the contractor right now then, "You guys said you could do something. You can't do it. We are getting shut of this."

Secretary BOLTON. I haven't said that yet.

Mr. ABERCROMBIE. That is not what I asked. Can you?

Secretary BOLTON. I could, yes.

Mr. ABERCROMBIE. Okay. And that is tough to the contractor.

Secretary BOLTON. It is tough, but I have done it on some of the other programs.

Mr. ABERCROMBIE. Okay. Then I remember that too. So there is a time sensitivity here.

Secretary BOLTON. Yes, sir.

Mr. ABERCROMBIE. And if that needs to be done, then do it, is my view. If it needs to be done, then do it. Let's not draw this out and prolong the agony.

Secretary BOLTON. Right. Right.

Mr. ABERCROMBIE. Now, there will be a dollar consequence to that, I understand that. The sooner we know that, the better off we are going to be.

Now, if you make the change, and my guess is you are going to have to make this change, I am still not clear and I still think the chairman needs to get answer, both chairmen need to get answers here on, if there needed to be a change, why it wasn't brought to our attention.

I know both of these folks. I know Chairman Weldon better than Chairman Wilson, but I know both of them from my experience on the committee. You are not going to shock them by coming to say to them, "You know, I think we have got to go in another direction. We can't make what we wanted to do, and here is what we think needs to be done." I think what upset them as well as other members is when we have to drag it out of the DOD or constituent parts because, as you put it, some people look at this as a failure.

Now, my understanding of the scientific method is, is that you do experimentation and replication and duplication to find out whether you can do it. And when you find out you can't, that is not a failure, that is a trial, because you are not wasting time, you are not going off on a direction, you are not alchemists, right?

Secretary BOLTON. True.

Mr. ABERCROMBIE. You are not trying to get gold out of—whatever the classic alchemy is, I guess, gold out of whatever the hell you get it out of.

Secretary BOLTON. Lead.

Mr. ABERCROMBIE. Lead, yes. So that is not going to be seen—certainly by this member it is not going to be seen as a failure. Failure to me is when you don't acknowledge the reality and don't bring it to our attention, because we are dependent on your professionalism, we are dependent on your evaluations of things. And if we have to find out about it by default, then that is failure, in my judgment.

Secretary BOLTON. Right.

Mr. ABERCROMBIE. So my point here and my question now then is, is it possible for—will there be a significant cost increase, and do we have to go to another platform entirely? I expect the answer is, yes.

Secretary BOLTON. The answer is, yes. I don't know how much nor how significant.

Mr. ABERCROMBIE. Okay. So the schedule is bound to slip, right?

Secretary BOLTON. It has already slipped.

Mr. ABERCROMBIE. That is right. Bound to slip further, I should have said.

Secretary BOLTON. Yes, sir.

Mr. ABERCROMBIE. Well, then don't you think that you have to come to a determination as quickly as possible and get that to us?

Secretary BOLTON. Absolutely.

Mr. ABERCROMBIE. Okay.

Thank you, Mr. Chairman.

Secretary BOLTON. But in order to do that, Mr. Abercrombie, I really do need this team to come back to me. They are the ones who are going off and answering in detail all the questions and the other members, and particularly the chairman, on what are the alternatives. And this contractor is not stuck with that platform. He has already gone out to other contractors and other platforms. I have asked him to do that. He is looking at all platforms.

Mr. ABERCROMBIE. Okay. I have got to quit now, because I still don't understand why the hell that wasn't done in the first place.

Secretary BOLTON. When you say, "first place," sir, I am not sure what that means.

Mr. ABERCROMBIE. Okay. Well, we can go at that another time.

Secretary BOLTON. Okay.

Mr. ABERCROMBIE. I have used up my time. Thank you.

Mr. WELDON. The gentleman has as much time as he would like, as he knows.

The gentlelady is recognized, the chairwoman.

Mrs. WILSON. Thank you, Mr. Chairman. I yield my time to the gentleman from Kansas.

Mr. TIAHRT. I thank the gentlewoman.

A requirement is a snapshot in time, and we are looking at something that is going to be around for a long time—20 years you said. If you look at the KC–135, it has been around since Eisenhower.

Secretary BOLTON. Yes.

Mr. TIAHRT. And so it has been a long time. This is a Blackberry, and if you look 10 years ago, we wouldn't have realized that a threat could be a data stream coming through our phone lines. We have got future threats out there that are going to drive additional requirements. And I think that is something that I heard earlier, that the requirements weren't established. Well, it is always nice to have requirements firm when you buy a program, but when you are looking at the mission that this aircraft, this airframe has, this is not a stable requirements baseline because of things like this. And we don't know what we don't know on requirements.

So my point is, we are going to have to have some room in this airframe because there are other threats out there. And that is on the front end of it. But on the back end, you have got more and more people that you are going to be feeding this stuff to, and this room wouldn't hold them all. And they will need it, and they are going to send it to other people that really need it.

So I just think that to think that we don't have an established baseline, I think we need to have some room in here, be smart about this, so that we can have growth in the future.

Now, the schedule I have here says that the plan was to have an First Unit Equipped (FUE) or an Initial Operational Capability (IOC) in about the middle of 2010.

And, Mr. Laux, I think you may—or maybe it was the admiral, talked about the MMA would be available in 2013?

Mr. LAUX. Yes.

Mr. TIAHRT. You know, they have got a move rate for the 737 about every day. They move from one jig to the next jig every day. That means they pump out about 21 to 25 of these airplanes every month. There is a firing order and to get slotted in there for a firing order or put it in on this production line, it is already milita-

rized, great advantage, I think you can save schedule. And we keep talking about moving the schedule to the right. If the tent pole is the Lowest Replaceable Units (LRUs), the black boxes, then that is one thing, but if it is an airframe, you can gain time by getting into an existing line that already is militarized.

Now, Mr. Laux, you mentioned a couple of times in your testimony that was submitted for the record that this program should be evaluated from a joint con-ops and a potential joint platform alternatives. So I am convinced that you believe that, but would you tell me why you had that in your testimony?

Mr. LAUX. Yes, sir. We are aware that the Quadrennial Defense Review that is going on right now is likely to address this entire intelligence collection area. We are trying to position ourselves to open up new dialogue with the Air Force and with the Army, with the benefit of the hindsight and the knowledge of where we are in this program and other needs that can be addressed that we expect to be the topic in the QDR.

Mr. TIAHRT. Well, does the Navy have a backup plan? Is the MMA a backup plan or is lengthening out the EP–3's service time, do you have a backup plan for this or is this—we are going to go forward with this set of requirements for this mission? Is there a backup plan?

Mr. LAUX. Admiral Clingan.

Admiral CLINGAN. Congressman, we do in fact have a backup plan. We have a bridge plan to take the EP–3 and sustain it. The circumstances we find ourselves in now causes us to look at sustaining it through 2017 now, or so.

In regard to the way forward, we are looking with interest, of course, as to how the contractor comes back and provides solutions or options in regard to making our way through the briar patch that currently faces the ACS. And as Mr. Laux has indicated, because those challenges have had cost and schedule implications, it opens the door, thoughtfully, for us to do an analysis of alternatives, which would embrace other platforms, as you have suggested.

So we are looking to sustain the EP–3 and to go forward with open eyes in regards to what acquisition program will in fact meet our operational requirements.

Mr. TIAHRT. Well, I hope there is some expediency here, because these airframes as they age, there is more risk to the crews. And, you know, going back to the tanker, I mean, the average age there is about 45. I don't know any of us that come to work in a 1960 automobile, but if you did and it broke down, you could pull over to the side of the road. When you have got an EP–3 that breaks down, it has only got one place to go and the forces of nature take over.

So I am very concerned about this, and I think that the idea of having existing production lines that can help compress the schedule can save costs, because every year, inflation every year adds to costs, and if you back this far enough to the right, 2013, 2017, that all adds to the cost as well. So I want to be careful that we are not penny wise and pound foolish.

And this fence of time that we look through, we are looking through one knothole now. But we need to step back and see what

other knotholes are there that we should be looking through. And I want to plead with you to be—let's be dollar-wise here as well.

Thank you, Mr. Chairman.

Mr. WELDON. Thank the gentleman.

The gentleman from Maryland is recognized. Do you have a question?

The gentleman from Texas?

Does the gentlelady have any questions?

Mrs. WILSON. Mr. Chairman, I have two questions to submit for the record.

Mr. WELDON. Without objection.

I want to thank all of our—does the gentleman, Mr. Abercrombie, have any questions?

I want to thank you all for your appearance today, and, again, I hope you take our questions in the spirit in which they are intended.

Secretary BOLTON. Yes.

Mr. WELDON. This committee has been as supportive as any committee in the Congress for our military. We have gone to the wall, sometimes at odds with our own President and with the leadership over at the Pentagon to give you more than what is requested, whether it is up-armoring Humvees or whether it is additional personal protection for the troops or additional manpower and end strength.

We will continue to do that, but we also have a fiduciary responsibility to the taxpayer, and that requires us to play the oversight role and ask the tough questions. And this is not a good news story right now.

You have heard the Intelligence Committee basically say that we need this capability yesterday. We are not going to have it yesterday. We are not even going to have it tomorrow. It is now going to be pushed out. That is a bad news story that we have to understand what our options are now to move forward.

And, Secretary, and all of you, we don't question your own abilities but we do seriously question where we are going so that this program can be put back on track and in the end give our troops the capabilities that we need in the 21st century.

So we will provide additional questions for the record. Thank you for your appearance and thank you for the service to the country.

The hearing stands adjourned.

[Whereupon, at 5:45 p.m., the subcommittees were adjourned.]

A P P E N D I X

October 20, 2005

PREPARED STATEMENTS SUBMITTED FOR THE RECORD

OCTOBER 20, 2005

HOUSE ARMED SERVICES SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES
CURT WELDON, PENNSYLVANIA
CHAIRMAN

PRESS RELEASE

For Immediate Release:
October 20, 2005

Contact: Josh Holly (HASC), 202-225-2539 or
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Opening Statement of Chairman Curt Weldon

Joint Hearing with Technical and Tactical Intelligence Subcommittee of the Permanent Select Committee on Intelligence

Aerial Common Sensor Program

WASHINGTON, D.C. – This afternoon the Tactical Air and Land Forces Subcommittee has the pleasure of meeting in a joint session with the Technical and Tactical Intelligence Subcommittee of the Permanent Select Committee on Intelligence to receive testimony on the Army and Navy's Aerial Common Sensor Program. This is a program the Subcommittee has been following for some time. I had asked the Government Accountability Office for a report on ACS and they reported back to us in September of 2004.

The ACS program was initiated as an attempt to upgrade and consolidate the capabilities of three current intelligence collection aircraft types of the Army and Navy: the Army's Guardrail Common Sensor and Airborne Reconnaissance Low programs and the Navy's EP-3.

The program was approved for entry into Systems Development and Demonstration, or S-D-D in July 2004. In August 2004 the Lockheed Martin-Embraer team was awarded an $879 million, five year contract to develop electronics and sensors to be carried on a militarized version of the Embraer 145 regional jet aircraft. Total acquisition cost for the 38 aircraft Army program was estimated to be $8 billion for 38 aircraft. Although the Navy was not a signatory to the Acquisition Decision Memorandum, the Navy budgeted for the program in FY 06 with an intended eventual procurement of 19 aircraft.

In the spring of this year it became apparent that weight growth in the mission package would cause the ACS to fall short in meeting its requirements. In September, Lockheed Martin was issued a stop work order, halting all work on ACS. Lockheed Martin was given 60 days to develop an alternative plan for the ACS program. The Army has recently stated that there is now a potential for a two year delay in fielding the ACS platform and that the development cost could double to $1.8 billion.

