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The New American Approach to Defense: The FY2003 Program

**Notes on Homeland Defense, Counterterrorism,
Asymmetric Warfare, and Force Transformation**

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The US is Redefining Security:

- Three major areas in which the US is redefining defense:
 - Homeland defense
 - Force Transformation
 - Nuclear Posture Review

Overall Homeland Defense Spendingⁱ

- Nearly double spending on homeland security by pouring unprecedented amounts of money into fighting bioterrorism, tightening border controls, improving airline security and helping firefighters.
- Bush's first budget since the terror and anthrax attacks of last fall proposes \$37.7 billion for homeland defense in the year that starts Oct. 1, compared with \$19.5 billion in the current year.
- Adds extra cash for faster anthrax tests, twice as many guards on the Canadian border, better equipment for firefighters and easier information-sharing among federal agencies.
- "If there was any proposal linked to defeating terrorism or to making Americans more safe at home that had even a reasonable case for it, we agreed and rolled it into the budget," White House budget director Mitch Daniels said.
- Among the highlights:
 - \$5.9 billion to fight bioterrorism, which the budget plan calls "a new American vulnerability laid bare" by the anthrax attacks. A big infusion of cash would pay for research and development, state and local health systems, federal stockpiles for treating victims, and improved communications.
 - Almost \$1.7 billion would go to the National Institutes of Health for research on developing vaccines, tests, therapies and other work to fight anthrax and other biological agents. The Defense Department would get \$420 million to study bioterrorists and ways to fight biological weapons.
 - Some \$851 million would be set aside to help the government respond to a bioattack, including stockpiling antibiotics to treat 20 million people, improving the nation's supply of smallpox vaccine, and improving food safety.
 - \$3.5 billion to help "first responders" such as firefighters, police and rescue squads. The money would go for personal protective equipment, emergency medical gear, detection equipment for biological and chemical agents, communications and other items. It also could be used to conduct more frequent terrorism drills, improve emergency communication systems, and set up a new Homeland Security Corps.
 - \$10.6 billion for protecting borders, "targeting illegal traffic while welcoming legitimate travelers." The budget would more than double the number of Border Patrol agents and inspectors across the northern border, which "has become an attractive route for potential terrorists," Bush's budget proposal avers. The budget

includes \$380 million to set up a reliable way to track the entry and exit of immigrants, especially those seen as security threats.

- \$722 million to improve communication among federal agencies and with states and other jurisdictions. To illustrate the need, the budget plan says Sheik Omar Abdel Rahman, involved in the 1993 World Trade Center bombing, entered the United States legally and was granted permanent resident alien status despite a terrorist past. “Improved information-sharing could make a repeat of such tragic mistakes unlikely,” it said.
- The budget also includes \$4.8 billion for aviation security through the new Transportation Security Agency and \$12.2 billion scattered elsewhere throughout the government, areas highlighted in the budget book with a small photo of a Minuteman soldier.

Homeland Spending and Supplements before FY2003 Budget

- At the Federal level, Congress appropriated a \$40 billion Emergency Response Fund to wage war against Al Qaeda, aid the reconstruction efforts in New York and Virginia, compensate victims, and strengthen our defenses at home.
- A total of \$10.6 billion was dedicated to homeland security, which has allowed the Federal government to:
 - increase the number of sky marshals on our airlines;
 - acquire enough medicine to treat up to 10 million more people for anthrax or other bacterial infection;
 - distribute \$1.1 billion to States to strengthen their capacity to respond to bioterrorism and other public health emergencies resulting from terrorism;
 - deploy hundreds of Coast Guard cutters, aircraft, and small boats to patrol the approaches to our ports and protect them from internal or external threats;
 - acquire equipment for certain major mail sorting facilities to find and destroy anthrax bacteria and other biological agents of terror; and
 - station 8,000 National Guard at baggage screening checkpoints at 420 major airports.
- The Emergency Response Fund also supported the largest criminal investigation in United States history. This investigation has been greatly assisted by another act of Congress – the passage of the “USA Patriot Act,” signed into law by the President on October 26, 2001.
- In essence, the legislation dealt with four broad areas:
 - Federal criminal laws were updated to reflect the rapid and dramatic changes that have taken place in recent years in communications technology. For example, it improved law enforcement’s ability to obtain stored voice mail and records from communications and computer-service providers, and amended the pen register/trap and trace statute to apply to Internet communications.

- Important measures were adopted to combat money laundering. For instance, it required the Department of the Treasury to promulgate rules requiring financial institutions to verify the identities of persons opening accounts, granted immunity to financial institutions that voluntarily disclosed suspicious transactions, and increased the penalties for money-laundering. These authorities permitted the Federal government to investigate the sources of terrorist funding – and then freeze the financial assets of more than 150 individuals and organizations connected to international terrorism.
- The ability of the Immigration and Naturalization Service was enhanced to detain or remove suspected terrorists at the Nation’s borders. It broadened the terrorism-related definitions in the Immigration and Nationality Act; expanded the grounds of inadmissibility to include aliens who publicly endorse terrorist activity; required the Attorney General to detain aliens whom he certifies as threats to national security; gave the Secretary of State discretion to provide visa records to foreign governments for the purpose of combating international terrorism or crime; and required the Federal Bureau of Investigation to share criminal record information with the INS and the State Department for the purpose of adjudicating visa applications.
- The law authorized grants that will enhance State and local governments’ ability to respond to and prevent terrorism, and expanded information-sharing among law enforcement authorities at different levels of government.
- Additionally, since September 11, the Administration has gone to great lengths to identify the most vulnerable potential targets and critical infrastructure in America, and then to put in place appropriate additions safeguards and security procedures.
- These potential targets include airports, sea and water ports, nuclear facilities, dams, water and sewer plants, electric power plants, gas pipelines, dams and bridges and biological and chemical facilities.
- The Administration has also paid extra attention to high-profile events such as the Olympics and the Super Bowl, and has responded vigorously to intelligence reports of possible terrorist threats.
- Precise figures are not available, but the National Governors Association has estimated that States have spent at least \$650 million to help protect their citizens. These expenditures have gone to protect critical infrastructure facilities as described above.
- Additionally, the border States have shared with the Federal government the responsibility for bolstering America’s land borders and increasing security at vulnerable points of entry.
- Local governments have played a critical role. According to the U.S. Conference of Mayors, initial estimates show that local communities have spent more than \$525 million for added security. Moreover, they anticipate that these cities will spend about \$2.1 billion in 2002 on heightened security..

Homeland Security and the 2003 Budget

- The FY 2003 Budget directs \$37.7 billion to homeland security, up from \$19.5 billion in 2002.

