STATEMENT OF HONORABLE JACQUES S. GANSLER, UNDER SECRETARY OF DEFENSE (ACQUISITION & TECHNOLOGY)

Before House Armed Services Subcommittee
Subcommittees on Research and Development and Procurement

"FY 2000 Budget for Ballistic Missile Defense"

February 25, 1999

Good morning, Mr. Chairman, members of the committee, and staff. It is a privilege to appear before you today to discuss the Administration's strategy to protect both our warfighters and our homeland from the growing threat posed by weapons of mass destruction delivered by ballistic missiles. General Lyles, General Martin, and I will review with you the architecture we envision to provide that protection, and the programs we are currently pursuing within that architecture ... I would like to take this opportunity to thank the committee for the strong support it has given to missile defense, to include the recent authorization and appropriation of additional funds for the program.

The Threat

Our defense strategy for the 21st century seeks to shape the international security environment in ways favorable to U.S. interests, to prepare for an uncertain future, and to respond to the full spectrum of threats – from whatever the source.

A series of very dramatic and terrifying world events this past year has made us painfully aware of the vast, complex geopolitical, economic, and technological upheaval that is taking place in the world. We no longer need to be reminded that we face a very real – and present – set of new threats from a variety of asymmetric forces capable of being directed against us from all parts of the world. I need not tell the members of the committee that recent terrorist bombings in Kenya and Tanzania, the conflicts in Bosnia and Kosovo, the North Korean and Iranian ballistic missile launches, the nuclear tests in India and Pakistan, the growing proliferation of low-cost cruise and ballistic missiles, and the sophisticated cyber attacks on the U.S. Department of Defense computer systems have brought home to all of us the very real nature of the present and growing threats to our national security.

BATTLE/MANAGEMENT/COMMAND, CONTROL AND COMMUNICATIONS (BM/C3) CENTER UNDER CONSTRUCTION WITH ARTIST'S RENDERING.

Today, more than 20 countries possess or are developing weapons of mass destruction. More than 20 nations have theater ballistic missiles or cruise missiles to deliver them. Some of these countries are developing much longer-range ballistic missiles.

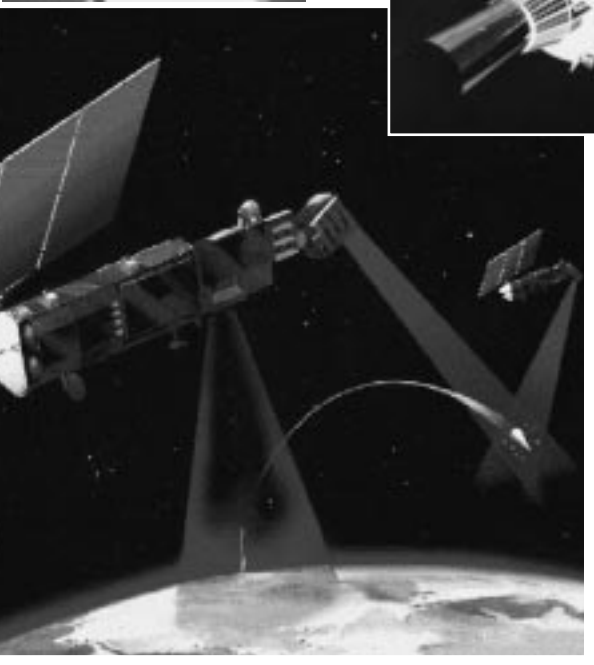
Theater-range missiles already in hostile hands pose an immediate and increasing threat to U.S. interests, military forces, and allies. More countries are acquiring ballistic missiles with ranges up to 1,000 km, and more importantly, with ranges between 1,000 km and 3,000 km. Iran's flight test of its Shahab 3 medium-range missile demonstrates that we are no longer dealing with a hypothetical threat. We are dealing with a real threat that is with us now. With a range of 1,300 km, the Shahab 3 significantly alters the military equation in the Middle East by giving Tehran the capability to strike targets in Israel, Saudi Arabia, and most of Turkey. Among those countries seeking longer-range missiles, North Korea is the most advanced: a judgment underscored by the recent launch of the Taepo Dong-1.

The U.S. missile defense program underscores the urgency of meeting this immediate threat. A missile defense system reduces the likelihood that a ballistic missile attack could achieve its intended objectives. Equally important, missile defenses contribute to the reduction and prevention of missile proliferation and strengthen regional stability, both critical for shaping the international security environment.