In comparison to other much larger, complex programs, ACS could have been characterized as a low to medium risk program based on declared technology readiness levels when entering SDD. Yet less

- more -

than a year into the program we are at stop work, with all the attendant costs and schedule ramifications. And with many engineers having been reassigned to other programs, difficult to predict negative impacts to the program are highly probable due to discontinuity in the design teams, if the program is restarted.

Delay or cancellation of ACS has significant negative implications for Army and Navy intelligence, surveillance and reconnaissance program capabilities. There are potentially similar implications for other acquisition programs if this management failure is indicative of shortcomings in the acquisition system as a whole.

Our understanding is that the ACS problem was largely driven by something as simple as a significant underestimation of connecting cables and racks for the mission equipment, due to quote: "bad parametrics," end quote. We also understand that a $4 million dollar cut in risk reduction on integration tasks to quote: "save money," end quote, potentially contributed to this $800 million dollar, two year slip to the program. Further, it isn't like the present ACS circumstance comes as a total surprise. The January 2004 Director, Operational Test and Evaluation Report stated the following: "There are concerns about the size, weight, and power requirements of the aircraft required to carry and operate the multi-intelligence sensor payload. Associated with this issue, there are concerns about the growth potential of the aircraft to add additional systems and capabilities in the future, consistent with the growth experienced with most other U.S. aircraft platforms."

This is not a new story. The Joint Strike Fighter went through a restructure, with the development cost increasing from $26 billion to over $40 billion and adding over a year to the program, largely due to weight problems of fasteners, and also largely driven by quote: "bad parametric estimates" end quote. If the ACS history is symptomatic of larger acquisition system shortcomings, this also has potentially far greater negative implications for more complex programs like the Future Combat Systems program.

There is no question that we need to shorten the acquisition cycle, but we should not be rushing into SDD without technology and integration tasks being demonstrated in a relevant environment. DOD has its 5000 series acquisition regulations. No one is saying that we should not have flexibility in enforcement of the regulations, but OSD seems to too often default to waiving the regulations. As an example, the Future Combat Systems program was allowed to enter SDD long before technologies had matured. And the requirement for an independent cost estimate has yet to be met. The program was restructured again last November and we are being told that we won't get an answer on program price until well into 2006.

We have invited our witnesses here today to discuss these issues. We want to know how we got to where we are on ACS, what lessons have been learned, and determine what is being done to determine the proper path forward, for the benefit of this program as well as other programs.

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Congresswoman Heather Wilson
Chair, Technical and Tactical Intelligence Subcommittee
House Permanent Select Committee on Intelligence

Opening Statement

Aerial Common Sensor

October 20, 2005

- Good afternoon and thank you for agreeing to appear today.
- On the Intelligence Committee, most of the programs we oversee are classified, and our questions take place behind closed doors.
- I wish the problems being faced by the Aerial Common Sensor were unique. But they are not.
- The program we are here to review today is just one example of continued problems with the way we buy complicated systems for defense and intelligence.
- We need to upgrade and replace the Army and Navy aircraft that watch and listen to potential and real enemies. They're old and not up to the demands of twenty first century warfare.
- But because we didn't do a good job in setting the requirements, getting different agencies on board early, and developing an acquisition strategy that reduces risk, we won't have the new planes when we want them and it will cost us more to get them.
- While all of us are concerned about what the Army and Navy should do meet this requirement, our committee is even more concerned about bigger issues of which ACS is only symptomatic.
- First, what does this experience tell us about how we need to change the way we buy big systems?

- The outside review requested by the Army and done by the Navy after the stop work concluded that:
  - ✓ The RDT and E costs would be twice as high as projected
  - ✓ The schedule was un-executable
  - ✓ The program might not meet Army/Navy requirements
  - ✓ The government and contractor personnel lacked experience on a project of this size, and
  - ✓ The flight test program was ill-defined

- Second, what does this experience tell us about the need to coordinate and plan across stove pipes as we decide what we need to build for intelligence, surveillance and reconnaissance?

  - The Navy joined this project late
  - The Air Force is replacing JSTARS
  - Did we have an architecture and a clear definition of roles and requirements? It doesn't look like it
  - How can the services work together to divide up roles and missions or make sure we plan together so that we get the capability we need at a price we can afford.

- I look forward to the testimony today as we look for answers to these questions.

RECORD VERSION

STATEMENT BY

MR. JOHN R. LANDON

BEFORE THE

U.S. HOUSE OF REPRESENTATIVES

SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES

COMMITTEE ON ARMED SERVICES

AND THE

SUBCOMMITTEE ON TECHNICAL AND TACTICAL INTELLIGENCE

PERMANENT SELECT COMMITTEE ON INTELLIGENCE

ON THE

AERIAL COMMON SENSOR PROGRAM

October 20, 2005

NOT FOR PUBLICATION
UNTIL RELEASED BY THE
HOUSE COMMITTEE ON ARMED SERVICES AND
HOUSE PERMANENT SELECT COMMITTEE ON INTELLIGENCE

Chairman Weldon, Chairwoman Wilson, distinguished members of the two Subcommittees, thank you for this opportunity to speak to you about the Aerial Common Sensor (ACS) program. I am John Landon, Deputy to the Assistant Secretary of Defense (Networks and Information Integration) for Command and Control, Communications, Intelligence, Reconnaissance and Surveillance, and Information Technology Acquisition. I am here today representing Mr. Ken Krieg, the Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L)) and the Milestone Decision Authority for ACS. He is traveling overseas on official business and unable to attend this important hearing.

The Aerial Common Sensor program is designated a Major Defense Acquisition Program (MDAP) in accordance with Title 10 USC, and my office oversees the acquisition activities of the program in accordance with the Department's acquisition regulations in support of Mr. Krieg. In the case of ACS, I also work closely with the office of the Under Secretary of Defense for Intelligence to ensure the system is delivering the desired capability.

The Department's acquisition regulations are designed to provide a structured process through which validated capabilities are acquired, starting with early concept exploration activities, continuing through development and demonstration, and leading to a decision to produce and fully deploy the capability. My involvement in these programs is to ensure the mandates of statute and regulation are adhered to, and the programs are on a success-oriented track as they enter the system development and design phase. My office also measures the progress that programs are making as they

advance through the phases of the acquisition life cycle, with special attention to the program's achievement of its performance, schedule, and cost goals.

I also serve as the Leader of the Overarching Integrated Product Team (OIPT), a group responsible for ensuring programs in the acquisition process have satisfied the necessary criteria for entering the next phase of acquisition. For a number of years, the Department has used the Integrated Product Team approach as a process for reviewing its acquisition programs. The group I lead, as well as the supporting groups, consist of subject matter experts from across the Office of the Secretary of Defense (OSD) and the Services. These experts bring their considerable knowledge and experience to the table as we review the multiple facets of today's acquisition programs. Our OIPT members include representatives from all parts of the Department. For example, the Joint Staff provides advice on requirements; the Defense Procurement Office assists the program office in development of the acquisition strategy; and the Program Analysis and Evaluation office is key to the development of alternatives analysis and accurate program cost estimates. Other key representatives are the Office of the Director for Operational Test and Evaluation; the Defense Research and Engineering office; the Comptroller; the Chief Information Officer; Logistics and Materiel Readiness; and the General Counsel.

Once a program completes the review process, we present the findings to the USD(AT&L) and his advisors and offer a recommendation as to whether the program is ready to proceed. With regard to ACS, we followed the process I've described above and collectively concluded that the program was ready to enter the system

development and demonstration phase. The results were presented to the USD(AT&L) and his advisors during a Defense Acquisition Board and, on July 29, 2004, he approved entry into this phase of development. The decision was forwarded to the Secretary of the Army and source selection and contract award was completed by the Department of the Army.

With that said, I am here to answer any questions you may have. If I am unable to provide a concise answer today, I will respond to you as soon as possible with an answer for the record.

Intelligence, Surveillance, and Reconnaissance in the National Security Strategy

We are facing a turbulent and volatile world populated by a number of highly adaptive adversaries. These enemies depend on the stealth afforded them through the exploitation of illicit networks and the sanctuary of ungoverned territories to survive. Their style of warfare is transient and unpredictable, demanding that the United States and our allies rely heavily on intelligence to anticipate and deter enemy action.

The Department of Defense National Security Strategy outlines an approach to dealing with the diverse, unconventional set of global security challenges in the 21st Century. The Strategy highlights the importance of transforming the United States (U.S.) military to ensure the U.S. has the capabilities to deter attacks, secure strategic access, and retain global freedom of action. This emphasis on transformation includes redefining how the Department develops and deploys its Intelligence, Surveillance,

and Reconnaissance (ISR) capabilities, based on the premise that the U.S. cannot influence what it cannot reach, see, or hear.

The Tactical Air and Land Forces Subcommittee of the House Committee on Armed Forces requested the Department address the concept of operations, mission description and force structure of current major National and DoD systems, their capabilities, enabling systems and follow-on replacement systems; and the DoD criteria for determining requirements and productivity of intelligence collection programs. These topics are addressed in the Department's ISR Integration Roadmap. To support the implementation of an integrated ISR capability, and in accordance with the FY 2004 Defense Authorization Act, the Under Secretary of Defense for Intelligence (USD(I)) has established an ISR Integration Council and published a Defense ISR Integration Roadmap.

The ISR Integration Council serves as the Department's senior deliberative body for intelligence issues. It provides a forum through which the sponsors of ISR capabilities for the Services and Agencies can routinely interact to preclude unnecessary duplication of effort. The council has met eleven times this year, reviewing Service and Agency Program Objectives Memorandums (POM), addressing cross-community issues, and exploring the implications of transformation on intelligence support. The Council's scope includes all issues necessary to assist the Under Secretary in establishing the Department's overall direction for ISR capabilities and identifying and advocating the capabilities required for ISR transformation.

The ISR Integration Roadmap is a guide for transforming ISR capabilities. It

articulates the Department's vision and strategic objectives for transforming ISR capabilities and provides an approach for implementing a DoD ISR Enterprise. The ISR Enterprise will provide a federation of capabilities that, when integrated, offer U.S. military forces the joint capabilities necessary to meet future challenges.

The roadmap defines how and when the Department intends to develop, procure, and deploy transformational capabilities and how it will function as a joint enterprise that is responsive to strategic, operational, and tactical requirements anywhere, day or night. The intent of the ISR Integration Roadmap is to represent the architectural foundation that will provide warfighters unfettered access to intelligence information from a set of highly capable and accessible assets.

The ISR Integration Roadmap directly links to the goals for transforming Defense intelligence, provides an overview of the ISR integration activities of the Military Departments and DoD intelligence agencies, and develops a balanced DoD ISR investment strategy.

In order to meet the intelligence needs of decision-makers from the highest levels of command to the individual soldier, sailor, airman, and marine, as well as, the needs of other Departments and Agencies, the Department recognizes that it must use a diverse set of intelligence assets (collection, processing, and analytical elements) operating across the full spectrum of crises and conflict. The Under Secretary of Defense for Intelligence has articulated the overall Defense Intelligence goals. The intent of these goals is to have Defense Intelligence provide:

- Universal situational awareness

- Reliable strategic warning
- Agile and adaptable intelligence collection and analysis
- Support to our national strategy of forward deterrence and agility
- A capability that enables effects-based operations by our military forces
- Assurance that knowledgeable adversaries do not compromise U.S. secrets

To achieve these intelligence goals, the Department has established six strategic objectives for the ISR capabilities that establish the foundation for our Defense Intelligence capabilities. Achieving these objectives will give us the tools and resources necessary to realize the Defense Intelligence goals. These strategic objectives are:

- Converge and recapitalize DoD's ISR capabilities
- Attain global persistent surveillance
- Achieve horizontal integration of all intelligence information
- Capitalize on a collaborative net-centric distributed operations (collection, exploitation and analysis) infrastructure
- Transform ISR management capability
- Operationalize intelligence

I will address each of these objectives separately.