- This year's Budget does not attempt to address the totality of the homeland security agenda, a task that will be more fully developed with the publication of the National Strategy for Homeland Security and the Budget for 2004.
- This year's Budget focuses on four specific policy initiatives that were deemed so important and so urgent that they required immediate attention. These initiatives are:
 - Supporting First Responders
 - Defending Against Bioterrorism
 - Securing America's Borders
 - Using 21st Century Technology to Secure the Homeland

Supporting First Responders

- There are over 1 million firefighters in the United States, of which approximately 750,000 are volunteers.
- Local police departments have an estimated 556,000 full-time employees including about 436,000 sworn personnel.
- Sheriffs' offices reported about 291,000 full-time employees, including about 186,000 sworn personnel.
- There are over 155,000 nationally registered Emergency Medical Technicians (EMT).
- The President's 2003 Budget proposes to spend \$3.5 billion on enhancing the homeland security response capabilities of America's first responders – a greater than 10-fold increase in Federal resources. This initiative will accomplish the following objectives:
 - Provide the first responder community with much-needed funds to conduct important planning and exercises, purchase equipment, and train their personnel.
 - Provide States and localities with the flexibility they require to ensure that the funds are used to address the needs of their local communities.
 - Establish a consolidated, simple, and quick method for dispersing Federal assistance to States and localities.
 - Encourage mutual aid across the Nation so that the entire local, State, Federal, and volunteer network can operate together effectively.
 - Establish a process for evaluating the effort to build response capabilities, in order to validate that effort and direct future resources.
 - Encourage citizens to participate actively in preparing their communities for the threat of terrorism and other disastrous events.
- To achieve these objectives, the Federal Emergency Management Agency (FEMA) will implement a streamlined and simple procedure designed to speed the flow of resources to the States and localities. The funds may be used for the following types of first responder activities:
 - **Planning.** The program will support State and local governments in developing comprehensive plans to prepare for and respond to a terrorist attack.

- **Equipment.** The program will allow State and local first responder agencies to purchase a wide range of equipment needed to respond effectively to a terrorist attack, including personal protective equipment, chemical and biological detection systems, and interoperable communications gear.
- **Training.** The First Responder Initiative will also provide resources to train firefighters, police officers, and emergency medical technicians to respond and operate in a chemical or biological environment.
- **Exercises.** The program will support a coordinated, regular exercise program to improve response capabilities, practice mutual aid, and assess operational improvements and deficiencies.

Defending Against Biological Terrorism

- An effective biodefense will require a long-term strategy and significant new investment in the U.S. health care system.
- The President's Budget for 2003 proposes \$5.9 billion to defending against biological terrorism, an increase of \$4.5 billion – or 319 percent – from the 2002 level. This new funding will focus on:
 - **Infrastructure.** Strengthen the State and local health systems, including by enhancing medical communications and disease surveillance capabilities, to maximize their contribution to the overall biodefense of the Nation.
 - **Response.** Improve specialized Federal capabilities to respond in coordination with State and local governments, and private capabilities in the event of a bioterrorist incident and build up the National Pharmaceutical Stockpile.
 - **Science.** Meet the medical needs of our bioterrorism response plans by developing specific new vaccines, medicines, and diagnostic tests through an aggressive research and development program.
- Responsibility for detecting and managing a bioterrorist attack needs to be shared among a wide range of Federal, State, local, and private entities.
- The resources made available in the President's Budget for 2003 will help the Nation develop an effective "early warning" system against a possible bioterrorist attack, and mount an effective operational response to manage its medical consequences.
- These enhanced capabilities, once in place, will also enhance the Nation's ability to respond to outbreaks of naturally occurring diseases.

Infrastructure: Strengthening America's Public Health System

- Many of our health care systems are not adequately prepared for a large-scale attack:
- The health care system lacks the surge capabilities needed to handle quickly large numbers of victims and have insufficient isolation facilities for contagious patients.
 - The information system that knits together hospital emergency rooms and public health officials is antiquated and inadequate.

- Little has been done to promote regional mutual aid compacts among health care institutions for bioterrorism attacks.
- Training for health care providers in the handling of bioterrorism victims has been infrequent.
- In his 2003 Budget, the President has proposed \$1.6 billion to assist State and local health care systems in improving their ability to manage both contagious and non-contagious biological attacks, to expand health care surge capabilities, to upgrade public health laboratory capabilities, and to provide training for medical personnel.
- The Budget also makes available funding to support the development of regional medical mutual aid compacts. In the event of an emergency, these compacts will enable State and local emergency managers to augment local medical care providers quickly and efficiently.
- Finally, the communications network that links the acute care providers of our communities with their public health counterparts will be modernized and improved so that vital information on the detection and treatment of disease can flow swiftly.

Response: Enhancing Specialized Federal Capabilities

- A major act of biological terrorism would almost certainly overwhelm existing State, local, and privately owned health care capabilities.
- For this reason, the Federal government maintains a number of specialized response capabilities for a bioterrorist attack. The President's Budget invests \$1.8 billion to ensure that these specialized Federal resources are adequate for the threat we face.
- The President and the Congress have already taken steps to acquire a national supply of smallpox vaccine and ensure that by the end of fiscal year 2002, the National Pharmaceutical Stockpile will contain sufficient antibiotics to treat 20 million people against diseases such as anthrax, plague and tularemia.
- The President's Budget for 2003 provides \$650 million to carry the process of enhancing the National Pharmaceutical Stockpile even further through:
 - The acquisition of the next-generation anthrax vaccine, and the maintenance of and improvements to the national supply of smallpox vaccine. The budget will also provide resources to acquire sufficient amounts of vaccinia immuno globulin (VIG) to treat those that might experience adverse reactions to inoculations.
 - Continued maintenance of and improvements to the "push packs" that can be used in the case of both biological and conventional attacks. These pre-assembled packages contain life-saving antidotes, pharmaceuticals, and other medical supplies, and are deployed to the disaster site within 12 hours of a request. The first emergency use of the "push packs" came on September 11 in New York City. In fiscal year 2002, the national supply of these "push packs" was increased from 8 to 12.
 - An enhanced vendor managed inventory program so that the Federal government can quickly obtain the additional antibiotics, antidotes, and medical equipment and supplies if an incident requires a larger or multi-phased response.

- Funding support for the States and localities to plan for the receipt and distribution of medicines from the National Pharmaceutical Stockpile.
- The streamlining and integration the Federal bioterrorism response efforts into a unified plan.
- Recognizing the potentially global nature of bioterrorism, the Budget for 2003 devotes \$10 million to create a team of epidemiological scientists who are committed to working with their counterparts in foreign countries to provide information, research, awareness, and early warning of potential health threats from abroad.
- Finally, the President's Budget for 2003 provides \$20 million to strengthen the Epidemiological Intelligence Service (EIS) at the Centers for Disease Control in Atlanta. Established in 1951 following the start of the Korean War as an early-warning system against biological warfare, the EIS today has expanded into a surveillance and response unit for all types of epidemics.

Science: A New Medical Toolkit for Fighting Bioterrorism

- Responding to the anthrax letter attacks of October 2001 has revealed major inadequacies in our existing medical "toolkit" for fighting bioterrorism. Some of the diagnostics, vaccines, and therapeutics available to us today were developed during the Cold War and hence do not harness the full power of modern biomedical science.
- The President's Budget for 2003 devotes \$2.4 billion to jump-starting the research and development process needed to provide America with the medical tools needed to support an effective response to bioterrorism. These resources will be focused in the following areas:
 - \$1.75 billion will be provided to the National Institutes of Health to conduct basic and applied research needed to provide solutions to a range of specific operational problems in our bioterrorism response plans. To do this, NIH will lead a partnership with industry, academia, and government agencies dedicated to understanding the pathogenesis of potential bioterrorism agents and to translating this knowledge into required medical products.
 - Over \$600 million will be allocated to the Department of Defense, of which \$420 million will be used to accelerate efforts to develop better detection, identification, collection, and monitoring technology. Additionally, the scientists working under Defense auspices will support the law enforcement, national security, and medical communities by improving our understanding of how potential bioterrorism pathogens may be weaponized, transported, and disseminated.
 - \$75 million will go to the Environmental Protection Agency to develop better methods for decontaminating buildings where bioterrorism agents have been released.

