Chairman of the Joint Chiefs of Staff Report on the

Roles, Missions, and Functions of the Armed Forces of the United States

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THE CHAIRMAN, JOINT CHIEFS OF STAFF

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MEMORANDUM FOR THE SECRETARY OF DEFENSE

Subject: 1993 Report on the Roles, Missions and Functions of the Armed Forces

1. As required by Title X of the United States Code, the 1993 Report on the Roles, Missions and Functions of the Armed Forces of the United States is forwarded. Although I have consulted with the Joint Chiefs and combatant commanders in its development, this report presents my views and is not a consensus document.

2. The report describes those issues reviewed and provides specific recommendations for improvements needed to maintain the maximum effectiveness of the Armed Forces.

COLIN L. POWELL
Chairman
of the
Joint Chiefs of Staff

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Executive Summary

SOME DEFINITIONS

The terms "*roles, missions,* and *functions*" are often used interchangeably, but the distinctions between them are important, particularly in the context of this report. ROLES are the broad and enduring purposes for which the Services were established by Congress in law. MISSIONS are the tasks assigned by the President or Secretary of Defense to the combatant Commanders in Chief (CINCs). FUNCTIONS are specific responsibilities assigned by the President and Secretary of Defense to enable the Services to fulfill their legally established roles. Simply stated, the primary function of the Services is to provide forces organized, trained and equipped to perform a role -- to be employed by a CINC in the accomplishment of a mission.

A SHORT HISTORY

For the first century-and-a-half of our nation's history, roles and missions were not subject to much debate. The Army's role was fighting on land. The Navy's and Marines' role was fighting on, and from, the sea. This simple division of labor started to get complicated after World War I, when the Services began to adapt the increasing combat potential of the airplane to its respective warfighting role.

Roles and missions grew even more confused during World War II, when the globe was divided into theaters, each encompassing land and sea areas. A CINC was appointed for each theater and given a mission, so that admirals began to command soldiers and generals began to command sailors. After the war, in order to implement lessons learned, Congress passed the National Security Act of 1947. This Act made the Joint Chiefs of Staff a permanent, formal body; created the United States Air Force as a separate Service; and, after amendment in 1949, led to establishment of the Department of Defense. This Act also attempted to clarify and codify Service roles

and missions to provide a framework for program and budget decisions. After the Act became law, Service leaders met at Key West, Florida and produced a broad outline for Service functions. That outline guides the division of labor to this day.

In 1986, Congress passed the Goldwater-Nichols Department of Defense Reorganization Act. It requires the Chairman of the Joint Chiefs of Staff "to periodically recommend such changes in the assignment of functions (or roles and missions) as the Chairman considers necessary to achieve maximum effectiveness of the Armed Forces." This is the second report in accordance with the Act.

This report is a comprehensive summary of a process of internal review and self-appraisal that goes on in the Armed Forces every day. It represents the culmination of months of effort by the Chairman and the Joint Staff. The recommendations of this report are the Chairman's alone though the Service Chiefs, the combatant CINCs, and their staffs were directly involved in the review process.

A Rapidly Changing World

Three years ago, when the first report on roles and missions was prepared, the Berlin Wall still stood. American strategic forces were on constant alert, and more than 300,000 US troops were in Europe, ready to repel any attack by the Warsaw Pact. Today the Cold War is over. The Warsaw Pact is dissolved. The Soviet Union has ceased to exist. Our strategic bomber force is no longer on alert. Nuclear and conventional arms control agreements have been concluded, eliminating entire classes of nuclear weapons and thousands of tanks, armored vehicles and artillery pieces. Over a hundred thousand troops have come home from Europe.

But the disappearance of the Soviet threat has not eliminated the need for trained and ready Armed Forces. In the three years since the last report, American troops have been committed in over two dozen crises, ranging from armed conflict in Panama and the Persian Gulf to peacekeeping and humanitarian assistance missions in several parts of the world, and to disaster relief operations at home and abroad. In short, our Armed Forces have been busier than ever in this rapidly changing world.

Four key factors -- the end of the Cold War, budgetary constraints, the Goldwater-Nichols Act, and the press of new regional crises -- converged to provide the opportunity, the necessity, and the authority

to address the ways in which all four Services are structured, trained, and employed in combat. As a result, more changes have occurred in the US military in the past three years than in any similar period since the National Security Act of 1947.

THE METHOD OF CHANGE

First, the *National Military Strategy of the United States* was developed, taking into account the new strategic landscape.

Next, the Base Force was established to provide the means for implementing the new military strategy. Smaller than the Cold War force but flexible, well-trained and highly capable, the Base Force is a dynamic force which can be tailored in response to further changes in the strategic environment.

Finally, a detailed review of the roles, missions, and functions of the Armed Forces was undertaken to ensure the new strategy and force structure were aligned as effectively as possible. In developing the recommendations contained in this report, the objective was to maintain -- and where possible enhance -- the combat readiness of the Armed Forces even as we reduced their size and the cost of maintaining them.

WHAT WE'VE ALREADY DONE

In the three years since the first of these reports was submitted under Goldwater-Nichols, many steps have been taken -- some with little public notice -- to respond to the rapidly changing world and to improve both effectiveness and efficiency. Even as walls fell and empires toppled, we were making the adjustments our nation's security required.

The Creation of US Strategic Command

The organization of our nuclear forces has been changed fundamentally. For the first time, all of America's strategic bombers, missiles, and submarines are under one commander, either an Air Force general or a Navy admiral. This arrangement, hard to imagine only a few years ago, represents perhaps the most dramatic change in the assignment of roles and missions among the Services since 1947.