Converge and recapitalize DOD's ISR capabilities

The Department's ISR collection capabilities provide the source data upon which the Defense ISR Enterprise is built. The Department needs to replace today's aging collection systems in order to maintain that base of support. In addition to

recapitalizing existing assets, the Department must deploy enough new systems to meet its on-going steady-state and wartime surge requirements. Among airborne systems, the steady-state demand has routinely exceeded the number available for tasking. Further, DoD must ensure that as it recapitalizes its ISR capabilities, it does so with the vision of ensuring a robust, survivable architecture. Our ISR capabilities provide us an asymmetric advantage, but our increasing reliance on these assets directly increases our vulnerability when we are denied use of those systems. The Department of Defense must ensure its ISR architecture – including space, airborne, ground, and communications components – is both resilient and flexible enough to operate in all crisis environments, against all projected threats.

The Department, including those elements in the National Intelligence Program, has a robust investment strategy for collection capabilities. There are significant investments in U.S. space-based collection capabilities, which will replace aging systems and provide significant new capabilities. The Department is also confident that investments in airborne intelligence collection systems, including delivery of the MQ-1 PREDATOR-Al, MQ-9 PREDATOR-B and RQ-4 GLOBAL HAWK with the Multi-Platform Radar Technology Insertion Program [MP-RTIP] capability and the planned enhancements of U-2 and RC-135V/W RIVET JOINT will mitigate the current airborne ISR shortfall. Finally, the Aerial Common Sensor is a key recapitalization program for the Navy's aging EP-3 and the Army's RC-7 and RC-12 platforms. Deployment by 2018 will complete the recapitalization effort of the U.S.'s airborne collection capabilities.

Attain global persistent surveillance

The Department's collection paradigm is evolving from periodic reconnaissance to persistent surveillance. A global persistent surveillance capability will provide the Department with timely intelligence and increase the exposure to U.S. collection capabilities on a more fleeting, dispersed set of targets. The Department defines persistent surveillance as:

> *The integrated management of a diverse set of collection and processing capabilities, operated to detect and understand the activity of interest with sufficient sensor dwell, revisit rate and required quality to expeditiously assess adversary actions, predict adversary plans, deny sanctuary to an adversary, and assess results of U.S./coalition actions.*

A key point is that persistent surveillance seeks to capture activity as it occurs, rather than forensically reconstructing it after the event. This requires an ability to adjust the revisit rate of the collector suite to a level appropriate for the event of interest. If one is tracking the progress of building construction, a weekly collection cycle may be appropriate. If one is tracking an individual, a "staring" capability is most likely necessary. The proper mix of assets will depend on the problem set, and for some problems the appropriate capabilities have not yet been developed. A second key point is that "global persistent surveillance" refers to an ability to conduct targeted persistent surveillance anywhere in the world. It is not meant to imply that the U.S. can do simultaneous persistent surveillance over the entire globe. The Department of Defense and the Intelligence Community (IC) must reconcile how much capacity for persistent

surveillance (numbers/sizes of regions, revisit rate, etc.) is required and how much is affordable.

The Department has a very limited ability to conduct persistent surveillance today. In the next decade, we expect to implement a persistent surveillance capability in those areas where airborne assets are able to effectively collect. The fielding of the MQ-1/9 PREDATOR-A/B, RQ-4 GLOBAL HAWK Multi-TNT and MP-RTTP capabilities, the initial deployment of the Army's Extended Range/Multipurpose (ER/MP) Unmanned Aerial Vehicle (UAV) and the Army / Navy Aerial Common Sensor, as well as space system enhancements, will give the U.S. a regional persistent surveillance capability. This regional capability will be enhanced with the delivery of the Broad Area Maritime Surveillance (BAMS) UAV, and completion of the ACS, ER/MP, and VUAV programs. Through deployment of new overhead systems, the Department will achieve a global persistent surveillance capability in airborne sensor-denied areas.

Achieve horizontal integration of all intelligence information

Intelligence information in various stages of refinement within the Defense intelligence enterprise will be made accessible, understandable, and retrievable by all appropriate elements within the enterprise. This horizontal integration will provide sufficient controls and sanitization to protect the sources and methods used to gather the information.

The recapitalization and investment in ISR collection assets must be balanced with a corresponding investment in integrated processing and exploitation

infrastructure. The Distributed Common Ground/Surface Systems (DCGS) is the Departments primary ISR processing and exploitation program. There is a demand-driven need to expand DCGS capacity to accommodate the increased collection capacity from Global Hawk, Predator and U-2 systems. The Department's balanced approach calls for modest growth accompanied by improved efficiency offered by horizontal integration and net-centricity.

DCGS processing, exploitation and analysis capabilities form the heart of the Department of Defense tactical (ISR) horizontal integration. DCGS as an ISR ground infrastructure is an integral and critical component of the overall DoD ISR interoperability and data integration strategy. The end result will allow collected ISR data from sensors such as Rivet Joint, Joint STARS, and Global Hawk to be processed into combat information within one of the Service's DCGS systems and made available/discoverable to all users, regardless of Service or Agency affiliation. The ability for any user to discover, access, and understand the data are key tenets of network-centric operations which is the future of DCGS operations.

The DCGS provides fused, decision-quality intelligence information to joint, allied, and coalition battle management and command and control (C2) including planning, combat planning, operations, and assessment. It is the Department's hub to effectively implement information sharing - horizontal integration - between the warfighters, Service intelligence components, and national intelligence agencies. The DCGS will:

- provide the exploitation and analysis capabilities for ISR collection

capabilities, with the exception of certain specialized technical functions.

- provide intelligence capabilities for all deployed military forces.
- provide a common focal point for integrating with the Combat Support Agencies and provide a two-way flow of information to and from the Defense Intelligence Agency, National Geospatial-Intelligence Agency, National Reconnaissance Office, and National Security Agency.

These capabilities make DCGS the focal point for integrating the various ISR collection capabilities into the Defense ISR Enterprise (which includes Coalition and allied systems), enabling information sharing with command and control systems, and providing a common intelligence picture.

Capitalize on a collaborative net-centric distributed operations (collection, exploitation and analysis) infrastructure

The Defense ISR Enterprise consists of a globally-distributed enterprise, combining deployed forces, fixed overseas locations, and Continental U.S. operations. The deployment of net-centric capabilities allows the Department to innovatively use this worldwide capability to meet its overall intelligence responsibilities. The Department will deploy a robust and secure networked ISR architecture, with sufficient capacity and capabilities to meet the intelligence needs of U.S. fighting forces across the full range of military operations and against the full range of threats – traditional, irregular, catastrophic and disruptive. Using the power of distributed operations, the ISR enterprise will provide timely imminent threat warning and effective tactical over watch of combat forces.

An integral and critical component of the overall Department of Defense (DoD) ISR integration strategy is the Distributed Common Ground/Surface Systems (DCGS). DCGS is a family of ground and surface systems within each Service that make up the processing and exploitation component of the ISR Enterprise. Service DCGS process and exploit US and selected coalition ISR sensor data and post consumable ISR information (raw and processed ISR data, as well as exploited ISR products) within the ISR Enterprise. DCGS is optimized to support analysts, warfighters and decision makers at the Joint Task Force (JTF) level and below. However, ISR data posted by these systems will be visible, accessible and understandable by users from the tactical to the national level. The ISR Enterprise will be capable of collaborative, net-centric ISR operations that are founded on common data standards and a common enterprise infrastructure. The ability to move ISR data around the world, allowing various processing/analysis elements to exploit the data, provides a transformative multiplier to the Defense ISR Enterprise.

Transform ISR Management Capability

DoD is implementing organizational and process changes to improve the management of Global ISR. To maximize the utility of our DoD systems and national assets, and to meet the established intelligence priorities, Commander, United States Strategic Command (USSTRATCOM) has been assigned responsibility for planning, integrating and coordinating ISR in support of strategic and global operations. As a component of USSTRATCOM, the Joint Function Component Commander for Intelligence, Surveillance and Reconnaissance (JFCC-ISR) will conduct planning to

employ DoD ISR resources to meet Combatant Commander, national and Departmental requirements. Furthermore, JFCC-ISR will ensure the integration and synchronization of DoD, national and our allies' ISR capabilities and collection efforts.

On May 31, 2005, Commander JFCC-ISR declared initial operational capability. This declaration means JFCC-ISR is performing watch functions and is assuming intelligence support planning capabilities. JFCC-ISR key tasks include developing allocation strategies for DoD ISR resources, including the management of the Sensitive Reconnaissance Operations "book" process; adapting ISR strategies in response to dynamic and evolving situations; participating in adaptive planning to support Combatant Commander intelligence campaign planning efforts; conducting ISR risk analysis and optimizing risk mitigation strategies; and advocating ISR capabilities and required resources.

Operationalizing Intelligence

At the center of the USD(I) led Remodeling Defense Intelligence initiative is the effort to "operationalize" intelligence by including its execution in the broader construct of operational planning and assessment. Through the adaptive Intelligence Campaign Planning process (ICP), Combatant Commanders are able to plan, synchronize, manage and execute intelligence operations and better define detailed collection/production requirements for deliberate allocation between theater and national assets.

This process improves integration of operations and intelligence for planning,

crisis, war and post-conflict scenarios, and also provides the COCOMs and the Department a vehicle by which to assess and present their intelligence needs back to the DNI and Intelligence Community.

Intelligence Campaign Planning is ongoing at the COCOMs as a function of their Joint Intelligence Operations Centers/Commands (JIOCs). The organizational development, resourcing and implementation of these JIOCs is currently underway at the Strategic (Defense JIOC), Operational (COCOM JIOCs) and Tactical (JIOC-I) levels. JIOCs will place analysts and collectors in the same chain of command, often forward deployed, to improve all-source analysis and production.

Achieving these six strategic objectives will ensure the Department has the ability to operate across the full spectrum of operations and satisfy the intelligence needs from the highest levels of command to the individual soldier, sailor, airman, and marine while simultaneously supporting the intelligence needs of those outside the Department of Defense.

In response to Committee's request for the Department's rationale for approving the entry of the ACS Program into System Development and Demonstration (SD&D) Phase – a Milestone B decision - was made on July 29, 2004. This decision represented the culmination of a rigorous review process that began in FY 2000. As part of that review process, subject matter experts from the OSD, Army, and Navy staffs insured that alternatives were analyzed, operational requirements were vetted and approved, program costs estimates were independently assessed, a master plan for test and evaluation and an acquisition strategy were developed, compliance with the

Clinger-Cohen regulations were verified, and most importantly, a performance, schedule, and cost baseline were established for the program during its SD&D phase. The Army/Navy Team satisfactorily completed each of these items, as was noted at the Milestone Decision Review. Risks were accounted for, most notably, the weight and power issues associated with the airframe. This issue was a topic of discussion at each pre-Milestone B program review meeting beginning in June 2003, about the same time as the FY 2003 DOT&E report commenced. At each session, the OIPT was assured that the issue was given sufficient coverage in the Army's source selection plan, and was high on the list of risk areas to be watched. At the final milestone decision review, the power/weight issue was discussed and risk appeared manageable.

In response to the Committee's request for a description of the impact of a two year delay in the ACS program on the intelligence collection mission, any delay in the Aerial Common Sensor program will impact the Department's convergence and recapitalization of DoD ISR capabilities. Delays in the ACS program will force the Army and Navy to reassess their investment strategies in their legacy systems. Their assessment will need to focus on both airframes and sensors to ensure the services continue to meet critical warfighter capabilities.