Securing America's Borders

- The new threats and opportunities of the 21st century demand a new approach to border management. President Bush envisions a border that is grounded on two key principles:

- First, America's air, land, and sea borders must provide a strong defense for the American people against all external threats, most importantly international terrorists but also drugs, foreign disease, and other dangerous items.
- Second, America's border must be highly efficient, posing little or no obstacle to legitimate trade and travel.
- The United States has a 7500-mile land and air border shared with Canada and Mexico and an exclusive economic zone encompassing 3.4 million square miles.
- Each year, more than 500 million people are admitted into the United States, of which 330 million are non-citizens.
- On land, 11.2 million trucks and 2.2 million rail cars cross into the United States, while 7,500 foreign-flag ships make 51,000 calls in U.S. ports annually.

The Smart Border of the Future

- America requires a border management system that keeps pace with expanding trade while protecting the United States and its territories from the threats of terrorist attack, illegal immigration, illegal drugs, and other contraband.
- The border of the future must integrate actions abroad to screen goods and people prior to their arrival in sovereign U.S. territory, and inspections at the border and measures within the United States to ensure compliance with entry and import permits.
- Federal border control agencies must have seamless information-sharing systems that allow for coordinated communication among themselves, and also the broader law enforcement and intelligence gathering communities. This integrated system would provide timely enforcement of laws and regulations.
- Agreements with our neighbors, major trading partners, and private industry will allow extensive pre-screening of low-risk traffic, thereby allowing limited assets to focus attention on high-risk traffic.
- The use of advanced technology to track the movement of cargo and the entry and exit of individuals is essential to the task of managing the movement of hundreds of millions of individuals, conveyances, and vehicles.
- Some of this work has already begun with Canada, our largest trading partner. On December 12, 2001, Governor Tom Ridge, Director of the Office of Homeland Security, and John Manley, then Canada's Minister of Foreign Affairs, signed the "Smart Border Declaration" with a 30-point action plan
- A similar effort is currently underway with Mexico.

Border Security Initiatives in the 2003 Budget

- In the 2003 Budget, the President will propose approximately \$11 billion for border security, including \$380 million for the Immigration and Naturalization Service to construct a state of the art Entry-Exit visa system.
- In total, this will represent an increase of \$2.2 billion from the 2002 Budget for border security. This additional funding will allow our border agencies to begin implementing a

seamless air, land, and sea border that protects the United States against foreign threats while moving legitimate goods and people into and out of the country.

- The new border initiatives will be managed by the agencies with primary responsibility for border control.

U.S. Customs Service—Inspections

- The President's 2003 Budget increases the inspection budget of the Customs Services by \$619 million, for a total of \$2.3 billion.
 - **Additional Personnel.**
 - The Customs Service will complete the hiring of approximately 800 new inspectors and agents to carry out additional security activities on our borders and at our seaports.
 - **New Technology.**
 - The President's Budget provides resources to purchase technologically advanced equipment that will assist in inspecting shipments so that time-consuming and labor-intensive searches can be minimized.

Immigration and Naturalization Service (INS) – Enforcement

- The President's 2003 Budget increases the INS budget for enforcement by \$1.2 billion, for a total of \$5.3 billion, including the resources necessary to implement the Entry-Exit visa system.
- These resources will enhance key INS missions related to homeland security, including border patrol, inspections, and the implementation of a technologically advanced system for monitoring the entry and exit of foreign visitors.:
 - **Additional Personnel.**
 - The INS will more than double the number of border patrol agents and inspectors on the northern border. INS will also install integrated information systems to ensure that timely, accurate and complete enforcement data is transmitted to INS agents and other border security agencies operating in the field.
 - **Entry–Exit Tracking System.**
 - The INS will implement a new entry-exit system to track the arrival and departure of non-U.S. citizens. This new system will dramatically improve our ability to deny access to those individuals who should not enter the United States, while speeding the entry of routine, legitimate traffic.

United States Coast Guard

- The President's 2003 Budget increases funding for the Coast Guard's homeland security-related missions (protecting ports and coastal areas, as well as interdiction activities) by \$282 million, to an overall level of \$2.9 billion. A
- After September 11, the Coast Guard's port security mission grew from approximately 1-2 percent of daily operations to between 50-60 percent today.

- In addition, the Coast Guard has important national security missions such as illegal immigration and drug interdiction and port security.

Coordination.

- Working with other port entities, the Coast Guard is developing tracking mechanisms for all vessels operating in the maritime domain: within or transiting to U.S. ports and transiting our coastal waters. The heart of this maritime domain awareness program is accurate information, intelligence, surveillance, and reconnaissance of all vessels, cargo, and people extending well beyond our traditional maritime boundaries.

Coastal Asset and Infrastructure Protection.

- Coast Guard forces will provide enhanced defenses for critical high-risk vessels and coastal facilities, marine and otherwise (e.g. nuclear power plants, oil refineries). Close coordination through Harbor Safety Committees, which help bring together the many local, state, and Federal agencies that maintain and protect the harbor, will ensure a well-balanced protective envelope is sustained at different threat levels.

Information Technology and the Federal Government: Expanding E-Government

- The President recognizes that modern information technology is essential not only for making our Nation more prosperous but for making our homeland more secure.
- The President has launched a long-term program for using advanced information management technology to better protect the Nation. At the same time, the President's 2003 Budget requests significant funding for cyberspace security, given our growing dependence on critical information infrastructure, most importantly the Internet.
- The Budget for 2003 requests a total of \$50 billion for information technology investment across the entire Federal government.
- Led by the Office of Management and Budget, the Administration is deploying 21 high payoff e-government initiatives to maximize Federal government productivity gains from technology, eliminate redundant systems, and significantly improve government's quality of service for citizens, businesses, and other levels of government over the next 18 to 24 months.

Using Information to Secure the Homeland

- The President believes that an effective use of intelligence and closer coordination across all levels of government will help stop future terrorist attacks.
- In the wake of September 11, for example, we discovered that information on the hijackers' activities was available through a variety of databases at the Federal, State, and local government levels as well as within the private sector.
- Looking forward, we must build a system that combines threat information and then transmits it as needed to all relevant law enforcement and public safety officials.
- The President's budget calls for an increase of \$722 million and sets in motion a program to use information technology to more effectively share information and intelligence, both

horizontally (among Federal agencies and Departments) and vertically (among the Federal, State and local governments)..

- The homeland security information initiative has two key objectives:

Goal 1: Tear down unwarranted information “stovepipes” within the Federal government.

- The President’s Budget for 2003 proposes to establish an Information Integration Office within the Department of Commerce to implement a number of priority homeland security goals in the area of horizontal information sharing.
- The most important function of this office will be to design and help implement an interagency information architecture that will support United States efforts to find, track, and respond to terrorist threats within the United States and around the world,
- The President’s 2003 Budget provides \$380 million to the INS to implement a new entry-exit system to track the arrival and departure of non-U.S. citizens.

Goal 2: Share homeland security information with States, localities, and relevant private sector entities.

- Having the right system of communication – content, process, and infrastructure –is critical to bridging the existing gaps between the Federal, State, and local governments, as well as the private sector.
- To help meet these needs, the Administration will establish a uniform national threat advisory system to inform Federal agencies, State and local officials, as well as the private sector, of terrorist threats and appropriate protective actions.
- The Budget for 2003 supports this effort by funding the development and implementation of secure information systems to streamline the dissemination of critical homeland security information.