Photos courtesy Ballistic Missile Defense Organization

Ground Based Interceptor in Flight INF1 Target Launch June 24, 1997

Defense Support Program/ Space Based Infrared Geosynchronous and High Elliptical Earth Orbit Satellite (DSP/SBIRS GEO)



Space Based Infrared System Low Earth Orbit (LEO) (Space and Missile Tracking System)

The Administration's Strategy

Our current missile defense program is affordable and can be successfully executed. It is well matched to the missile threats we will face. In addition, we have increased funding in the FY 2000 President's Budget for the National Missile Defense and Navy Theater Wide programs.

As we began our deliberations in support of the FY 2000 President's Budget submission, we were faced with making a number of decisions affecting both the ballistic missile defense mission and other missions of the Department, as well as decisions on how to proceed with programs within the ballistic missile defense arena: when to provide the funding to deploy our National Missile Defense program, how best to field an upper-tier Theater Missile Defense system quickly and affordably, what quantities of our lower-tier systems we should buy, and how quickly to proceed with our Airborne and Space Based Laser efforts. We also had to align the Space Based Infrared System (SBIRS) components to make the best use of our existing missile warning assets as well [as] meet the needs of our missile defense mission, taking into account both resource and technology constraints and their impact on setting realistic launch dates.

The decisions we made were based on the Department's fundamental priorities concerning our missile defense program. These priorities have not changed over the past year. We must defend U.S. troops against the threat posed by the theater ballistic missiles and cruise missiles. Within the Theater Missile Defense (TMD) mission area, we must first field systems to defend against the existing short- to-medium-range missiles — our lower-tier systems. Next we must proceed to add upper-tier systems for defenses over wide areas against longer-range theater ballistic missiles as that threat emerges and as our technology allows. At the same time, we should continue developing the Airborne Laser (and, subsequently, the Space Based Laser) to provide boost-phase intercept capability.

Equally important, we must develop an early capability to defend against a limited strategic ballistic missile attack by a rogue nation — via our National Missile Defense (NMD) program.

Finally, we must continue to develop a robust technology base to underlie these two programs — both the TMD program and the NMD program — which will allow us to develop and deploy more advanced missile defense systems over time as the threat systems they must counter become more advanced.

The Ballistic Missile Defense Architecture

In light of the widespread deployment of theater ballistic missiles today, the Department's immediate missile defense priority is to develop, procure, and deploy Theater Defense systems to protect forward-deployed elements of the U.S. armed forces, as well as allies and friends, against cruise and ballistic missiles (as well as aircraft). This plan envisions time-phased acquisition of multi-tier, interoperable missile defense systems that provide defense in-depth against theater ballistic and cruise missiles. The Ballistic Missile Defense Organization, the Joint Staff's Joint Theater Air and Missile Defense Organization, and the Military Services share the responsibility for developing improved capability to defend against such threats.

No one system can meet all of the demanding and complex tasks necessary

to satisfy the warfighting commander's theater missile defense requirements. Since the mission cannot be accomplished with just one or two systems, we are developing multiple systems designed to counter the threat during all phases of flight. We call this the Theater Air and Missile Defense Family of Systems. To work effectively, this Family of Systems must be interoperable and capable of sharing and exchanging information, providing a common view of the battlespace.

The Department has taken significant steps in the last year toward realizing the interoperable Theater Air and Missile Defense Family of Systems. Of note, the Theater Missile Defense Capstone Requirements Document, which specifies the joint warfighter's overarching requirements, received Joint Requirements Oversight Council validation, thereby providing us, for the first time, a set of formal, overarching, joint missile defense requirements. In short, we are working to define and build the Theater Air and Missile Defense Family of Systems in the same manner that it will be used — jointly.

Lower-Tier Systems

Lower-tier systems remain the top priority to defeat short-range ballistic missiles. The Patriot Advanced Capability-3 (PAC-3) and the Navy Area Defense systems are the key lower-tier systems for this mission. PAC-3 will provide air defense of ground combat forces and defense of high-value assets against high-performance air-breathing threats and theater ballistic missiles. The FY 2000 budget request calls for procurement of 32 PAC-3 missiles, with first unit equipped projected for FY 2001. The development of the missile's "seeker" software was more difficult than anticipated and delayed the first attempted intercept last year and, therefore, the program. The first intercept attempt is now back on track for March, and, consistent with Congressional intent, the program will require two successful intercepts before proceeding to low-rate initial production, which we expect later this year.