In response to the Committee's question regarding the use of outside groups and experts, the DoD personnel working within the Defense Acquisition System are well qualified to ensure the system provides what the warfighter needs in a timely and cost effective manner. However, in certain cases there is a need to pull in additional independent subject matter experts to examine particular areas of the program and

provide recommendations on a path forward. ACS is an example of a program where outside expertise could prove effective in the attempt to pair different technologies; i.e. sensors and airframes.

My initial reading of the Non-Advocacy Group's report indicates that there are several issues that will have to be addressed in order for the program to be successful. Chief among these issues are the funding requirements and the completion schedule. The program's stakeholders are beginning to hash these issues out, and I expect some decisions about the program in the not-to-distant future.

RECORD VERSION

STATEMENT BY

THE HONORABLE CLAUDE M. BOLTON, JR.
ASSISTANT SECRETARY OF THE ARMY
(ACQUISITION, LOGISTICS AND TECHNOLOGY) AND
ARMY ACQUISITION EXECUTIVE

BEFORE THE

SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES

COMMITTEE ON ARMED SERVICES

AND

HOUSE PERMANENT SELECT COMMITTEE ON INTELLIGENCE

UNITED STATES HOUSE OF REPRESENTATIVES

ON THE AERIAL COMMON SENSOR PROGRAM

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INTRODUCTION

Chairman Weldon, Chairwoman Wilson, distinguished members of the two Subcommittees, thank you for this opportunity to speak to you about the Aerial Common Sensor program. It is my privilege to represent the Army's leadership, the military and civilian members of the Army's acquisition workforce, and the Soldiers who rely on us to provide them with world-class weapon systems and equipment so they can successfully accomplish any mission, anytime, anywhere in the world. Let me also express my sincere appreciation to all members of the Subcommittees for their continued support of the Army during these critical times; you, like the men and women on the front lines in Iraq, Afghanistan, and elsewhere, are helping us win the Global War on Terror.

Mr. Chairman, Madame Chairwoman, you called me here today to discuss a program that we in the Army consider a critical component of Army Transformation: the Aerial Common Sensor, or ACS. ACS was borne out of the recognition that our transformed Army of tomorrow will rely ever increasingly on information superiority to defeat our adversaries. The Current Force is evolving into a Future Force that will be lighter, faster, and more deployable than today's Army, yet will have greater lethality in large measure because of improved battlespace awareness and the ever increasing capability of extended-range precision munitions. To remain survivable, the transformed force will be increasingly dependent on highly accurate, near-real-time intelligence to maximize full spectrum dominance on the battlefield and focus those increasingly capable extended-range precision munitions squarely on the enemy. In other words, to realize the transformed Army, we require transformed intelligence. ACS, as the cornerstone of a transformed intelligence force, will provide it.

The Aerial Common Sensor will be the future commander's responsive, multi-intelligence and multi-discipline precision targeting system, capable of self-deploying anywhere in the world within 72 hours and conducting operations immediately upon arriving into a theater of operations. ACS's broad-area

surveillance sensors will include Imagery, Signals, and Measurement and Signatures Intelligence (IMINT, SIGINT, MASINT), with the ability to provide better and faster Indications and Warnings data, improved situational development/awareness, increased force protection, robust battle damage assessment and the preponderance of non-line-of-site (NLOS) targeting support for future force weapons systems. ACS will leverage common payloads, platforms, data links and ground stations in order to increase the system's affordability, responsiveness and Joint interoperability, while also keeping pace with evolving technology and minimizing new equipment training and logistics challenges.

Thru on-board processing and/or via reach (i.e., satellite communications link to a rear-based ground station) ACS will support early-entry operations by providing the commander with critical information in support of vulnerable rapid-deployment forces. ACS will allow commanders to determine the disposition, capabilities, and intentions of hostile forces prior to the major build-up of friendly forces. Its myriad sensors will be capable of confirming the location and status of beachheads, drop zones, landing zones, transportation networks and mobility corridors. It will also detect, identify, and locate enemy lines of communication, airfields, ports and logistics bases, air defense systems, long-range missile and artillery systems and weapons of mass destruction with the targeting accuracy required for rapid engagement by friendly forces.

During the build-up phase, ACS will assist the commander in shaping the battlespace for future operations, and in increasing protection of friendly forces by providing information on threat intelligence and collection operations, as well as attempts by the enemy at sabotage and terrorism. It will seek to refine the intelligence acquired during the early-entry phase so that the commander can better understand the enemy's composition, disposition, and intentions. ACS will also help pinpoint and track enemy command and control, fire support, air defense, and intelligence nodes, creating the conditions necessary for their rapid

destruction. As the theater matures, on-board processing and reach will gradually yield to an in-theater ground station such as the Distributed Common Ground System-Army (DCGS-A), which will take collected intelligence from ACS, process it, and make it available for dissemination across the force.

Once friendly forces are fully deployed into the theater of operations, ACS's mission will shift from one focused on Indications and Warnings and situational awareness to one of gaining information dominance over the threat, allowing the commander to conduct decisive operations on his terms, not the enemy's. In this phase, intelligence collection efforts for ACS will be directed towards predicting enemy plans and operations. As an integral component of the Army's deep strike architecture, ACS will also play a key role in the finding and engaging of High Value Targets and High Payoff Targets. As always, protection of friendly forces here will remain a top priority, with ACS capable of "surging" to provide "persistent stare" coverage 24-hours per day to alert the commander to changes in threat disposition.

ACS will also feature on-board Battle Command and Communications links such as Link-16, Improved Data Modem, and the Joint Tactical Radio System, enabling the future commander to communicate with and direct friendly forces in response to rapidly evolving battlefield situations. ACS will provide for level IV control of unmanned aerial vehicle systems (UAVS) such as the Extended-Range/Multi-Purpose (ER/MP), thus increasing UAVS downlink range and enabling manned/unmanned teaming. This is the airborne collection platform of tomorrow's battlefield. In short, no other U.S. or allied system on the horizon will be capable of combining the capability, accuracy, timeliness, and depth of coverage that ACS will. Truly, it will be the military's premier multi-intelligence platform and a combat multiplier unlike any system before it.

BACKGROUND

The ACS concept capitalizes on more than 30 years of Army experience in flying multi-ship systems which provide high-accuracy location of enemy targets. The Army's current fleet of airborne Intelligence, Surveillance, and Reconnaissance (ISR) aircraft—termed Special Electronic Mission Aircraft, or SEMA—consists of the Guardrail Common Sensor and the Airborne Reconnaissance-Low (ARL) systems. While they have served us superbly in the past and continue to perform yeoman's work in Operations Iraqi and Enduring Freedom (OIF and OEF) and in Korea, they fall far short of the capability we will require to support our transformed Army and its multi-dimensional doctrine and battlefield structure. Guardrail and ARL are essentially a mix of *ad hoc* legacy systems that are neither fully networked nor integrated. Neither do they have the ability to self-deploy or the sensors to detect and locate targets in depth. Still, they provide value-added to commanders today and a quasi-preview of what's in store vis-à-vis ACS.

Today, the SEMA fleet—all five of our Guardrail and ARL battalions—are flying at a high operating tempo in support of ongoing military operations worldwide. All are either forward-deployed, most in support of OIF or OEF, or recently returned to home station and preparing to re-deploy again. Consider the following:

- Our Korea-based fleet continues to provide over 80% of the Sensitive Reconnaissance Operations (SRO) on the Korean peninsula, while flying an average of 444 sorties a year in support of early warning and force protection missions for U.S. forces there.

- Since September 11, 2001, our three U.S.- and Germany-based Guardrail battalions have deployed to the U.S. Central Command theater a total of seven times, including four separate year-long tours in Iraq. The 1st Military Intelligence (MI) Battalion is currently on its second tour in Iraq,

while the 15th MI Battalion, which returned home to Fort Hood in June 2005 is conducting refit and refurbish operations in preparation for redeployment. Guardrail is the workhorse of the SEMA fleet, flying an average of 1,900 sorties annually and providing precision SIGINT geo-location data on threat communications and radar emitters.

- The ARL battalion at Fort Bliss, Texas, provides a continual operational presence in South America in support of the U.S. Southern Command's (USSOUTHCOM) coordinated intelligence collection plan. Portions of this unit are deployed to Colombia year-round, flying an average of 288 sorties per year and supporting numerous counter-drug and other operations.

However, as mentioned above, limitations abound with the current SEMA fleet, and age is creeping in. As the 1990's drew to a close, the Army recognized that a replacement solution would be needed when a Mission Needs/ Requirements Analysis done in support of the Army Intelligence Master Plan in 1999-2000 determined that no current or funded system within the military could or would meet the information accuracy and timeliness requirements of the Army's future force. While our sister services and National sensors bring a tremendous capability to the fight, they generally cannot provide the combination of timeliness, accuracy and multi-intelligence support required by ground commanders at the tactical level. Additionally, theater and National systems are not available in sufficient quantities to meet tactical requirements and are not dynamically responsive enough to meet changing battlefield conditions. The results of this analysis were ultimately used to define the Key Performance Parameters that were included in the Operational Requirements Document (ORD) for ACS that was approved by the Joint Requirements Oversight Council (JROC) in October 2003.

The Analysis of Alternatives (AoA) that was conducted for ACS in 2000-2001 considered four alternative material solutions for meeting the gaps

identified in the Mission Needs Analysis. The AoA considered major regional contingency scenarios in the Balkans and Northeast Asia. Results of the AoA showed that continued upgrading and modernization of the current SEMA fleet (Alternative 1) could not meet future force requirements, and would give you only marginally better performance over existing capability. The law of diminishing returns played a factor here. A manned ACS alternative (Alternative 2) was shown to have the highest effectiveness, although it also had the highest cost. Two manned/unmanned concepts (Alternatives 3 and 4) showed lower cost than the pure manned solution, but with significant operational limitations as well as reduced effectiveness.

A Supplemental Analysis for ACS was conducted in 2002-2003 and examined the role ACS would play in Caspian Sea and Southwest Asia scenarios, typical of what we might expect to encounter in future conflicts. As expected, the ISR capabilities that ACS brought to the fight increased the Joint Task Force (JTF) commander's situational awareness and ability to maneuver out-of-contact with threat forces. It also allowed greater survivability through rapid detection and location of enemy air defense systems, and allowed the JTF to maintain 'standoff' distance and engage targets at longer ranges than when ACS was not present. Its near-instantaneous SIGINT geo-location capability was faster and provided more accurate information than any other Joint sensor system. The multi-intelligence nature of ACS also allowed for rapid cross-cueing of imagery sensors directly on-board for timely identification and confirmation of the target.

With respect to the efficacy of placing multiple types of sensors on board a single aircraft platform, the Army's assumption early on was it would be very challenging to integrate high-accuracy radar and SIGINT payloads on to the same platform, so the AoA played a constellation of four aircraft—three configured for SIGINT, one for IMINT—operating at all times. The AoA assumed a fleet of 12 aircraft per unit or system, similar in size to a current Guardrail

battalion, and was focused on the operational effectiveness of a hypothetical material solution. During the Concept Exploration phase of the program, the three industry partners at the time—Lockheed-Martin, Northrop-Grumman and Raytheon—each conducted their own independent analyses of alternatives, examining the technical feasibility and projected costs of their respective solutions. The recommendation from all three industry teams was that it is not only possible to conduct both IMINT and SIGINT on the same platform, but that you could do it with only minor degradation in overall collection capability while also reducing the total number of aircraft, payloads, and personnel, thereby lowering total ownership cost of the system. A further finding by these industry teams was that the Army was being too conservative in its views of projected availability of the ACS systems. For example, while the Army's standard for operational readiness for aircraft is 70%, the industry teams showed that with the typical readiness rating for the various commercial aircraft under consideration in excess of 95%, ACS could expect to see readiness levels above 90% even after integrating the full mission payloads onboard the aircraft. The net result of these two findings was a drop in the overall aircraft requirement for the program from the original projection of 62 down to a much more affordable 38.