Cyberspace-Security: Protecting our Information Infrastructure

- The President recognized the importance of ensuring the continued operation of America’s critical information services by creating a national board and designating a special advisor for cyberspace security.
- Since October 2001, the President’s Critical Infrastructure Protection Board has organized national committees to streamline initiatives and address emergency planning.
- The board has initiated research into potential methods to isolate and protect critical government information that carries vital communications. It has fostered an unprecedented national government-industry partnership to provide alert and warning for cyberspace threats.
- This comprehensive strategy to defend cyberspace will be the result of a true partnership among government and the owners and operatives of critical

infrastructure – including our partnership with the information technology industry, telecommunications, electric power, and the financial services industries.

- Some of the components of this national strategy will include:

National Infrastructure Protection Center (NIPC).

- The President's Budget for 2003 requests \$125 million to fund the NIPC, the premier cyberspace-threat response center located within the FBI. This request represents an increase of more than \$50 million from the NIPC's base 2002 funding level.
- **Cyberspace Warning Intelligence Network.**
- The Internet and our critical infrastructure are constantly under attack from viruses and other invasive programs. The President's Budget for 2003 requests \$30 million to create the Cyberspace Warning Intelligence Network (CWIN) that would link the major players in government and the private sector to manage future cyberspace crises.
- **Priority Wireless Access.**
- On September 11, we learned first hand that in times of a major crisis, wireless communication jams due to congestion. First responders must be able to complete calls in a timely manner. The President's Budget for 2003 requests \$60 million to develop a wireless priority access program that will give authorized users priority on the cellular network. The program will ensure that first responders have priority for cellular phone coverage during emergencies.
- **National Infrastructure Simulation and Analysis Center.**
- The President's Budget for 2003 requests \$20 million to fund the National Infrastructure Simulation and Analysis Center at the Department of Energy. This Center will promote collaboration between Federal research efforts and the private sector to better understand the dependencies between the Internet, our critical infrastructure, and our economy.
- **Secure "GovNet" Feasibility Study.**
- The President's Budget for 2003 requests \$5 million for a feasibility study of a proposal to develop a government network that will secure critical functions performed by government at a higher level of security against external attack.
- **Advanced Encryption Standard.**
- The President helped foster better computer security at Federal agencies. A new Federal standard announced on December 4, 2001, is designed to protect sensitive, unclassified information well into the 21st century. In limited circumstances, it will also be available for classified national security information. The new standard, called the Advanced Encryption Standard, also is expected to be used widely in the private sector, benefiting millions of consumers and businesses.
- **Cybercorps Scholarships for Service.**

- The President's Budget for 2003 requests \$11 million for the "Cybercorps." By injecting scholarship funding into universities across America, the Cybercorps Scholarship for Service program encourages college students to become high tech computer security professionals within government. Managed by the National Science Foundation and the Office of Personnel Management, this program also helps to build academic programs at universities in the area of computer security.

Transportation Security

- On November 19, 2001, the President signed into law the Aviation and Transportation Security Act, which among other things established a new Transportation Security Administration (TSA) within the Department of Transportation.
- This Act established a series of challenging but critically important milestones toward achieving a secure air travel system. The President's Budget for 2003 requests \$4.8 billion to fulfill the mandates established by the Act.
- The Aviation and Transportation Security Act recognized the importance of security for all forms of transportation and related infrastructure elements. This cannot be accomplished by the TSA in isolation and requires strengthened partnerships among Federal, State and local government officials, and the private sector to reduce vulnerabilities and adopt the best practices in use today.
- Infrastructure protection of critical assets such as pipelines and more than 10,000 FAA facilities is another key mission of the TSA. Along with rail and highway bridges, many other national assets are critical to our economic and national security and vital for the free and seamless movement of passengers and goods throughout the country.

Federal Law Enforcement

- The President's Budget for 2003 will allow the FBI to add more than 300 special agents and other investigative staff to conduct surveillance of terrorists and collect intelligence information about terrorist activities.
- It will add more than 130 Federal Bureau of Investigation special agents and other investigative staff specifically to combat cyber-crime and protect our banking, finance, energy, transportation, and other critical systems from disruption by terrorists.
- It will also provide Drug Enforcement Agency with more than 25 financial crime investigators to help identify and shut down the sources of money that support the terrorist cells.

Citizen Corps

- The Citizen Corps will enable Americans to volunteer to participate directly in homeland security efforts in their own communities.
- Citizen Corps will be coordinated by the Federal Emergency Management Agency (FEMA).
- The President's Budget for fiscal year 2003 requests \$144 million in matching funds to support the formation and training of local Citizen Corps Councils.

- These community-based Citizen Corps Councils will help drive local involvement in Citizen Corps, developing community action plans, assessing possible threats, identifying local resources and coordinating other Citizen Corps programs. These Councils will be broad-based – including leaders from law enforcement, fire and emergency medical services, businesses, community-based institutions, schools, places of worship, health care facilities, public works and other key community sectors.
- The President’s fiscal year 2003 Budget provides more than \$230 million for these efforts, including:
 - Volunteers in Police Service (VIPS) Program:.
 - Medical Reserve Corps:.
 - Operation TIPS (Terrorist Information and Prevention System): Operation TIPS will enable millions of America transportation workers, postal workers, and public utility employees to identify and report suspicious activities linked to terrorism and crime.
 - Community Emergency Response Teams (CERT): The President has proposed tripling over the next two years the number of Americans enrolled in CERT – a training program that enables individual Americans to participate in emergency management planning in their communities and prepare to respond to disasters and other emergencies.
 - Neighborhood Watch Programs: The President’s plan will double the number of Neighborhood Watch Programs in the next two years, and enhance the program by incorporating terrorism prevention into its mission.
 - Citizens’ Preparedness Guidebook: The Citizens’ Preparedness Guidebook provides current crime and disaster preparedness techniques as well as the latest information on terrorism, to give Americans guidance on how to prepare in their homes, neighborhoods, workplaces and public spaces.

Department of Defense and Intelligence Community

- The President’s Budget for 2003 requests \$7.8 billion for homeland security-related activities of the Department of Defense and Intelligence Community.
- The largest portion of the total request (\$4.6 billion) is dedicated to the physical security of Department of Defense facilities and personnel inside the United States,
- The second largest is for maintaining combat air patrols within U.S. airspace (\$1.3 billion).
- The Budget for 2003 also requests significant funding for research and development related to combating terrorism, as well as for several specialized response teams such as the National Guard’s Weapons of Mass Destruction Civil Support Teams.

Protecting our Critical Infrastructure

- After September 11, the Administration took a wide range of urgent steps to protect the Nation’s highest risk targets and critical infrastructure systems – such as nuclear power plants, ports, hydroelectric dams, telecommunications nodes, border crossings, and chemical

facilities. This effort proceeded in cooperation with many different State and local agencies and private companies.

- Over the longer term, however, the Administration recognizes the need to address the security of America's highest risk targets and critical infrastructure systems in a comprehensive fashion. Accordingly, the Administration has begun a systematic effort to define, prioritize, and develop effective strategies for protecting the Nation's critical infrastructure.
- This framework will produce the country's first unified critical infrastructure protection plan, with full involvement by all relevant Federal agencies as well as State and local governments and private industry.

DoD Total Defense Spendingⁱⁱ

- President Bush is asking for a fiscal 2003 defense budget of \$379.4 billion, an increase of \$48 billion over the fiscal 2002 budget.
 - The proposed defense budget for the year starting Oct. 1 would add \$48 billion in budget authority to the Pentagon's spending.
 - That would amount to a 14 percent increase, the biggest boost for the military in two decades. Bush would add more each succeeding year, reaching \$451 billion in spending authority for 2007.
 - When past years' budgets are adjusted for inflation, that would be second only to President Ronald Reagan's 1985 budget of \$451.8 billion.
 - In 1981, Reagan's first year in office, the Pentagon budget grew by nearly 25 percent.