The Navy Area Defense program will provide a sea-based, lower-tier capability to U.S. forces, allied forces, and areas of vital national interest at sea and in coastal regions against air-breathing threats and theater ballistic missiles. The FY 2000 budget request calls for 23 SM-2 Block IVA missiles to start off the low-rate initial production buy. Recent delays in the next phase of development of the Aegis weapon system software have impacted the program's schedule. The first unit equipped is projected for FY 2003, and it will require two successful TBM intercepts, as with Patriot's PAC-3, and an additional anti-air warfare intercept, before proceeding to low-rate initial production in late FY 2000.

Upper-Tier Systems

Our upper-tier systems — the Theater High Altitude Area Defense system and the Navy Theater Wide program — are designed to intercept incoming missiles at high altitudes in order to defend larger areas, defeat medium- and long-range theater ballistic missiles, and increase theater commanders' effectiveness against weapons of mass destruction by providing a layered defense. THAAD and Navy Theater Wide will make possible an effective protection of broad areas, dispersed assets, and population centers against missile attack. The Navy Theater Wide system builds upon the existing Aegis weapon system as well as the Navy Area Defense system. Compared to last year's budget request, we have increased funding for Navy Theater Wide by more than half a billion dollars in FY 1999-2001, including funds added by the Congress last fall, so that we can pursue this program as a major defense acquisition program. Additionally, as part of the program's risk mitigation development efforts, we are looking to cooperative efforts with Japan to evolve the capability of the Block I missile into the Block II variant.

We have established a combined "upper-tier" funding profile in FY 2002-2005. We believe this is the best way to meet our objective to field an upper-tier system capability by 2007. Extensive developmental testing for both THAAD and Navy Theater Wide is planned in 1999 to 2001. In the near term, THAAD will continue flight testing with missiles of the current design; and tests of the Aegis Lightweight Exo-Atmospheric Projectile (LEAP) will demonstrate the Navy Theater Wide system concept. We will examine both programs after initial flight testing to determine system progress. Based on this progress, and an assessment of cost, schedule, technical performance, and program risk, the Department will allocate upper-tier program resources to focus on the most successful program. Depending on the results of the review, the other system might continue to be developed, most likely at a slower pace. We expect to make this decision before submitting the FY 2002 budget request.

To defeat theater ballistic missiles during their boost phase, we are developing the Airborne Laser (ABL) system. This adds an important additional layer of defense to the architecture. By terminating powered flight early, ABL thus confronts an adversary with the prospect of having missile payloads fall short of their targets, perhaps on the adversary's own territory. The ABL aircraft will be a modified 747-400 freighter, carrying a megawatt-class laser system, beam control optics to compensate for the atmospheric turbulence between the aircraft and the target, and a battle management C4I capability. This capability enables the system to locate and engage targets autonomously, and also provides cueing, launch point location, and tracking data to other missile defense units.

The ABL program passed its Milestone I review in November 1996, when it established an acquisition program baseline, and recently passed its Authority-to-Proceed-1 (ATP-1) review in June-September 1998. The program is restructuring to accommodate a Congressionally mandated $25-million reduction in FY 1999 funding, so these dates are subject to change, but we expect to begin modifying the first demonstrator aircraft in January 2000, and conduct a lethal shoot-down of a realistic target in September 2003.

As directed by the FY 1999 Authorization, the Department is conducting an as-

sessment of the technical and operational aspects of the ABL program, concurrently with a review by an independent team of non-Department of Defense experts, who are assessing the testing and operational concepts. Overall, the ABL program has made good progress. In September 1998, laser system power was demonstrated at 110 percent of the design specification — a major success story.

Many of the capabilities needed for effective cruise missile defense are either evolving from existing systems or are in development. For example, an interoperability Advanced Concept Technology Demonstration will network, under the Cooperative Engagement Capability, selected ballistic missile defense sensors; battle management/command, control, and communications; and weapons (including the PAC-3 and Navy Area Defense lower-tier systems) to provide capabilities against cruise missiles. A key objective of cruise missile defense efforts is to leverage the synergy between ballistic missile, cruise missile, and air defense, and to integrate various systems that contribute to cruise missile defense into a comprehensive architecture.