It should be noted that incorporating multi-intelligence payloads onto single aircraft platforms is not new to the Department of Defense. Indeed, the Army's own ARL system is already doing it to some extent, combining both SIGINT and IMINT sensors onto two of its aircraft in the USSOUTHCOM theater. The Air Force's Global Hawk is seeking the "multi-INT" road as well by experimenting with a SIGINT payload on its already IMINT-capable platforms. The E-10 MC2A is yet another system that will feature multiple disciplines on the same aircraft. In short, multi-capable platforms are the wave of the future. They are not only technically feasible, but they provide greater operational flexibility, better opportunity for Joint interoperability, and more "bang for the buck."

CURRENT STATUS OF THE PROGRAM

Army Transformation and ACS capabilities notwithstanding, the impetus for calling me here today, as the Army's lead acquisition authority, is undoubtedly the program's current situation with respect to the weight issue. I am happy to address it, beginning first with a brief discussion of the system's requirements and original cost and schedule baseline. As I mentioned earlier, ACS's Operational Requirements Document (ORD) was approved by the JROC in October 2003, and consists of three Key Performance Parameters (KPPs): Interoperability, Multi-Sensor Targeting Support, and Reliability. Additionally, there are four threshold requirements in the ORD, non-KPP in nature, that are considered driving factors for the program because of their importance to the operational community in both the Army and the Navy and the fact that, together with the KPPs, they drive us to a certain class of aircraft. They include: number of analyst workstations/operators onboard the aircraft, altitude, endurance, and range. Together, the three KPPs and the four threshold requirements comprise the major capabilities around which the system is based.

There is an oft-stated misperception that the weight issue is a result, at least in part, of requirements creep. This is simply not the case. While an earlier version of the ORD from 2001 focused more on sensor performance and less on aircraft performance, the JROC-approved ORD of October 2003—on which the contractors based their proposals—focused on both and has not changed since its approval. As a point of clarification, when the Army released its formal request for proposals (RFP) following approval of the ORD, it included as part of the RFP a Performance-Based Specification (PBS) that was reflective of the ORD. The intent here was to allow prospective bidders to tailor the PBS so that their proposed solutions would maximize system performance and stay within recognized cost targets, with the understanding that any tailored PBS would be written into their final contract. In other words, bidders had a mechanism for scoping the effort in a direction they considered attainable. While the Army

clarified portions of the PBS at the behest of each bidder during the source selection phase, it did not direct any changes to it—nor has it since.

Current program funding and schedule as reflected in the Acquisition Program Baseline are shown below and based on estimates by the Army's then-Cost and Economic Analysis Center (CEAC) and the Office of the Secretary of Defense's Cost Analysis and Improvement Group (CAIG) following their evaluations of the ACS program in 2003 and 2004, respectively. The CAIG's estimate was $209 million higher than the CEAC's across the SDD phase and put the system's first fielding in February 2010 versus our original estimate for summer 2009. The Army made the appropriate adjustments to reflect the CAIG's position prior to the Milestone B decision.

ACS Army Acquisition Program Baseline

Performance

APB	Threshold	Objective
Interoperability	100% of Critical Top-Level IERs	100% of Top-Level IERs
Multi-Sensor Targeting Support	MLRS ATACMS Increment I	MLRS ATACMS Increment I
Reliability	36 Hrs/MTBSA	76 Hrs/MTBSA

Other Driving Requirements

ORD/PBS	Threshold	Objective
On Board Operators	6	6
Altitude	37,000 ft	45,000 ft
Endurance	8 Hours	10 Hours
Range	3,100 nm	3,100 nm

Schedule

	Objective	Threshold
DRR	Dec-06	Dec-07
LUT	Feb-08	Nov-08
MS C	Sep-08	Mar-09
IOT&E Start	Apr-09	Oct-09
IOT&E End	Aug-09	Mar-10
FRP Decision	Nov-09	May-10
Army FUE	Feb-10	Aug-10

Quantity

Army Buy	
RDT&E	5
Procurement	33
Total	38

Cost

Program Level Cost Metrics (FY03 BY$)	Objective	Threshold
	MS B	MS B
R&D	$1,127.0M	$1,296.0M
Procurement	$2,726.0M	$2,999.0M
MILCON	$4.0M	$12.0M
O&S	$4,065.0M	$4,471.5M
Total	$7,922.0M	$8,778.5M

We do not quite share the Subcommittees' views that the Army failed in the SDD phase or with oversight of the program. On the contrary, we feel that we have been successful in recognizing problem areas early on and raising them to the attention of senior leadership as quickly as possible. Allow me to elaborate.

During the source selection and evaluation period, each bidder's proposal was evaluated on its strengths and weaknesses, which were characterized by their operational impact or programmatic risk. The proposals were also evaluated for realism, to include the estimated weight of payload and integration hardware necessary to "missionize" the system. The evaluation team included more than 20 aeronautics and aviation engineers, as well as mass properties experts from the Army's Research, Development and Engineering Center and the Navy's Naval Air Systems Command. Of the two proposals submitted, one came in showing the system to be overweight from the start, with the high likelihood that the system would still be overweight at the first developmental test two years following projected contract award. In contrast, the other proposal—Lockheed Martin's—projected a weight nearly 3,500 lbs. *under* the threshold limit. Even after the Government team factored in risk, Lockheed's proposed design was still below the limit, with only a moderate chance of going higher. Neither the Government evaluation team nor the contractor anticipated the nearly 6,400-lbs. weight growth that was ultimately realized as the design progressed.

Following the awarding of the SDD contract to Lockheed Martin in August 2004 the Government, having already identified sensor integration onto the platform as a risk area, made weight—specifically, Size, Weight, Power and Cooling (SwaP-C)—a "watch area," no different than would be the case with any other aircraft-based program, and required that Lockheed submit weight and balance reports on a monthly basis as a condition of its contract. By December 2004 the Government program office began seeing that weight estimates were exceeding critical thresholds and requested that the contractor provide a detailed explanation of the problem. At that point in time, the system was approximately 100 lbs. over its weight limit, so the Government program office elevated SWaP-C from a watch item to a significant risk item. The Lockheed Martin program office reacted by bringing some of its best aviation expertise from across other programs like F-22 and C-130J onto the ACS program in order to get a better

handle on the situation, and to accelerate the design's maturity in certain subsystems it thought had potential for further weight growth.

Unfortunately, as the design matured, weight continued to grow. By March and early April 2005 Lockheed was given authorization to begin exploring possible solutions using aircraft in a higher weight category and to continue pursuing a mitigation strategy for the originally proposed aircraft, the Embraer 145. At this point, the Government program office informed senior Army leadership of the problem. By May, it became evident that some of the parameters laid out in the program's Acquisition Program Baseline were in jeopardy of eventual breach and critical schedule milestones would likely not be met. As a result, the Army informed OSD of this potential breach situation by submitting a Program Deviation Report on May 18, 2005.

We consider our oversight mechanisms and reaction to the weight issue to be sound. After all, it was because of the program office's due diligence that we were able to identify the problem early rather than after the Government was committed to the purchase of expensive airframes. While discovery of the weight issue at an even earlier point in the program's life would have been the preferred approach, it was simply not practicable. In the case of ACS, one would have essentially needed to require that each contractor design and build representative prototypes of the various subsystems during the Component Advanced Development (CAD) phase, prior to Milestone B. For complex integration efforts like ACS, this is the only way to delve into the specific elements of the design that contribute to weight, and in the case of ACS this is where we saw the lion's share of the growth in the SDD phase, with the contractor determining things like detailed cable runs, searching vendor catalogues for specific information on parts, and identifying which racks, seats, and radome structures to put on the aircraft. Unfortunately, the investment in funding and other resources required for developing these prototypes during the CAD phase—and for two or more contractor proposals at that—made it a non-

viable option. In fact, with ACS, we actually experienced a decrement in funding during the CAD phase, forcing us to reduce the scope of the integration effort and concentrate on other areas like SIGINT development versus aircraft development, based on our understanding of the risks at the time.

Currently, the ACS contract is in a stop-work status following the convening of an Army Systems Acquisition Review Council in September. Following this meeting, Lockheed Martin was directed to stop all work except that needed to present a written plan to the Army describing possible solutions and alternate strategies for consideration that maximize possible performance of the ACS system while minimizing negative cost and schedule impacts to the Government. The contractor was given 60 days from the date of the stop-work order to complete this plan. We expect their full lay-down by mid-November.

IMPACTS OF A DELAYED ACS AND PATH FORWARD

As a result of the weight issue, we anticipate a delay of several years in the program's lifecycle. This forces the Army to invest in the recapitalization of the current SEMA fleet—Guardrail and ARL—which, as I mentioned earlier, provide critical ISR support to tactical commanders in the field today. Why is this investment necessary? The simple answer is that we must continue to keep pace with advancing technology and the evolving threat so we can provide the warfighter with the most relevant and up-to-date systems possible. With your support, both the Guardrail and ARL fleets received supplemental funding in FY05 that furthered their modernization. Our planned path forward, pending final resolution of the ACS situation, is to reinvest some of ACS's near-term funding into both of these programs as required so that this modernization can continue. In other words, as the ACS program shifts to the right, some of its funding in the Future Years Defense Program might be shifted to Guardrail and ARL, enabling them to keep pace with the threat. Specific upgrades might include adding a robust modern signals capability across the Guardrail fleet; increasing the number of multi-intelligence collection capable aircraft in the ARL fleet; and also

the spiraling in of DCGS-A technology into the current ground processing stations for Guardrail and ARL. The benefit here is that this investment into current systems will be leveraged within the ACS while providing future force technology and concept refinement to today's warfighter.

The delay in the ACS program unfortunately has a significant impact to future operational units. The bottom line is the future commander will have to wait to receive the fused, timely, assured, multi-intelligence picture of his battlespace that ACS will deliver. This is exactly the type of capability that will prove critical to future success as the Army transforms to a lighter, more lethal and more expeditionary force. It is imperative that we provide the warfighter with an agile, multi-intelligence, multi-functional system that provides the needed situational awareness to support force protection, precision targeting, and command and control, enabling the tactical commander to better protect his force while defeating the adversary.

The stop-work status also affects the contractor. Presently, only 75 members of the original "pre-stop-work" team of 360 are actively engaged in the program, according to Lockheed Martin. Most others have found temporary assignments in other programs within the company, pending a decision on ACS by mid-December, when the order is set to expire. If the stop-work period extends into 2006, Lockheed may be forced to begin lay-offs on January 2. Subcontractors are similarly affected. Should Lockheed Martin's written plan for a revised program be met with approval by the Army, and the stop-work order is lifted, Lockheed Martin estimates that it could take up to a year for the program to ramp back up to full capacity.

The Subcommittees asked for the full range of options on a path forward. They are essentially two as we approach the end of the stop-work period: we could lift Lockheed's stop-work order and direct them to continue work or we could terminate the contract. In the former, this would hinge on the Army's and

Navy's approval of one of several options that Lockheed is currently examining and which they will present by mid-November. These options could include a restructuring of the program around the current Embraer 145 platform, meaning that we would have to trade some capability in order to meet affordability goals; second, continuing with Lockheed as the prime contractor and seeking a larger aircraft that would allow the program to meet all requirements, while acknowledging the additional cost implications of this approach; and third, recognizing the value of Lockheed's approach to sensor development and allowing them to continue this work, then re-competing the aircraft at a later point.

In terminating the contract, there are essentially two sub-options forward. In one, the Army could re-baseline the program, develop an improved acquisition strategy, and then ultimately re-compete the SDD contract several years down the road. Or, in the other, the Aerial Common Sensor program could be terminated altogether, leaving a future capabilities gap that would need to be filled by some other method.