DoD Force Transformation

- Rumsfeld said the budget request of \$379.3 billion reflects the six transformation goals set down in the Quadrennial Defense Review. These are:
 - protect the U.S. homeland and critical bases of operation;
 - deny enemies sanctuary;
 - project and sustain power in access-denied areas;
 - leverage information technology;
 - improve and protect information operations; and
 - enhance space operations.
- He said the changes in defense strategy mandated by the QDR helped shape the budget request as did other initiatives such as the Nuclear Posture Review and the reorganization of space capabilities and commands.
- DoD also reorganized and revitalized the missile defense program and reiterated the importance of homeland defense.
- Rumsfeld said he believes many people think that "transformation is a weapon system or transformation is firing some person who is not transformational."

- He said people in his office tried to quantify the “transformation monies” in the DoD budget request.
- By one definition and calculation the result was \$20 billion and by another it was \$50 billion. “I said that would be as misleading as it would be useful, for people to think of it in dollars,” Rumsfeld said.
- Transformation can be new weapons, but it can also be connectivity and interoperability and “in taking things—every single one of which exists presently—and managing them, using them, arraying them in a way that has a result that is transformational.”
- People are transformational. He said the appointment of the next six to 12 senior four-star officers would be the most important driving force behind transformation.
- Senior military and civilian officials are working together to change the culture of the military.
- Key changes include:
 - The request supports converting four Trident submarines to cruise missile carriers. It also seeks to capitalize on U.S. asymmetric advantages in developing new classes of satellites—including a space-based radar—and improving existing capabilities and hardening them against attack.
 - The budget would initiate development of the DD(X) surface warfare ship, a test bed for future Navy systems, a senior defense official said. Plans are to insert and test new stealth and propulsion technologies in the DD(X) and to test new manning programs. The budget request asks for \$961 million for this effort.
 - Unmanned vehicles are also transformational. The department wants to spend \$1 billion to go to procurement and research of unmanned aerial vehicles. DoD wants to spend \$154.1 million to buy and arm 22 Air Force Predator UAVs in fiscal 2003. The Air Force has also allocated \$170.8 million for three Global Hawk UAVs. There is another \$100.7 million set aside to buy 12 Army Shadow UAVs.
 - In addition, DoD would accelerate funding of Global Hawk research and the Navy’s Fire Scout UAV. The request also accelerates research in unmanned combat aerial vehicles. “These UCAVs are not just UAVs with weapons added,” said the official. “They are combat airplanes built from the ground up, just without pilots.” The request also increased funding for unmanned underwater vehicles.
 - The old strategic nuclear Triad—land-based ICBMs, manned aircraft, and submarine-launched ballistic missiles—would begin transformation with this budget. President Bush has announced plans to reduce offensive nuclear warheads from 6,000 to between 1,700 and 2,200. The new Triad is the scaled-down nuclear deterrent, a more deadly and responsive conventional deterrent, and missile defense.
 - Procurement reaches a new high with this budget, in the realm of funding officials believe is needed to transform the force. The overall procurement budget is set at about \$72 billion. The Army is set for \$13.8 billion, the Navy/Marine Corps for \$24.9 billion, the Air Force at \$27.3 billion, and \$2.8 billion for defensewide buys. There is also \$3.2 billion in the Defense Emergency Response Fund.

- The budget for research, development, testing and evaluation is set for \$53.9 billion in fiscal 2003, up from \$48.4 billion this year. This would continue development of the Joint Strike Fighter and accelerate special operations capability. It also funds the restructured V-22 Osprey program.
- Science and technology funding rose a billion dollars in this request to \$9.9 billion, or 2.7 percent of the DoD budget topline. The money would fund Army research in future combat systems, medical technology and other basic research. Navy funds would go to mine warfare and mine countermeasures, undersea systems and basic research. The Air Force would look at directed energy, aircraft propulsion and uses of space.
- The department has canceled a number of programs and shifted almost \$10 billion to other projects. DoD ended programs it deemed out of line with transformation strategy. These include the Navy DD-21 destroyer and Theater Area Missile Defense programs, the Air Force Peacekeeper missile program and 18 Army “legacy” programs. The services would retire some older systems faster, such as older F-14 Tomcats, Vietnam-era UH-1 helicopters and the Navy’s Spruance destroyer class.
- Other highlights of the budget request are:
 - The fiscal 2003 request includes \$707 million for the Army’s Future Combat System. In addition, the Army would buy 332 interim armored vehicles and 5,631 M-16 rifles. The request budgets \$910.2 million for continued development of the RAH-66 Comanche helicopter
 - The Navy shipbuilding request funds two DDG-51 Arleigh Burke-class destroyers, a Virginia-class attack submarine, an LPD-17 amphibious transport dock ship and a Lewis and Clark-class auxiliary dry cargo ship. The Navy would also buy 15 MH-60S helicopters, five E-2C Hawkeye aircraft and 44 F/A-18E/F Hornet fighters. The service will also continue with the EA-6B Prowler electronic surveillance and control craft modernization program.
 - The Air Force request funds 12 more C-17 airlifters, one E-8C Joint Surveillance Target Attack Radar System aircraft and 23 F-22 Raptor fighters. The budget also funds modernization programs for the B-2 Spirit bomber, the F-16 fighter-bomber and the F-15E multimission fighter.
- The Afghan War has again demonstrated the need to be able to rapidly project land and air power at very long distance. It has demonstrated the value of strategic airlift, long-range strike capability, and the ability to operate with limited forward basing. At the same time, it has confirmed the value of light forces like special forces in counterterrorism and some forms of asymmetric warfare and that planning for major regional contingencies and wars where the US must fight against heavy armor and heavily defend airspace are only one possible case in a changing spectrum of conflicts.
- Again, it is dangerous to generalize without more detailed data on the forces engaged in the conflict and the history of their battles and engagements, and dangerous to generalize at all given the unique character of the Afghan conflict. Nevertheless, some lessons about force transformation and power projection do seem clear:

The Changing Nature of Joint Warfare and Combined Arms Mix

- Virtually every major recent war has shown the growing value of joint operations and of integrating land-air-sea operations in ways adapted to the needs of a given conflict. Like Kosovo, however, the Afghan conflict has shown that a combination of precision air and missile strike capability, coupled to greatly improved intelligence and targeting systems, can provide much of the heavy firepower in some contingencies that previously had to be provided by artillery and armor.
- Part of the shift towards precision is indicated by the fact that some 6,700 of the 12,000 air weapons the US dropped by December 7, 2001 were precision guided. This is 56% of all weapons dropped and compares with 35% of the 24,000 weapons dropped during the Kosovo campaign in 1999.ⁱⁱⁱ
- It is dangerous to over-generalize since much depended in both wars on near air supremacy and the ability to engage enemy ground forces in ways where they could make only limited or no use of their armor or artillery against US and allied forces – aside from local allies and proxies. Nevertheless, the nature of the air-land battle does seem to be changing.
- It is also worth noting that if the opponent had been more serious, land forces would probably had done better by adding more attack helicopters and gunships to the battle than by having lighter and more mobile artillery and armor.
- The same might well have been true about adding more highly trained special forces elements, forward air controllers, and experts with local language and cultural skills.
- Such forces obviously cannot substitute for heavy ground forces in many contingencies, but it is important to note that the Afghan war per se is not an argument for lighter tanks and artillery and lighter and more projectable mechanized ground forces.