Additionally, advanced technology programs for cruise missile defense focus on shooting down land-attack cruise missiles at extended ranges, possibly over an adversary's territory — adding depth to existing capability. To ensure the Department is positioned to capitalize on all of these developments, the Commanders-in-Chief, the Services, the Ballistic Missile Defense Organization, and the Joint Theater Air and Missile Defense Organization are developing joint employment concepts and an investment plan for Theater Air and Missile Defense.

International Cooperation Programs

The increased likelihood of committing forces to coalition operations makes the case for greater armaments cooperation with friends and allies. The Department's approach to international participation in the development and deployment of theater missile defense systems continues to build upon consultations with our allies and friends and the establishment of bilateral and multilateral research and development programs.

The Medium Extended Air Defense System (MEADS) is a cooperative development program between the U.S., Germany, and Italy to develop a mobile cruise and ballistic missile defense system. Recently, the Department decided that the planned MEADS system was unaffordable as structured. Therefore, we are redirecting MEADS towards the development of evolving technologies that will be lower risk and more affordable, and yet allow us to meet the requirement for a highly mobile, rapidly deployable system for defense of our maneuver forces. The FY 2000 budget provides about $150 million over the next three years for technology development, focusing on a 360° fire control radar and a mobile launcher, and utilizing the PAC-3 missile as the MEADS interceptor. The Department has kept its international partners apprised of the proposal to restructure MEADS and hopes they will join in this new approach.

The Arrow Continuation Experiments program, a cooperative program with Israel, concluded with the successful Arrow II flight test in September 1998. Given the success of this program, Israel committed to the near-term deployment of an active theater missile defense system. In 1998, amendments to the Arrow Deployability Program agreement provide for the integration, test, and evaluation of the Arrow Weapon System, namely, the jointly developed Arrow interceptor and Israeli-developed ground equipment, focused on enhancing the system's interoperability with U.S. theater missile defense systems. It also gives Israel the option of acquiring an additional surveillance/fire control radar for an eventual third Arrow battery. The FY 2000 budget provides nearly $120 million over the next three years for the deployability program, a hardware simulation testbed, and an architecture analysis study. We are currently developing interface requirements (hardware, software, and procedures) to establish some level of interoperability between Arrow and the Patriot systems.

The Russian American Observational System (RAMOS) program was initiated in 1992 to engage the Russian Federation in cooperative early warning and theater missile defense research with the primary goal to build confidence through cooperation. The technical goals were defined to answer questions concerning risk areas for future early warning space programs. In the past two years, we have developed Russian and American sensors and jointly tested them aboard a U.S. aircraft, demonstrating significant technical cooperation, and we have taken the first joint images from space. We strongly wish to continue our cooperative efforts involving early warning satellite technologies. We have recently identified two potential future research projects that are consistent with the original objectives for RAMOS. They are: 1) to continue aircraft experiments and simulations to study mid- and long-wave infrared background clutter as it applies to theater missile tracking, and 2) to fund Russian early warning prototype sensor development for future space flight. We will spend $8 million in FY 2000, and $13 million between FY 2001-2002 on this effort, and provide about half of this funding for the Russian research efforts. We will also fund Russian research on early warning — providing almost $8 million in FY 2000 and $20 million between FY 2001-2002. We expect to have discussions with the Russians next month on continuing this important series of experiments.

National Missile Defense

The submission of the FY 2000 budget request marks a major change in the Administration's funding of the National Missile Defense program. The addition of $6.6 billion in new funding brings total FY 1999-2005 resources for NMD to $10.5 billion, of which $9.0 billion is allocated in FY 2000-2005. The added funds will protect the option to deploy a national missile defense system. However, no decision for deployment has been made. A June 2000 decision regarding deployment is expected to be based primarily on the maturity of national missile defense technology as demonstrated in development and testing, the

assessment of the threat, the affordability of the system, and treaty issues.

The national missile defense program is postured to respond to the possibility that a rogue nation could come to possess intercontinental ballistic missiles that could threaten the United States. This possibility was underscored by the August 1998 North Korean attempt to launch a satellite, using as a platform a Taepo Dong-1 (TD-1) missile with an added third stage. The test demonstrated that North Korea continues to be interested in developing long-range missile capabilities and that it has made considerable progress.