THE NON-ADVOCACY REVIEW

In June 2005, following submittal of the Program Deviation Report on the weight issue, I approved a recommendation by my program executive officer to have an outside party take a hard look at the entire ACS program, from top to bottom, and tell us what things we were doing right, what things we weren't and how to fix them. We solicited the assistance of our brethren in the Navy for this, who employ a mechanism called the Non-Advocacy Review (NAR) to conduct periodic, in-depth examinations of its major programs. NAR teams are tailorable to the type of system being reviewed, so in the case of ACS, it was comprised of both Army and Navy experts from across a broad spectrum of cognizant disciplines, to include program management, cost, systems engineering, air vehicles, mass properties, SIGINT and IMINT, power/propulsion, software, integration, logistics, test and evaluation, weight, and human systems

engineering. None of the members were directly connected to the ACS program. Led by a Navy flag level officer, the team could count among its members more than 540 years of collective experience in their fields.

The NAR was chartered to do several things: One, assess the viability of the ACS program-of-record with respect to cost, schedule, and performance; determine if its acquisition strategy was sound and what risks are involved; and look at the structure and organization of the program management offices on both the Government and contractor side, including the experience of its members, to see what shortfalls existed, if any. Two, provide "pre-decisional" findings and recommendations to the Army and Navy. And three, suggest a path forward. It should be noted that many of the NAR findings had already been recognized by the Government program office as the weight issue unfolded and were provided to the NAR during its in-briefing; the NAR simply validated many them. The NAR's major findings and recommendations were as follows:

- **Staffing and expertise at both the Government and contractor program offices does not reflect the complexities typically seen in a major ACAT-1D program.** The NAR expressed concern with Lockheed's relatively high personnel attrition rate for the ACS program as compared to some of its other programs, especially with some of the key leadership positions; with the fact that, of the members who comprised its ACS team during the Concept Advanced Development phase, only relatively few of them remained with the program once the company won the contract; and with the reality that Lockheed is now on its fifth chief engineer since contract award in August, 2004. On the Government side, the NAR found that the experience level of its personnel resided primarily in integration and testing, and not enough in aircraft flightworthiness. The NAR also saw shortfalls in the Government program office's approach to its integrated product teams, recommending that they be restructured and held accountable for cost

and schedule performance, and not just technical performance. And finally, the NAR recommended that the ACS program be recognized to be an aircraft program first and an ISR program second, and then reorganized as such under a command with prior experience in complex aircraft integration efforts.

- **Funding and schedule goals render the program un-executable in its current state.** The NAR viewed the program's funding profile for the SDD phase to be inadequate, basing their opinion on historical knowledge and experience in programs like JSTARS and AWACS. The NAR surmised that in order to complete SDD properly and successfully, the program's funding for research and development would need to essentially double from its current $1.2 billion to about $2.5 billion. Three specific areas that the NAR thought to be grossly under-funded were avionics non-recurring engineering (NRE), airframe NRE, and flight testing. Together, they account for nearly two-thirds of the cost doubling in the NAR's estimate of the SDD phase. The Government program office's revised assessment was $2.0 billion and based on the supposition that a larger aircraft would be required. The NAR also saw a significant increase in procurement costs, given that the program's current aircraft platform, the Embraer 145, does not allow the system to meet all of its ORD requirements, thereby necessitating a larger aircraft. The NAR's estimate for procurement is $1.2 billion higher than the Army's original estimate of $2.7 billion. It is premature to know how accurate these costs might be until the program is restructured. Schedule estimates were impacted as well, with the NAR predicting a 3-year slip in the first fielding date from February 2010 to early 2013. Some of this increase is attributable to testing, but most is due to increased development and integration timelines. It should be noted here also that the NAR's schedule

estimates agree with the Government program office's revised assessment based on moving to a larger aircraft platform.

- **Risk and earned value management are inadequate.** For risk management, the NAR noticed that the Government and contractor program offices had differing perspectives and assessments of the same risk. It recommended that the program have a single risk mitigation board, but make it chaired by the both sides together, rather than having two separate boards, one Government and the other contractor. The NAR also recommended that the Army consider a spiral approach to system development in order to reduce overall program risk. For earned value, the NAR simply recognized the obvious fact that current reporting metrics for earned value are invalid due to the fact that most of the contractor's efforts lately have been focused on fixing the weight issue, rather than on developing the ACS system itself as originally planned.

- **Requirements require further definition, especially with respect to interoperability and interdependencies.** Specifically, the NAR expressed concern with the interoperability KPP, noting that it had potential for growth as new systems emerged in the future, and that ACS must ensure that programs like DCGS-A and the Future Combat System are developing the necessary interface tools to make interoperability with ACS a reality.

CONCLUSION

Mr. Chairman, Madame Chairwoman, in closing, let me summarize the key facts: One, the capability that ACS will bring to the table is critical to Army transformation. As I mentioned earlier, no other system in the military, now or on the horizon, will be capable of combining the overall capability, precision accuracy, timeliness, and depth of coverage that ACS will. Our current airborne

ISR systems, Guardrail and ARL, while they give our tactical warfighting commanders a key advantage over the enemy, were built with a Cold War threat in mind and are not expected to last much beyond 2020--perhaps less, given their current operating tempo. We need for ACS to be the next-generation system that replaces these two workhorses.

Two, we believe that the requirements, as spelled out in the approved operational requirements document of 2003, are achievable—and on a single platform, too. The question is at what cost and are we willing to accept it? We have an advantage in partnering with the Navy, and they with us, in that because our baseline requirements are essentially identical, our two services can leverage efficiencies in things like Joint development, Joint training, and Joint basing. These efficiencies will translate into a significant cost savings for the Department than might otherwise be the case if our two services were to embark on separate paths for our respective systems.

And three, while there are things we might have done differently if we had them to do over again—perhaps broaden the scope and investment of the Component Advanced Development phase—we obviously have the benefit of hindsight now that we didn't then. And as I explained, much of the design detail that we uncovered, as is the case with most complex integration efforts, occurred in the System Development and Demonstration phase, *after* we awarded Lockheed Martin the contract. I said earlier, and I will stress it here again, our mechanisms for catching the increase in weight, like requiring the contractor to submit monthly weight and balance reports, were key in allowing us to catch it early enough in the contract where we hadn't yet committed to the purchase of actual aircraft.

Mr. Chairman, Madame Chairwoman, I know that you and the members of both Subcommittees share my concern and that of my counterparts in the Navy and OSD that we get this program right. I can assure you that we are all

personally involved in the matter and are committed to developing and fielding the best capability possible, as we are with any acquisition effort. Our Nation is at war, and likely to be for the foreseeable future, so we owe it to the Soldiers fighting it to give them the tools they need to win it. As the Army's chief of acquisition, this is my charter. Thank you for the opportunity to address the Subcommittees.

NOT FOR PUBLICATION UNTIL RELEASED BY THE
HOUSE ARMED SERVICES COMMITTEE
TACTICAL AIR AND LAND FORCES SUBCOMMITTEE

STATEMENT OF

MR. THOMAS LAUX
PROGRAM EXECUTIVE OFFICER FOR AIR ASW, ASSAULT
AND SPECIAL MISSION PROGRAMS

&

REAR ADMIRAL BRUCE CLINGAN, U.S. NAVY
DEPUTY DIRECTOR, AIR WARFARE

BEFORE THE

SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES

OF THE

HOUSE ARMED SERVICES COMMITTEE

ON

DEPARTMENT OF NAVY AIRBORNE INTELLIGENCE COLLECTION PROGRAMS

OCTOBER 20, 2005

NOT FOR PUBLICATION UNTIL RELEASED BY THE
HOUSE ARMED SERVICES COMMITTEE
TACTICAL AIR AND LAND FORCES SUBCOMMITTEE

Mr. Chairman, distinguished members of the Subcommittee, thank you for this opportunity to appear before you to discuss The Department of the Navy's airborne intelligence collection programs.

The Navy's current airborne intelligence collection capabilities include the EP-3E, P-3 Special Projects and P-3C Anti-Surface Warfare Improvement Program (AIP) aircraft and the Shared Reconnaissance Pod (SHARP) sensor. Programmed platforms include Aerial Common Sensor (ACS), Broad Area Maritime Surveillance/Unmanned Aerial Vehicle (BAMS/UAV), and Multi-Mission Maritime Aircraft (MMA) (which will have a secondary Intelligence, Surveillance and Reconnaissance mission) and the Active Electronically Scanning Array (AESA) APG-79 sensor.

The EP-3E provides fused near real time tactical signals intelligence tasked by Fleet and Carrier Strike Group Commanders. The EP-3E also provides Theater Intelligence, Surveillance and Reconnaissance tasked by Combatant Commanders and Strategic Intelligence, Surveillance and Reconnaissance tasked by National intelligence authorities. The signals intelligence and communications systems onboard the EP-3E enable it to perform primary mission areas of threat indications and warnings, strike reconnaissance and strike support, electronic intelligence baseline, maritime surveillance and escort, suppression of enemy air defenses, and combat search and rescue support.

Navy ACS platforms will expand Intelligence, Surveillance and Reconnaissance operations beyond a signals intelligence only capability. ACS will be interoperable with afloat units, leveraging capabilities enabled by FORCEnet. Its full integration into a network-centric

Distributed Common Ground System (DCGS) will greatly expand the naval horizon as it becomes further integrated within the Global Information Grid. As part of the USD (I) DCGS concept, the ACS system will downlink raw and preprocessed sensor data and products to Navy, USMC, and Joint DCGS-compliant ground stations and also be capable of conducting first-stage exploitation using on-board workstations using DCGS compliant software modules. ACS will be integrated with other tactical collection assets (ships and airborne Intelligence, Surveillance and Reconnaissance including UAVs) for cooperative geo-location of critical time sensitive targets.

The EP-3E acquisition roadmap is based on a decision made by the Chief of Naval Operations in the summer of 2003 to pursue the Army's ACS Program as the replacement for the aging EP-3E. An initial operational performance assessment conducted by the Navy in 2003 and an Analysis of Options completed in November 2004, validated an ACS solution as the best approach for EP-3E recapitalization. The roadmap as depicted in Figure 1-1 charts the Navy acquisition strategy as it transitions from the EP-3E Joint Airborne Signal Intelligence Architecture Modernization (JMOD) Program to the Joint Airborne Signals Intelligence Architecture (JASA) Modernization Common Configuration (JCC) Program to the ACS Program.

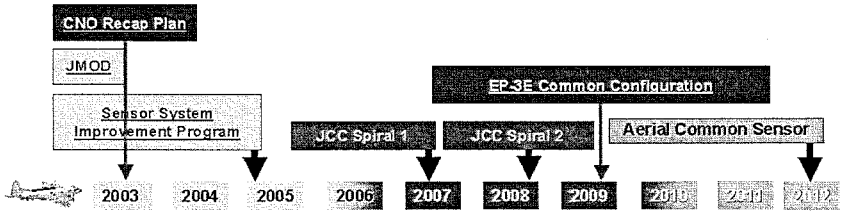

Figure 1-1, Chief of Naval Operations EP-3 Recapitalization Plan

The JCC Program will bring the sensor systems of the EP-3E to a common baseline of improved FORCEnet connectivity and signals intelligence collection capability with a planned Initial Operational Capability of its final JCC Spiral (Sea Strike Spiral II) in Fiscal Year 2008 and Full Operational Capability in Fiscal Year 2010. The EP-3E is planned to be recapitalized with the ACS platform beginning in Fiscal Year 2012, removing the EP-3E from Navy inventory by Fiscal Year 2014.