The Value of Coalition Warfare and Mission-Oriented Interoperability

- Recent wars have also demonstrated the value of coalition warfare in every aspect of operations from power projection to combat. The Afghan conflict, however, is interesting because light highly trained allied forces like the SAS could be highly effective without expensive high technology equipment, standardization, and interoperability. Similarly, relatively primitive allied local ground forces could be very effective substitutes for US ground forces when given the support of US special forces and advisors, and effective air and missile strike capability. This is a lesson that emerged in a different way from the role the KLA and other Kosovar forces played in Kosovo.
- Once again, there are clear limits to this lesson. However, the US and British experience in Afghanistan may indicate that the US and NATO have overstressed the high technology and high investment aspects of coalition warfare and interoperability and paid too little attention to the value of being able to draw on a pool of highly trained lighter forces like the SAS or their Australian, Canadian, German, and other equivalents.
- The same may be true of the value of using limited but highly trained numbers of advisors and forward air controllers and targeteers on the ground, along with rapid transfers of low and medium technology arms, to strengthen local forces.

- It seems fair to say that in the past, the US has paid more attention to seeking technological clones or doing it alone, than using its specialized high technology strengths in ways which make it easier to operate with less well equipped Western and regional allied forces. This may well have been too narrow, if not the wrong, approach to coalition warfare and interoperability in many mission areas.

The Value of Speed, Readiness, and Range in Power Projection

- Sometimes old lessons are just as valuable as new ones. Afghanistan again demonstrated the immense value of strategic airlift and refueling capability, of having highly flexible combat-ready forces than can be quickly deployed, and the ability to use sea power as a substitute for land bases. At the same time, it demonstrated the value of sheer strike range in air power and missiles, and the value this gives to forward presence even when it is not near the immediate area of operations.
- These are lessons that tend to be understated in the attention paid to new weapons and intelligence systems, but they are certainly at least as important. Strategic mobility, sustainability, and range of action were far more important keys to US success than the changes in technology between Kosovo and Afghanistan and probably the changes in technology between the Gulf War and Afghanistan.
- For example, the incredible record of US and British air units in multiple refuelings of thousands of missions, the readiness and safety of the carrier-based aircraft and bombers engaged, and the readiness and safety of the mobility aspects of special forces, ranger, and marine operations did at least as much to determine the outcome as any advances in intelligence systems or GPS guided weapons.

“Closing the Sensor to Shooter Loop” in Near Real Time: Improved Intelligence, Targeting, Precision Strike, Assessment and Restrike Capabilities^{iv}

- That said, no one can dismiss the major impact that new technologies did have, particularly because they were employed with new tactics and as part of new systems. Putting technology and tactics in a broader perspective, in no way means that technological advances can be dismissed or do not provide important lessons for both the Afghan and future conflicts.
- The new abilities of US forces to draw on greatly enhanced real-time satellite and UAV data on the movements of enemy and friendly forces, to target enemy forces with high precision in real time even as they were engaged by Afghan ground forces, to communicate this targeting data to US bombers and strike fighters, to use the data to conduct precision strikes with both precision guided weapons and area ordnance, and then at least partially assess damage as well as retarget and restrike almost immediately did involve a wide range of advance in tactics and technology. The US was able to “close the loop” in conducting air and missile strikes in near real time. It was an impressive further development of techniques that owe their origins to the use of spotter aircraft and kill boxes in the Gulf War and which were significantly further developed in Kosovo.
- It is also clear that the level of US success in Afghan conflict scarcely sets the standard for the level of progress that can be achieved in “closing the loop” in the future. The US only possessed limited numbers of many of the key UAVs involved and that many of the “24/7”

improvements it plans to make in imagery satellites and electronic intelligence satellites were not yet deployed. Similarly, at least some of the data links used to provide real-time retargeting data to aircraft were still relatively crude and had poor ergonomics; avionics and air munitions were not fully optimized to use such data; and many of the on-the-ground data links, targeting systems, and communications systems provided to special forces and rear area intelligence/targeting analysts can still be greatly improved. Furthermore, they all can be improved in ways that simultaneously increase the tactical impact of given strikes, increase their lethality, and reduced both the risk of friendly fire and collateral damage.

Advances in Technology and the “Force Transformation PDM”

This background both explains and justifies the kind of force transformation effort going on in the US Program Decision Memorandum 4, the so-called “Transformation PDM,” which is part of the FY 2003 budget submission. According to press reports, this PDM calls for:^v

- Some \$2 billion for improved satellite communications.
- A major acceleration of unmanned combat vehicle programs and serious examination of new programs to supplement or replace manned combat aircraft. Procure more RQ-1 Predators with the ability to fire AGM-114 Hellfire missiles. Examine the option of arming them with smaller 250-500 pound versions of the JDAM.
- Modifications and improvements, including security and survivability, to the Global Positioning Satellite system.
- Procurement of much larger numbers of RQ-1 Predator, RQ-4A Global Hawk and other Unmanned Aerial Vehicle intelligence and targeting systems. This could include developments like converting retired manned aircraft to UAVs, or older target drones like the BQM-145, BQM-34S and MQM-34D.^{vi}
- Make major improvements to their endurance, payload capability, sensors, downlinks, survivability, and launch/recovery systems, including their electro-optical, infrared, and synthetic aperture radar sensors. Possible addition of UAVs to future maritime patrol aircraft. (Approximately 20 of the 68 Predators delivered to date have been lost, largely to operator error or enemy fire.)^{vii}
- Improvements in space-based radars and imagery systems.
- Procurement and improvement of Tomahawk cruise missile systems.
- Convert at least four more C-130s into gunships and improve AC-130 special operations combat aircraft and other Special Forces variants of the C-130, including countermeasures for air defense. Improve video and infrared targeting and surveillance systems and fire-control capability, and refine the datalink systems between the AC-130 and Predator/Global Hawks that were rushed into deployment during the war.^{viii}
- Procurement and improvement of portable and theater-deployable intelligence and targeting systems and rear echelon and national capabilities.

- Improvements in communications, secure data links, displays, weapons dispensers, and precision weapons to make real time targeting and restrike capabilities more effective.
- Acceleration of the Airborne Laser theater missile defense system.
- \$63 million for upgrading of NORAD computers and radars.
- Acceleration of hard target and underground facility penetration weapons. These would replace or enhance the GBU-28 5,000 pound “bunker buster” bombs and AGM-130s used to attack hard and deeply buried targets during the Afghan War. The Department of defense estimates that there are some 10,000 hard and deeply buried targets (HDBTs) in the world, that some 1,000 have critical strategic value, and that their number will advance steadily as improved tunneling equipment becomes available. Most are 20 meters or less underground.

The US is examining ways to add hard target kill capabilities to its cruise missiles and there are unconfirmed reports that one such missile, the AGM-86D, was used during the fighting. Other options include a hard target defeat thermobaric weapon, the FMU-157 hard target smart fuse, and BLU-116B advanced unitary penetrator warhead.^{ix}

- Acceleration of programs to develop unattended ground sensors and long-loiter collection platforms to characterize and monitor activities in facilities. Develop remote sensors for the penetration of caves and sheltered facilities.