That launch demonstrated some important aspects of ICBM development, most notably multiple-stage separation. While the intelligence community expected a Taepo Dong-1 launch for some time, it did not anticipate that the missile would have a third stage or that it would be used to attempt to place a satellite in orbit. The intelligence community's current view is that North Korea would need to resolve problems with the third stage prior to being able to use the three-stage configuration as a ballistic missile to deliver small payloads to intercontinental ranges (that is, ranges in excess of 5,500 kilometers); and they would, of course, also have to solve warhead reentry problems. Nonetheless, a three-stage variant of the TD-1 could soon pose a threat, if it cannot already, to portions of the United States sooner than estimated previously.

The national missile defense system under development would have, as its primary mission, defense of the United States — all 50 states — against a small number of intercontinental-range ballistic missiles launched by a rogue nation. Such a system would also provide some residual capability against a small accidental or unauthorized launch of strategic ballistic missiles from China or Russia. It would not be capable of defending against a large-scale, deliberate attack.

Of the $6.6 billion in new funds programmed for national missile defense, $600 million will be provided using the FY 1999 Emergency Supplemental for Ballistic Missile Defense. These supplementary funds permit additional risk-reduction efforts, as well as activities needed to ensure a smooth transition to deployment should a decision be made in FY 2000 to begin deploying the system. Previous plans for testing national missile defense components and the system prior to the deployment decision remain unchanged. In June 1999, the performance of the exo-atmospheric kill vehicle will be demonstrated in the first national missile defense intercept attempt. Subsequent tests, to be conducted before the June 2000 decision point, will further evaluate the system's performance, culminating in an "end-to-end" systems test in the second quarter of FY 2000.

To maximize the probability of programmatic success and be able to deploy a technologically capable system as quickly as possible, key national missile defense decisions will be phased to occur after critical integrated flight tests. As a result, instead of projecting a deployment date of 2003 with exceedingly high risk, the Department now projects a deployment date of 2005 with much more manageable, although still high, risk. The funds added to the national missile defense program in FY 2001-2005 support a deployment in FY 2005. The majority of national missile defense funding through FY 2000 is in the RDT&E appropriation; procurement funding would begin in FY 2001. Military construction funds are programmed in FY 1999 for design, while construction is funded in FY 2001-2005.

If testing goes flawlessly, and there is a willingness to accept higher program risk, we could seek to deploy sooner. But independent analysts have expressed concern that the Department's fast-paced schedules for ballistic missile defense programs have sometimes represented a "rush to failure." Given the reality of the threat, the national missile defense program cannot afford to fail.

The Air Force's Space Based Infrared System (SBIRS) system is an important element of our BMD program. Both components of the SBIRS program, SBIRS-High and -Low, have seen significant cost growth and technical challenges during the past year. The President's Budget restructures both components of the SBIRS program to make optimum use of available Defense Support Program satellites, yet provide timely support to the ballistic missile defense mission.

In that regard, we are rescheduling the SBIRS-High program's first launch of its geosynchronous satellite to FY 2004. We currently have five Defense Support Program satellites awaiting launch, and the Department, in executing its stewardship responsibilities, must make full use of those satellites before launching a replacement system. The new SBIRS-High schedule synchronizes well with the new national missile defense schedule in that the required number of SBIRS-High geosynchronous satellites (two) will have been launched in time to support a national missile defense deployment in 2005. It should be noted that, although SBIRS-High will provide improved performance compared to its predecessor in all mission areas, the Defense Support Program is adequate for the strategic warning mission. And the Defense Support Program can support the initial deployment of the national missile defense system, with only a very slightly reduced confidence level of successful defense.

We are also restructuring the SBIRS-Low component, resulting in a planned first launch in FY 2006. This change is driven primarily by the technical challenges and complexities inherent in the system. As part of the SBIRS-Low restructure, after the formulation of the FY 2000 President's Budget, we cancelled the two flight demonstration experiments that were part of our earlier-conceived risk reduction effort. Much has already been learned and significant risk has been mitigated through the design, fabrication, assembly, and integration accomplished to date. Continuation of the flight experiments is not critical to SBIRS-Low, and the remaining program risk is best addressed in the now more robust Program Definition studies that will constitute the next phase of the SBIRS-Low