The Navy requires a transformational multi-intelligence platform that is scalable, flexible and can operate in a single, dual or three aircraft profile as the tactical situation dictates. By expanding beyond today's signals intelligence capability, ACS will provide multi-intelligence strike targeting and sea control support to the warfighter. The multi-intelligence capabilities include signals intelligence (communications intelligence and electronic intelligence), imagery intelligence, and measurement and signature intelligence via synthetic aperture radar, ground moving target indicator, electro-optical, infrared, and hyper-spectral imaging sensors. ACS will be capable of automatic and manual intelligence fusion in order to provide superior decision quality information to commanders.

As stated in the Army's ACS Operational Requirements Document approved by the Joint Requirements Oversight Council in October 2003 and the Navy's Operational Requirements Document Annex approved in March 2004, ACS fulfills the Navy's requirement for Maritime and National signals intelligence missions. ACS supports FORCEnet and Sea Strike *Sea Power 21* Pillars while providing the Combatant Commander with a 72-hour response capability for worldwide Intelligence, Surveillance and Reconnaissance prior to entry of forces.

ACS will leverage the operational concept of reach-back and reach-forward. The majority of operators will be based at a remoted ground site for a "mission teaming" concept. This places significantly fewer people in harm's way (eight vice 24) by moving the signal to the operator and provides a considerable advantage in collocating and utilizing personnel with unique analytical skills demanded by the Global War on Terrorism. The Navy's ACS Operational Requirements Document Annex increased the Army's Operational Requirements Document four-workstation requirement to a six-workstation threshold requirement and added technical enhancements to ensure the Navy's maritime capabilities objectives will be met. The only Navy Annex Requirement included in the Army's ACS performance based specification prior to release of the System Development and Demonstration Request for Proposal was the addition of two workstations.

Navy involvement in the ACS Program began with the Chief of Naval Operations decision in June 2003. On September 22, 2003, the Navy accepted the Army's ACS Operational Requirements Document with the inclusion of a requirement for six on board workstations. The Army and Navy signed a Memorandum of Agreement on February 6, 2004 describing the policies, relationships, resourcing, organization, and responsibilities attendant to the management of the ACS Program. Since June 2003, the Navy provided support within the Army's process for System Development and Demonstration Source Selection, contributed to Army assigned Integrated Product Team responsibilities, and developed unique Navy documentation and planning.

USD (AT&L) issued an Acquisition Decision Memorandum, dated July 29, 2004, which authorized the Army to enter into System Development and Demonstration and the Navy to spend up to $17.5 million dollars of Fiscal Year 2005 Research, Development, Test, and

Evaluation, Navy funds for ACS baseline development and program support. The Navy's goal was to be fully integrated into the Army ACS Program. In January 2005, via a Memorandum for USD (AT&L), the Navy requested deferring co-signing the ACS Acquisition Program Baseline Agreement until completion of a program Integrated Baseline Review and Preliminary Design Review at which time concerns about schedule and cost risk could be addressed.

The Navy's joining the ACS Program was indefinitely delayed pending resolution of an unrecoverable schedule breach and potential cost growth addressed in an Army Program Deviation Report on May 18, 2005. To help assess the overall program's health because of technical, schedule and cost issues, the Navy volunteered to the Army Service Acquisition Executive the services of Naval Air Systems Command's Non-Advocate Review process. The Army Service Acquisition Executive accepted the offer and a Non-Advocate Review was conducted on the ACS Program, focusing specifically on ACS's performance requirements, cost and schedule. Additionally, the Non-Advocate Review assessed the program office's organizational and management structure, current risk mitigation strategies in order to ensure their continued validity. The Non-Advocate Review was led by a Navy Flag officer and was comprised of members with a broad array of expertise, in air vehicles, avionics, systems engineering, propulsion and power, contracts, human factors engineering, and others. The Non-Advocate Review assessed ACS Research, Development, Test, and Evaluation costs as being more than two times the draft Acquisition Program Baseline Agreement; assessed the schedule as unexecutable; expressed doubt as to whether ACS could meet Army / Navy requirements; and stated that government and contractor personnel lacked "airplane integration" experience and that the flight test program was ill-defined.

On June 29, 2005, an Acquisition Decision Memorandum was issued authorizing the Navy to spend the remainder of the Fiscal Year 2005 funding to continue government staffing serving in critical joint ACS team lead roles and to fund its portion of ACS Program office expenses, including costs attributed to the identification and analysis of program impacts reported in the May 2005 Program Deviation Report. The Acquisition Decision Memorandum stated that the Army and Navy should continue to work together to analyze the issues confronting the ACS Program and develop a range of alternatives aimed at resolving the issues no later than September 30, 2005.

The Navy continues to pursue the Army-led ACS Program as it revalidates alternatives for a joint platform replacement of the EP-3E aircraft. The Senate Appropriations Committee's reduction of Navy Fiscal Year 2006 $120.0 million in Research, Development, Test, and Evaluation funds will increase the risk that a joint solution to the Navy's manned airborne Intelligence, Surveillance and Reconnaissance platform will yield a successfully executable program. In light of the technical issues and delay of ACS, the Navy requests to retain $21 million in Research, Development, Test, and Evaluation, Navy funds in Fiscal Year 2006 to conduct an Analysis of Alternatives for recapitalizing the EP-3E aircraft, revalidate the operational requirements and concept of operations for potential Joint platform alternatives, and update required documentation, while working with the Army to develop a successful solution for the present ACS issues.

In 2004 the Navy conducted an Analysis of Options per direction of the National Defense Authorization Act for Fiscal Year 2004 to replace the EP-3E mission capability. This analysis was forwarded to Congress in December 2004, summarizing ACS as the "Best Value" alternative primarily due to cost, assuming that the ACS platform met its Operational

Requirements Document thresholds. In lieu of the recent ACS programmatic issues, the Navy updated the 2004 Analysis of Options re-assessing mission system and platform performance, rough order of magnitude costs, and identifying other issues / risks. The increase in the ACS Program of Record costs levels the affordability field with other alternative platforms. The ACS option is now comparable with other manned options with varying risks. The best option for an EP-3E recapitalization is dependent on programmatic considerations and organizational structure (i.e., Joint potential, service cost sharing, detailed risk assessment). An Analysis of Alternatives is now needed to break out discriminators between the various alternatives. Additionally, the Navy would like to explore a tri-service Joint program and re-examine requirements. The Joint Program Office would be collocated (Army, Navy and Air Force) and be led by an organization with experience in complex aircraft integration and sensor development. Re-examination of requirements would require pre-Milestone B activities to conduct a Joint Concept of Operations and Joint Capabilities Development Document before re-entering System Development and Demonstration. With four Department of Defense Intelligence, Surveillance and Reconnaissance platforms (RC-12, EP-3, RC-135, RC-7) requiring recapitalization over the next 15 to 20 years, affordability and joint requirements should be considered in development of solutions. Services will be required to sustain legacy platforms to new IOC.

The Navy anticipated that its legacy EP-3E aircraft would require a service life well beyond the previously planned ACS Full Operational Capability of 2014. The Navy requests that, in addition to the $21 million requested to recapitalize the EP-3 E aircraft, the Appropriations Conference retain $15.0 million of the Fiscal Year 2006 ACS Research, Development, Test, and Evaluation, Navy funds to begin research and development for mission system sustainment and modernization for its legacy EP-3E aircraft in order to maintain manned Intelligence,

Surveillance and Reconnaissance viability without a mission capability gap until the replacement platform is fielded.

The Navy estimates that a restructured EP-3E recapitalization effort beginning in Fiscal Year 2006 would achieve Initial Operational Capability in Fiscal Year 2017. Navy EP-3E airframes are expected to reach their end of service life starting in Fiscal Year 2011. Recent engineering analysis has shown that the Navy should purchase an additional seven Special Structural Inspection Kits to ensure that the operational level of 12 EP-3Es remains structurally viable through Fiscal Year 2017. This bridge to recapitalization is captured in Figure 1-2. Engineering data has not been compiled nor analysis done to sustain a fleet of 12 EP-3Es beyond Fiscal Year 2017. The EP-3E Program presently benefits from shared maintenance, training, supply and depot level infrastructure costs, as well as common avionics, navigation, flight station and structural programs with the P-3C aircraft as a P-3 derivative airframe. However, the Navy's P-3C Fleet will be ramping down their infrastructure beyond Fiscal Year 2013 as the P-8A Multi-Mission Aircraft ramps up. The total infrastructure costs to support EP-3E aircraft will be increasingly born by the EP-3E Program alone beyond Fiscal Year 2013. Delaying recapitalization Initial Operational Capability beyond Fiscal Year 2017 would result in significant sustainment cost implications to the EP-3E.

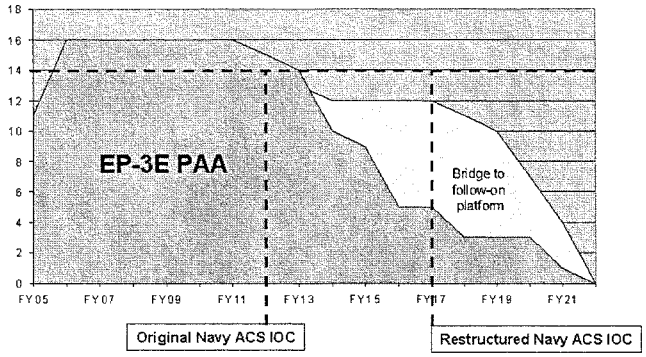

Figure 1-2, EP-3 Sustainment Bridge to follow platform

The Navy assessment of recapitalization with an IOC of 2017 will cause several critical legacy EP-3E signals intelligence mission subsystems to face obsolescence before the EP-3E is recapitalized. The program of record funds only the primary authorized aircraft for JCC Spiral 2 to maintain force levels until Navy ACS Initial Operational Capability in Fiscal Year 2012. Due to the slip in the ACS Initial Operational Capability, four EP-3E back up authorized aircraft will need to have the JCC Spiral 2 upgrade procured and installed to maintain Global Military Force Plan requirements through Fiscal Year 2017. Upgrading the four back up authorized aircraft with JCC Spiral 2 upgrades will achieve a common configuration for all 16 EP-3E aircraft. Multiple EP-3E aircraft configurations would result in increased out year operational costs and deteriorate supportability. In anticipation of an Aerial Common Sensor Initial Operational Capability of 2012, some developmental signals intelligence capabilities were deferred from the EP-3E Joint Airborne Signals Intelligence Architecture Modernization Common Configuration Program, reflected in the June 2005 program Operational Requirements Document. These

deferred capabilities, if addressed in the EP-3E, will result in additional increments of mission system capability improvements to maintain EP-3E mission effectiveness.

The $21.0 million Research, Development, Test, and Evaluation, Navy requested in Fiscal Year 2006 will begin an EP-3E recapitalization program restructure with an Analysis of Alternatives. Fiscal Years 2007 through 2010 will be utilized to conduct a Technology Demonstration phase. The Technology Demonstration phase will be used for Joint requirements harmonization and iteration with design concept cost, schedule and the acquisition strategy. A Milestone B Defense Acquisition Board for approval to enter System Development and Demonstration would be requested in Fiscal Year 2010.

The impact to operational units caused by the delay in ACS fielding will be significant. The Navy will begin to retire EP-3E aircraft as they exceed fatigue life safety limits starting in Fiscal Year 2011. By Fiscal Year 2014, the Navy will be unable to sustain an EP-3E Fleet sufficient to meet the Global Military Force Plan required operational levels, having a negative impact on Fleet, Theater and National Intelligence, Surveillance and Reconnaissance collection requirements. By Fiscal Year 2018, the Navy will be unable to meet operational requirements in more than one single, highly localized operational theater, and all EP-3E aircraft will be retired by 2020. The resultant risk would significantly increase for United States forces in a future crisis, leaving ships, soldiers and strike aircraft with reduced threat indications and warnings, limited suppression of enemy air defenses, and reduced intelligence collection and strike location capabilities.