Other Advances in Tactics and Technology

- While not directly related to the EDM, the US also seems to be conducting a number of relevant and Afghan-war related efforts in other areas:^x
 - Pursue a broad goal of tightening the delay between real-time intelligence gathering and targeting at the shooter platform to no more than 10 minutes.
 - Improve relevant central planning and data transfer facilities like the American Joint Analysis Center at RAF Molesworth in Cambridgeshire, England.^{xi}
 - Accelerate the development of systems to detect and characterize biological and chemical weapons and attacks.
 - Accelerate the development of sea-based wide area missile defenses, and the selection of a suitable replace to the E-6B electronic warfare aircraft as part of a joint airborne electronics attack program.
 - Reexamine the value of weapons like the BLU-82 15,000-pound GSX-jellied slurry bomb in terms of hard target kill and psychological impact and/or re-weaponize fuel-air explosive weapons like the BLU-72.
 - Upgrade the communications, display, and munitions systems on B-52 and other US bombers, and US strike fighters, to improve the ability to retarget in mid-flight and retarget and restrike during the same mission.
 - Improve some relevant subsystems on the RC-135V Rivet Joint signals intelligence aircraft, and U-2.^{xii}

- Improve the J-8 JSTARS targeting software. ^{xiii}
- Develop advanced targeting pods for existing aircraft, and built-in systems for the Joint Strike Fighter with third generation forward-looking radar sensors and charge-coupled imagers capable of identifying individual weapons at distance.
- Increase dissemination of electronic and IR intelligence systems and other surveillance platforms on various existing airborne platforms such as tankers.
- Replenish stocks of the GPS-guided Joint Direct Attack Munition (JDAM) – the \$18,000 kit used to convert regular bombs into smart weapons. Approximately 4,600 JDAMs were used out of a total inventory of 10,000 by December 2001. This is roughly 38% of the 12,000 weapons used as of that date. ^{xiv}
- Enhance use of the wind corrected munitions system (WMCD) which was used in the Afghan War to dispense combined effects munitions like the CBU-130 (a weapon with some 202 BLU-97/B cluster bombs more accurately).
- Complete development of the sensor fused submunition (SFW) with a smart IR-homing capability for anti-armor and vehicle use and develop improved submunitions with a fail safe option to prevent them from remaining live for extended periods. ^{xv}
- Deploy a dedicated Multi-Sensor Command and Control (MC2A) aircraft by 2009 to support advanced closed loop missions, including ones by stealth aircraft like the F-22 and B-2A by 2009. ^{xvi}
- Improve three-dimensional mapping and imagery to improve the accuracy of GPS guided weapons and determine the proper angle of attack.
- Begin development of an advanced, next-generation manned or unmanned bomber capable of surviving extremely advanced developmental surface-to-air defenses like the Russian S-400 Triumf (SA-20).
- Revise the defense communications satellite and MILSTAR problem to handle far great communications densities, integrate information systems, and standardize on one set of terminals and downlink communication systems with different echelons of access and security. ^{xvii} Add lasercom data and increase support to small scattered US and allied ground units for secure communications, imagery, and targeting data.
- Improve the integration and user friendliness of NRO and NSA data and systems used to support operations, targeting and ISR. ^{xviii}
- Given the fact that many of the relevant concepts and capabilities were first proposed during Vietnam, it seems far more realistic to call such progress part of the “evolution in military affairs” than part of a “revolution.” This does not, however, make the end result, and the steady level of progress, any less important or impressive.

Mission Effectiveness versus Mission Intensity: The Duel Between Offense and Defense Continues

- “Closing the loop” in near real time intelligence, targeting, precision strike, assessment and restrike operations may significantly improve mission effectiveness in ways that reduce the need for sheer force numbers and mission intensity. Not only did airpower substitute in many

ways for heavy ground forces, armor, and artillery, precision air power and far better targeting almost certainly substituted for air power numbers. This indicates that deploying even more effective real-time intelligence, targeting, and damage assessment systems can either make a given force steadily more effective in battle or allow a reduction in force numbers and mission intensity.^{xix}

- It must be stressed, however, that no meaningful numbers yet exist that allow any such benefits to be quantified. Indeed, they may never be available in a reliable form. Historical experience is a sharp warning that estimates of effectiveness, numbers of target kills, and all other aspects of battle damage assessment in the Afghan War will be sharply exaggerated. Neither the US nor Britain has more than the most marginal historical credibility in providing precise battle damage assessment.
- In the case of the Afghan war, these problems will be greatly complicated by the fact that many buildings and infantry complexes had to be hit where it was never clear exactly what functions were to be performed and what numbers of the enemy were involved, that at least some weapons were hit that were non-operational or had already been killed by other means, and that a number of strikes were conducted to produce psychological impact on the Taliban and Al Qaida, rather than damage per se. In many cases, it was impossible to both accurately characterize the target and then assess the level of damage done beyond obvious physical damage to a facility or weapon. This will make it difficult, if not impossible, to fully assess the impact of “closing the loop” in near real time intelligence, targeting, precision strike, assessment and restrike operations.
- There are also potential countermeasures to such advances. They include:
 - A shift to more distributed forms of warfare, where terrorists and other opponents seek to present smaller and smaller targets.
 - Hide or shield operations by more and more use of collocation with civilians,
 - The constant relocation of operations make it harder to target by function. Under such conditions, no advances in technical platforms will be able to compensate for a lack of reliable human intelligence and/or enhanced presence on the ground.
 - Disperse assets before or during a conflict without any normal indicators of combat operations -- just as Iraq dispersed chemical weapons near unmanned air facilities during the Gulf War.
 - Deploying distributed mixes of highly advanced surface-to-air missiles like the SA-10 or SA-11, shorter-range systems, sensors and command and control links to deny effective long-range air strike capabilities.
 - Creating retaliatory forces with weapons of mass destruction that can be launched on warning or under attack.
 - At the same time, there are also limits to the adaptiveness of enemy forces in response to such US capabilities. Large masses of armor, artillery, and combat air assets can scarcely be distributed. Indeed, moving them may simply make them targets.
 - Distributed forces are weaker forces, and hiding among civilians is a two edged sword that may alienate those you hide among. Buying very expensive and highly sophisticated air defense systems can also be countered with new targeting and strike

technologies. Relying on CBRN weapons as a deterrent is only credible if they cannot be target and it is clear that they will be used.

The Media and Psyops Battle.

- The Office of the Secretary of Defense feels that it did a much better job of dealing with the media and psychological dimensions of the war in the terms of the reaction of the US and Western media, but that it was slow to focus on the regional media and deal with psychological operations. It is not yet clear how the US can improve its efforts to deal with regional media, and strengthen and modernize its psyops capabilities, but this seems to be a significant lesson and one the Department will act upon over time.

US Marine Corps, the Osprey and Non-Littoral Warfare

- The US Marine Corps faces a potential crisis over the reliability and cost of the Osprey and the need to modernize many aspects of its transport helicopter, combat aviation, land systems, and amphibious systems.
- At the same time, its role in Afghanistan raises issues about the need to plan for more non-littoral operations and to create real Special Forces capabilities with language, area, and advisory expertise. President **Bush's** higher FY2003 defense budget request may solve some of these problems, but Afghanistan still indicates that the Corps needs to reexamine its force transformation plans.

Carrier Operations and Naval Strike Power

Successful as USN carrier operations were, the fighting in Afghanistan dramatized the need for long range carrier strike attack aircraft that can carry more weapons, deliver them with maximum accuracy, avoid having to return with munitions loads or dump munitions, and reduce the burden on USAF refueling assets.

This does not mean radical changes in the role of the carrier per se, but it does mean rethinking these aspects of USM and USMC combat air operations and particularly the capabilities and associated systems of the Joint Strike Fighter to see how these aspects of sea-based strike capabilities can be improved over time.

