EXECUTIVE SUMMARY

Introduction: Costs Grow, Technical Problems Continue

Over $130 billion has been spent on missile defense since President Reagan gave his 1983 "Star Wars" speech. Despite all this money and effort, the Pentagon has yet to produce a single device capable of reliably intercepting a long-range ballistic missile.

The ground-based midcourse system (GMD), which has received the bulk of missile defense funding in recent years, has failed in its last three tests, including two in which the interceptor missile was unable to leave its silo. Independent experts have demonstrated that the current system is incapable of picking out an incoming warhead from an array of simple decoys, rendering it unreliable and ultimately unworkable. Other missile defense technologies, such as "boost phase" defenses whose aim would be to hit an enemy missile shortly after it leaves its silo, are also plagued with daunting technical challenges that may not be solvable, according to a report from the American Physical Society.

Unless current plans are scaled back dramatically, missile defense costs will continue to grow. For example, the Union of Concerned Scientists has determined that **the *launch costs* alone for putting enough Space-Based Interceptors in orbit to provide global coverage against a missile attack could reach $40 to $60 billion.**

Should Missile Defense Be a Priority?

In era of mass casualty terrorism, missile defense has little relevance to the most pressing threats facing the United States. As CIA analyst Robert Walpole noted in 2002 testimony to Congress, **"U.S. territory is more likely to be attacked by non-missile means – most likely from terrorists – than by missiles."** Or as Greg Thielmann, a proliferation expert who worked at the State Department's Bureau of Intelligence and Research, notes, **"For emerging missile powers to anticipate… intimidating the United States with threats of a direct missile attack on the American homeland is a dubious proposition… Devastating retaliation and the end of the attacker's regime would have to be assumed."**

The Bush Difference: More Money, Less Scrutiny

Annual missile defense budgets increased by more than 80 percent in the first two years of the Bush administration, from $4.2 billion per year to $7.7 billion per year. Budgets have continued to increase, to $8.8 billion in the proposed budget for Fiscal Year 2006, down from $9.9 billion in FY 2005. **The current missile defense budget is more than double what it was in the final year of the Clinton administration.**

As budgets have increased, scrutiny of the missile program has diminished. Secretary of Defense Donald Rumsfeld, a long-time ally of the missile defense lobby, has eliminated basic reports on the costs and performance of missile defense technology, while

classifying key details that Congress and the public need to assess the feasibility of the program. For example, information on the number and character of decoys used in a given test is no longer provided, making it impossible to determine whether tests are being conducted under anything even remotely resembling real world conditions.

Contractors Cash In: The Rich Get Richer

The acceleration of missile defense spending has been especially lucrative for top missile defense contractors Boeing, Lockheed Martin, Raytheon and Northrop Grumman. Boeing's missile defense contracts more than doubled from 2001 to 2004, from $1.4 billion to $2.9 billion. Lockheed Martin's awards also increased more than 100%, from $557 million in 2001 to $1.2 billion in 2004. Raytheon's contracts nearly tripled, from $225 million to $647 million; and Northrop Grumman's awards went up more than fivefold, from $104 million to $534 million. **More than 77% of all missile defense prime contract awards from 2001 to 2004 went to just these four firms.**

A number of lesser-known firms have also developed a considerable business in missile defense, including the **Huntsville, Alabama based firm Sparta, Inc**., which **received $264 million in awards for 2001 through 2004**; **and Colsa Instruments** – an arm of Collazo Enterprises – which **received $120 million in missile defense awards.**

There are hundreds of firms receiving at least some funding for missile defense work. In all, seventy-five contractors received $10 million or more in missile defense prime contracts from 2001 to 2004, and over 250 firms received at least $1 million in awards. These figures don't include subcontractors, which can add political clout to efforts to maintain funding for a given system. For example, **Boeing cites 32 companies in 19 states as part of its Airborne Laser (ABL) program, including facilities in Washington, Oregon, California, New Mexico, Colorado, Kansas, Iowa, Nebraska, Ohio, Pennsylvania, New York, Massachusetts, Maryland, Florida and Georgia.**

Contractor Political Contributions: What Are They Getting for Their Money?

The top missile defense contractors contributed $4.1 million to just 30 key members of Congress in the 2001 through 2006 election cycles. The top two recipients of missile defense-related contributions in the Senate were Alabama Republicans Richard Shelby ($204,334) and Jeff Sessions ($145,250). Huntsville-based contractor Collazo Enterprises has been Sen. Sessions' top contributor thus far in the 2001 to 2006 cycle, contributing a total of $40,000 to his political war chest. The company and its executives also contributed $26,000 to Sen. Shelby's leadership Political Action Committee (PAC), the Defend America PAC. In exchange, **both Senators have worked overtime to keep missile defense budgets high and missile defense projects flowing to Alabama, as have their colleagues Rep. Terry Everett (R-AL), Bud Cramer (D-AL), and Robert Aderholt (R-AL), all of whom are among the top 15 recipients of missile defense-related contributions in the House of Representatives**.