It is important to note that signals intelligence threat indications and warnings has been "Go-No Go" criteria for every conflict since DESERT STORM. While it may be plausible for other Service assets, such as the Air Force RC-135, to pick up the loss of the EP-3E to Theater or

National collection, the model to support such coverage has repeatedly proven that not enough assets exist amongst the Services to cover the loss of a significant Intelligence, Surveillance and Reconnaissance contributor like the EP-3E. Additionally, the loss of the organic Navy EP-3E airborne signals intelligence platform will greatly increase the risk to open ocean and littoral Naval operations, and may in fact preclude such operations in critical global areas in which only the Navy maintains diligent coverage. The EP-3E continues to provide Fleet coverage previously performed by the carrier-based ES-3A Viking aircraft, which was retired in the mid 1990s; no platform or Service other than the Navy's EP-3E has since fulfilled the Naval Intelligence, Surveillance and Reconnaissance requirements following the retirement of the ES-3A.

SUMMARY

The Navy's challenge is keeping the EP-3E viable and relevant until an ACS Initial Operational Capability is established. Delay in ACS Initial Operational Capability beyond 2012 will require extending the EP-3E airframes service life, managing obsolescence to keep the EP-3E mission systems effective, and addressing additional requirements for spiral upgrades and mission system capability improvements.

Our mission remains bringing the fight to our enemies while continuing to be vigilant and well prepared at home and abroad. The increasing dependence of our world on the seas, coupled with a growing uncertainty of other nations' ability or desire to provide access in a future conflict, will continue to drive the need for agile Naval forces and the capability to project decisive joint power by access through the seas. The increased emphasis on the littorals and the global nature of the terrorist threat will demand the ability to strike where and when required, with the maritime domain serving as the key enabler for U.S. military force.

Accordingly, we will execute the Global War on Terrorism while transforming for the future fight. We will continue to refine our operational concepts and transform our technology to deliver the dominant military power envisioned in *Sea Power 21*. We will continue to pursue the operational concepts for sea basing persistent combat power, even as we invest in technology and systems to enable Naval vessels to deliver decisive, effects-based combat power in every tactical and operational dimension. We look forward to the future from a strong partnership with Congress that has brought the Navy and Army Team many successes today. We thank you for your consideration.

Mr. Chairman, thank you again for this opportunity to discuss with the Subcommittee the Navy's airborne intelligence collection programs.

QUESTIONS AND ANSWERS SUBMITTED FOR THE RECORD

OCTOBER 20, 2005

QUESTIONS SUBMITTED BY MR. WELDON

Mr. WELDON. Technology levels on the ACS program were much more mature at milestone B than the technology levels for FCS were at milestone B. In other words, the ACS program had much more "knowledge" as GAO would say, going into milestone B than FCS did at milestone B. If this can happen to ACS, can it not happen to FCS?

Secretary BOLTON. Technology maturity was not the issue with ACS. Rather, the issue was requirement maturity below the Key Performance Parameters (KPPs) requirements. Fully developing Concepts of Operation (CONOPS) and mission threads by the requirement community in close collaboration with the acquisition, resourcing, testing, and sustainment communities before System Development and Demonstration (SDD) start would have yielded better SDD results.

Mr. WELDON. You mention in your statement that "while discovery of the weight issue at an even earlier point in the program's life would have been the preferred approach, it was simply not practical." Yet you later state that the ACS program "experienced a decrement in funding during the CAD phase, forcing [the Army] to reduce the scope of the integration effort . . ." Please clarify.

Secretary BOLTON. ACS experienced a decrement of $11.2 million during the CAD phase following termination of the Joint SIGINT Avionics Family/Low-Band Sub-System program, of which $4 million was passed down to the contractors ($2 million to each contractor). This caused the Army to reduce the scope of the CAD phase, specifically work related to airframe integration and antenna placement. Had we proceeded with this work as originally planned, it is possible—not definite—that we may have learned about the Space, Weight, Power and Cooling (SWaP–C) problems earlier than we did.

Mr. WELDON. a. The issue isn't that the problem was discovered early in the SDD process. The issue is what changes need to take place in the "process" so that the "preferred" approach, as you say, becomes the "mandatory" approach. How do we prevent a $4 million dollar decision from having an $800 million consequence? How can we change the process?

Secretary BOLTON. The Department of Defense (DOD) 5000 series guidance has undergone several revisions during the earlier phases of the ACS program. ACS followed the processes as intended. On a program of this complexity, it may be worth the expense to go all the way to a Critical Design Review (CDR) as part of the earlier phase, rather than the SDD phase. However, I still believe a better understanding of the requirement, fully developed CONOPS and fully developed mission threads done by an educated/trained requirements community and thoroughly vetted with a trained resource, acquisition, test, and sustainment community will solve most "ACS-like" SDD problems.

Mr. WELDON. b. Is it a matter of fixing existing policy or is the existing policy just not being followed?

Secretary BOLTON. See answer to "a" above.

Mr. WELDON. After all this time, money and reviews, why did the fundamental design flaw that had such serious ramifications to the program go undetected? In other words, if you could do it all over again, what would you have done differently that could have prevented this situation?

Secretary BOLTON. The previous question's response of going to a full Critical Design Review may be the most logical way to prevent a recurrence.

Mr. WELDON. What are the lessons learned in terms of robustness and quality of the requirements, design and milestone reviews?

Secretary BOLTON. See answers to questions 1, 2, and 13.

Mr. WELDON. The committee understands that the weight issue first surfaced in December last year. Why is it going to take almost a year to get from problem identification to problem solution? Why wasn't a stop work order issued sooner?

Secretary BOLTON. The problem first surfaced in December 2004 when Lockheed found a potential weight bogey of 100 pounds above the structural limit of the airframe, several hundred pounds above what the Army had estimated was a "worst case" scenario for weight growth. The contractor explained to the product manager (PM) that this estimate was based on weight projections as Lockheed developed de-

tailed Interface Control Documents (ICDs) with the airframe manufacturer (Embraer). The PM directed Lockheed to determine the extent of the problem, which meant that Lockheed had to develop elements of the design beyond what had been scheduled for that time period. In other words, Lockheed had to accelerate design work in order to fully and quickly understand the problem. Once enough was known about these design elements, Lockheed then had to accomplish engineering work to determine the actual weights of these design elements. Much of this work was completed by early April 2005. Lockheed then briefed the extent of the problem to the Program Executive Officer (PEO) and suggested several requirements trades that might allow continued use of the proposed airframe. The PEO asked Lockheed to study excursions using larger airframes in order to provide the Government sufficient insight to make a determination of the path ahead. In May, it became obvious that a schedule breach would likely occur, and possibly a cost breach as well. We reported this to the Department of Defense, and by mid-June I accepted the Navy's offer to conduct a full independent assessment of the program while the Program Manager (PM) studied larger aircraft options. Both the Navy's independent assessment and the Army's study of larger aircraft concluded by late August, by which time I determined that the PM should present several courses of action and a recommendation to a formal Army Systems Acquisition Review Council for decision. This we accomplished in early September. Shortly thereafter, I directed a Stop-Work Order on the contract and directed Lockheed to return in 60 days with several options for a path forward.

Mr. WELDON. Assuming that the contractor can still use the current platform by reducing payload weight and delaying some ACS requirements, how much room would there be in terms of size, weight, and power before the payload would once again outgrow the platform?

Secretary BOLTON. The proposed platform is limited in SWaP–C margins. If we were to proceed down the path of using this airplane, it would likely require costly weight reduction upgrades to the sensors, leveraging the benefits of Moore's law (the theory that computing power generally doubles every 18 months) wherever possible, and probably straying from the intended COTS-based sensor solutions to specially built hardware instead.

Mr. WELDON. Who will be the final decision authority to determine what happens with the ACS program?

Secretary BOLTON. The decision to terminate or continue with the current contract rests with the Army, specifically with the Assistant Secretary of the Army for Acquisition, Logistics and Technology (aka the Army Acquisition Executive). Any decision regarding the disposition of the program itself (i.e., whether to terminate the program altogether) rests with the Undersecretary of Defense for Acquisition, Technology and Logistics (aka the Defense Acquisition Executive).

Mr. WELDON. In reference to the RDT&E program costs, will there be a Nunn-McCurdy breach of the ACS program?

Secretary BOLTON. A Nunn-McCurdy breach seems certain. The extent of the breach won't be known until we make a final decision on a path forward.

Mr. WELDON. The ACS is listed as a complimentary program to the Future Combat System program. Does the delay to the ACS program have an impact on the FCS program? If so, what?

Secretary BOLTON. The current Guardrail Common Sensor and Airborne Reconnaissance Low systems will be kept viable until ACS is fielded, minimizing any impacts to FCS.

Mr. WELDON. Does ACS receive any funding from the FCS program? If so, what?

Secretary BOLTON. No, ACS receives no funding from the FCS program.

Mr. WELDON. If one of the potential options is to change the requirements, how would reduced capability to store data on board impact the ability to meet other requirements, such as timeliness?

Secretary BOLTON. A complete engineering analysis would have to be done to determine those types of impacts. In your example (reducing on-board storage capability), the impact would likely be felt more in terms of the volume of targets stored in the database than in the timeliness of the response. In other words, in the number of signals or images that could be handled in a given time.

Mr. WELDON. What is the current requirement for on-board crew stations and is this one of the requirements that is being looked at for possible change.

Secretary BOLTON. The requirement for on-board crew stations, as stated in the Joint Requirements Oversight Council (JROC)-approved Operational Requirements Document of October 2003, is six (6). This takes into account the Navy's two additional work stations above the Army's original baseline of four. This is a prime area for weight reduction in terms of both equipment and personnel, and like all other requirements it is being reviewed.

Mr. WELDON. In your testimony, you talked about breaking the "stovepipes." Specifically, ". . . it is not only a matter of let's organizationally do something, but within those stovepipes it would be really neat if you would really educate, train and provide the right tools for those people. . . . in fact, in the Army, that is what we are trying to do right now, is to break those stovepipes down to make sure the requirements community, sitting with the resourcing community, sitting with the acquisition community from day one are looking at those operational requirements to try to understand what really are the technical and financial implications of trying to do that." Are you saying that these other communities (requirements and resourcing types) need to have a certification process similar to what the acquisition community currently has? Why is this so important? What specifically would you change if you could?

Secretary BOLTON. I am not sure a certification process is where I would drive this, although it merits consideration. However, I do strongly believe that some training and education is needed for our requirements, resourcing, and sustainment communities. These communities play key roles in the "Big A" process, which delivers capability to the field. Not ensuring these communities are trained/educated and provided the appropriate tools, I believe is unwise and will continue causing problems like those currently experienced by the ACS. The need to address this training shortfall will increase as future systems become more integrated and information centric.

Mr. WELDON. The ACS program had its milestone B review in July 2004. The Future Combat System had its milestone B review in May 2003. If these "stovepipes" as you say, existed for the ACS program in 2004, certainly they existed for the FCS program in 2003. How do you know that a similar issue like with what happened with ACS, not truly understanding the impacts of requirements, won't happen with FCS?

Secretary BOLTON. Unlike ACS, the FCS has enjoyed unprecedented communication, coordination, and integration among the requirements, resourcing, acquisition, testing, sustainment, and contractor communities. The result is an FCS program, which is maintaining the cost, schedule, performance baseline established by DOD.

QUESTIONS SUBMITTED BY MR. MCHUGH

Mr. MCHUGH. What is the project termination cost?

Secretary BOLTON. [The information referred to is classified and retained in the committee files.]

Mr. MCHUGH. What is the contractor liability here?

Secretary BOLTON. [The information referred to is classified and retained in the committee files.]

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