At the same time, the Afghan War again raises questions about the cost of the cruise missile, and the need for arsenal ships. It is one of the ironies of the cruise missile that that the Navy needs more and more long-range strike assets, but that only a relatively few targets merit strike systems that cost nearly \$1 million a round.

US Army and Future Combat System

- While the Afghan War is being used to justify the US Army's effort to transform its present armored and mechanized power projection forces into forces with much lighter armor and artillery and which can be moved and deployed much more rapidly, it is far from clear that the Afghan conflict per se really provides this lesson or that even an increase level of defense spending will allow the US Army to accomplish such a force transformation on a timely basis.

Special Forces

- In contrast, US Army special forces and ranger units illustrate that the so-called lessons of Task Force Hawk, and the failure to commit US Army light and attack helicopter forces in Kosovo, may not be lessons are all, but rather the result of political decisions and unique training and readiness problems. Certainly, the US Army's ability to airlift and drop more than 200 rangers and intelligence officers into Taliban controlled territory in Operation Rhino on October 19, 2001 indicates that properly planned operations can be very effective.
- There seems to be a good case for examining the expansion of special and ranger forces, modernizing their equipment, and tailoring attack helicopter and airmobile forces for counterterrorism and asymmetric warfare missions.
- As part of this examination, there seems to be an equal case for reexamining the role that CIA operations should play and the interface between the CIA and Special Forces.
- The same is true of how Special Forces are commanded and integrated into policy. At present, there seems to be a gap between the service commands, military command of SOF, role of the civilians in SOLIC, and the policy offices under the Secretary. In practice, it is clear that Special Forces are primarily a tool for joint warfare, but the issue of exactly who is in charge at the top is one that needs to be resolved in way that put some one clearly in charge. The last thing on earth Special Forces need is either an overcomplicated chain of command or one that is over-politicized.

A Global Command

- There is a need to consider whether some form of global command is needed to coordinate the new battle against terrorism and asymmetric warfare, and the complex problem of tying intelligence, coalition warfare, the political-military aspects of such wars, and the need to coordinate new forms of air ground operations. Secretary Rumsfeld has raised this issue and it is one that clearly need close attention.

Counterproliferation

- Finally, the discovery of a large-scale Al Qaida effort to develop CBRN weapons – as well as ongoing proliferation in nations like Iran, Iraq, and North Korea – illustrates the steadily growing importance of offensive counterproliferation capabilities as well as defense.
- The threat of biological warfare is particularly serious, and the US and its allies needs to rethink internal security planning, public health, response, and defense efforts to deal with the broad range of CBRN threats. The treatment of hoof and mouth disease and “mad cow” disease is almost a model of how not to deal with such cooperation, and a warning of how much more effort is needed.

Rethinking Arms and Export Controls:

- Much of the debate over the CW, ABM Treaty, BWC, and CTTBT has avoided coming to grips in detail with the threat of asymmetric attacks and terrorism, and has a heritage of focusing on large-scale conventional war fighting. The same has been true of export controls.

- A joint effort at comprehensive review of how to change arms control agreements and export controls -- looking at the CBRN and advanced technology threat as a whole – is needed to develop a more effective common strategy.

DoD Role in Homeland defense

- More than \$1.2 billion is set for continued combat air patrols over the United States
- \$3 billion is earmarked for counterterrorism, force protection and other homeland security needs.

DoD Role in War on Terrorism

- The request funds the war on terrorism, increases DoD funds spent on homeland security and begins financing transformation for the U.S. military to face the challenges of the 21st century. The DoD budget is 16.9 percent of the total federal budget request.
- Last year, that category of spending was \$5.2 billion, although it was boosted by \$13.7 billion shortly after Sept. 11. This year's budget has \$10.5 billion in this category.
- The Pentagon says it has spent about \$7 billion so far on the war in Afghanistan, which began Oct. 7. The costs have grown so rapidly, officials say, that Rumsfeld already has decided he must ask Congress for more money as early as March.
- The \$27 billion compares with \$4.6 billion in anti-terrorism spending in the 2000 defense budget.
 - Rumsfeld said the \$10 billion war reserve fund is “more likely to be too little than too much,” but it made sense to include at least an estimate for how much the war might cost.
 - Seven cents of every new dollar in the proposed spending plan would be devoted to the war on terrorism, including more than \$1 billion to continue fighter aircraft flights over parts of the United States as a precaution against a repeat of the Sept. 11 attacks.
 - DoD estimates the current cost of the war in Afghanistan at around \$8 billion.

DoD Nuclear Posture Review

- We conducted a nuclear posture review.
- It was as a result of that review that the President announced we were reducing our warhead levels to somewhere between 1700 and 2200, and the rest were going to be primarily, I think, put in reserve.
- But that begged a larger question which was okay, what else are you doing for your strategic deterrent? Not strategic nuclear deterrent, but strategic deterrent.
- We've come up with a new triad—we tend to think of things in threes. This new triad consists of:
 - the classic strategic nuclear deterrent,
 - missile defense as a second leg, and

- a third leg, a new conventional capability which because of improvements in communications and in targeting allow us to do some of the things that in the past we probably didn't even do as well.

ⁱ Much of the text is a modified form of various materials in the FY2003 budget briefing of the Homeland Security Office.

ⁱⁱ The data on the FY2003 defense program are adapted from material provided in Department of Defense briefings on www.defenselink.gov.

ⁱⁱⁱ Bryan Bender, Kim Burger, and Andrew Koch, Afghanistan: First Lessons, *Jane's Defense Weekly*, December 19, 2001, p. 20.

^{iv} For a good preliminary analysis of these lessons of war, see Bryan Bender, Kim Burger, and Andrew Koch, Afghanistan: First Lessons, *Jane's Defense Weekly*, December 19, 2001, pp. 18-21.

^v *Defense News*, January 14-20, pp. 3, 28; *Inside the Pentagon*, January 31, 2001, p. 1..

^{vi} See Kim Burger, and Andrew Koch, "Afghanistan: the Key Lessons," *Jane's Defense Weekly*, January 2, 2001, pp. 20-27.

^{vii} *Financial Times*, January 21, 2002, p. 15.

^{viii} *Jane's Defense Weekly*, January 2, 2001, p. 23

^{ix} *Jane's Defense Weekly*, January 2, 2001, pp 22-23.

^x For a broader summary of US force transformation activity, see Hans Binnendijk and Richard Kugler, "Adapting Forces to a New Era: Ten Transforming Concepts," *Defense Horizons*, Number 5, Center for Technology and National Security Policy, National Defense University, November 2001,

^{xi} *London Times*, January 23, 2002

^{xii} *Jane's Defense Weekly*, January 2, 2001, pp. 20-27.

^{xiii} *Jane's Defense Weekly*, January 2, 2001, pp. 20-27.

^{xiv} Bloomberg.com, January 22, 2002; *Los Angeles Times*, January 21, 2002, p. 1.

^{xv} *Los Angeles Times*, January 21, 2002, p. 1.

^{xvi} *Jane's Defense Weekly*, January 2, 2001, pp. 20-27.

^{xvii} *Aviation Week and Space Technology*, January 21, 2002, p. 27.

^{xviii} *Aviation Week and Space Technology*, January 21, 2002, p. 27.

^{xix} For broader update on ISR and digital warfare, see Vernon Loeb and Thomas E. Ricks, "1s and 0s Replacing Bullets in the US Arsenal," *Washington Post*, February 2, 2002, p. A-1.