Other major missile defense supporters who have been on the receiving end of major contractor donations include **Rep. Jim Saxton (R-NJ)**, who **received $72,995 from Lockheed Martin in the 2001 to 2006 cycles, and has bragged about his role in getting two Lockheed Martin-built Aegis destroyers added to the Pentagon budget. Saxton describes the ships as "the shields of the U.S. fleet and the backbones of the sea-based element of the nation's missile defense system." Sen. Ted Stevens (R-AK), the chairman of the defense appropriations subcommittee**, has been pressing the Pentagon to continue upgrading ground-based missile defense interceptors that are being based in Fort Greely, Alaska, with 40 missiles expected to be deployed by 2007. **Sen. Stevens has already received $103,400 from missile defense contractors in the 2001 to 2006 election cycle.**

Rep. Jack Murtha (D-PA) received more missile-defense related funding than any other member of Congress, with over $318,000 in the 2001 to 2006 election cycle to date. Although he started out as a skeptic of missile defense, he has recently become a fan of the program, a change that coincides with his successful efforts to steer missile defense contracts to his district. Companies involved include subcontractors like Mountaintop Technologies and Kuchera Defense Systems. **Murtha was involved in persuading Northrop Grumman to place a missile defense facility in his district.**

Seeds of a Space Weapons Lobby

The concept of placing weapons in space – to destroy other country's satellites, bolster missile defense efforts, or attack targets on earth – has gone well beyond the "what if" stage into research and development of actual systems. Although many of these programs are shrouded in secrecy**, a rough estimate is that new space weapons initiatives receive approximately $300 to $500 million per year,** a small fraction of the roughly $22 *billion* the U.S. spends annually on military space activities. **Many of the same corporate players that are involved in missile defense are also in on the ground floor of space weapons projects**.

Major space weapons-related programs now under way **include the XSS-11**, an experimental spacecraft with both inspection and anti-satellite capabilities; **the Near Field Infrared Experiment (NFIRE)**, a demonstration project tied to the testing of a space-based interceptor; **the Micro-Satellite Propulsion Experiment (MPX)**, aimed at developing small satellites that can track and/or destroy other nation's satellites; **the Common Aero Vehicle (CAV),** capable of dispensing munitions aimed at targets in orbit; **the Kinetic Energy Anti-Satellite Weapon (KE-ASAT)**; laser-based anti-satellite systems, including ones that would rely on the proposed **Evolutionary Air and Space Global Engagement program (EAGLE)**, a series of relay mirrors that could extend the reach of air- and ground-based lasers; and **the Space Based Interceptor (SBI)** and **the Kinetic Energy Interceptor (KEI)**, two missile defense projects that could be adapted for use as space weapons. Another space weapon under consideration is **the Hypervelocity Rod Bundles project, nicknamed "Rods from God**," which would be designed to strike deeply buried targets on earth.

Major contractors involved in space weapons projects to date include **Lockheed Martin** (XSS-11); the **Spectrum Astro division of General Dynamics** (NFIRE); the **SAIC Corporation** (XSS-11 and the Kinetic Energy Interceptor); **the Schafer Corporation** (Common Aero Vehicle); **Miltec Inc. and Davidson Technologies** (the KE-ASAT); and **Northrop Grumman** (the Kinetic Energy Interceptor).

Among the most **vocal officials supporting the development and deployment of space weapons are former Northrop Grumman Vice President James Roche**, who served as Secretary of the Air Force in the administration of George W. Bush; **and Peter B. Teets, a former chief operating officer at Lockheed Martin who has spoken of "paving the path to 21st century warfare" and strafing targets on earth with weapons based in space.**

The clearest example of direct lobbying for space weapons is Sen. Jeff Sessions's (R-AL) work to ensure that the Alabama-based firms Miltec and Davidson Technologies receive funding for the Kinetic Energy ASAT program. Another potential source of support for space weapons related work **is the Congressional Space Power Caucus,** which was founded at the urging of Peter B. Teets. Founding member **Sen. Wayne Allard (R-CO) describes the purpose of the caucus as to "educate other members of Congress on the capabilities of our military space program, what those programs contribute to the war-fighting ability of our armed forces and how those capabilities contribute to the everyday benefit of our country through other means."** Other major players in the caucus include Rep. Jane Harman (D-CA), Sen. Ben Nelson (D-NE), Rep. Dave Weldon (R-FL), and Representatives Bud Cramer (D-AL) and Terry Everett (R-AL).

Despite the potential lobbying power behind the development of space weapons, **the path of these programs toward deployment faces serious obstacles. Launching payloads into space is an expensive proposition, as evidenced by an estimate that putting just 40 "Rods from God" into orbit could cost $8 billion**, not counting the costs of procurement. The possibility of space debris caused by the testing or use of space weapons could damage or destroy military and commercial satellites, undermining current capabilities for targeting, communications, and other basic space-based activities that have incalculable military and economic value. Last but not least, space weapons deployment risks a "shooting war" in space that would eliminate current U.S. advantages in military reconnaissance, targeting, and communications based on the use of satellites.

The best hope of developing a practical military space policy that is not distorted by special interests is to reduce secrecy and increase transparency in these programs, so that a full public debate can occur *before* the fateful step of placing weapons in space is decided upon.