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STATEMENT BY

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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 will be the cornerstone of a transformed intelligence force.

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 have the capability to see to these depths, they generally do not 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—was simply not a

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.