The Elimination of Nuclear Functions

As a result of Presidential nuclear initiatives, developed under the direction of the Joint Chiefs of Staff and the Secretary of Defense, the Army and Marine Corps -- both of which have had a nuclear function since the mid-1950s -- no longer have nuclear weapons. Now they rely on the Navy and

the Air Force for nuclear support. Moreover, all tactical nuclear weapons have been removed from ships, submarines, and land-based naval aircraft. Finally, for the first time since the 1950s, all US strategic bombers and all 450 Minuteman II missiles have been taken off alert.

No More Chemical Weapons

With the signing of the Chemical Weapons Convention in Paris on January 13, 1993, the United States renounced the use of chemical weapons. The Services no longer need to maintain a capability to retaliate with lethal chemical weapons.

This will reduce training, maintenance, and procurement costs and permit chemical weapons stockpiles to be destroyed in the safest, most efficient manner.

Better Strategic Lift

Our new regional focus, combined with major reductions in overseas troop levels, puts enormous emphasis on strategic mobility. The formation of Transportation Command had already set our management house in order; what remained was to match our lift capabilities with the new strategy and Base Force. The Mobility Requirements Study does just that. The study's recommended mobility improvements will enable deployment of an Army light division and a heavy brigade to any crisis area in approximately two weeks, and two heavy divisions in about a month.

Expanded Mission: Counter-Drug Operations

In 1989, the Department of Defense began to expand significantly its participation in America's fight to stem the flow of illegal drugs. This expanded mission requires the sustained use of active duty and Reserve forces who are properly trained and equipped for a non-traditional role. They are involved with emergency organizations and host-nation police and military forces in planning and carrying out these counter-drug operations. This campaign involves several of our CINCs who are working together closely so they can share joint lessons learned and continue to improve our capability to perform this unprecedented mission.

A New Look In Combat Logistics

A change of strategic focus from global to regional conflict allowed us to make major changes in the way we calculate and provide for our logistics support needs. For global war, we needed enough stocks so that each CINC could fight his theater's forces alone and for some considerable time without resupply from the continental United States (CONUS). With our new strategy, we need only enough "starter" stocks to last until theater forces are resupplied from CONUS,

or from other propositioned "swing" stocks that can be moved quickly from one region to another. To do this, some stocks are being repositioned from land to "afloat." The Army, for example, has estimated that it can achieve a 50% reduction in war reserve requirements under this new concept. Combat logistics have entered a new era with our new strategy.

Better Intelligence Support to the Warfighter

The intelligence support available to US forces in the Gulf War was probably the best in history. This was partly because of innovations that preceded the war and partly because of innovations made during the war. Notwithstanding this success, additional needs were identified. Combining the success and the needs, we have greatly improved what was already a good intelligence system. For example, we set up a standing board comprised of senior intelligence officials from all intelligence organizations to determine program priorities and coordinate support for military operations. We established a Joint Intelligence Center -- just as General Schwarzkopf had -- for all our CINCs. We established the National Military Joint Intelligence Center in the Pentagon. This Center serves as a focal point for support to the commands and to joint task forces by acting as a national clearing house for intelligence requests and by coordinating support from the CIA, DIA, and NSA. We established a Central Imagery Office to coordinate the timely provision of imagery products -- maps, target photos, intel photos -- to the warfighters. We also established an Office of Military Affairs within the CIA to correct a deficiency in national intelligence availability identified by our commanders during the Gulf War. Finally, we eliminated a shortfall in Human Intelligence (HUMINT) -- the information gathered by people -- by giving tasking authority for all HUMINT to DIA.

Doctrine and Training

We have made great strides in developing, and training under, joint doctrine. Foremost among our new publications is *Joint Warfare of the US Armed Forces: Joint Warfare is Team Warfare*. It serves as the focal point for further refinement. OCEAN VENTURE 92 and TANDEM THRUST 92 -- conducted off the Carolina coast and in California and the mid-Pacific respectively -- saw thousands of soldiers, sailors, airmen and Marines training together on joint wartime tasks. Clearly indicative of our new joint doctrine and training emphasis was the use of the Joint Force Air Component Commander (JFACC) concept in the Gulf War. The JFACC oversaw and synchronized all air component operations for General Schwarzkopf. This was a historic first. The overwhelming success of the concept was

dramatically apparent in the results obtained.

Dramatic Infrastructure Changes

The drawdown to the Base Force requires a commensurate reduction in our infrastructure. More than 170 activities have been identified by the Services for elimination, consolidation, or realignment. For example, the commissary functions of all Services have been combined into a single Defense Commissary Agency. We have assigned executive agents to oversee common functions such as clean-up of former DOD-owned hazardous waste sites, operation of common-user ocean terminals, and support for medical materiel, military postal service, and domestic disaster relief. We have reduced and reorganized Service staffs.

WHAT WE'RE DOING NOW

The foundation for the current assignment of Service roles and functions -- the Key West Agreement -- was the product of a meeting convened by the first Secretary of Defense, James Forrestal, to work out disagreements among the Services sparked by the National Security Act of 1947. Many argue that the agreement reached at Key West is flawed, that it failed to resolve redundancy and duplication among the Services. In fact, what was recognized in 1947, and has been supported by Congress ever since, is that there are advantages in having complementary capabilities among the Services. At the national command level, such flexibility provides additional options to senior decision-makers in a crisis. At the theater level, CINCs can more effectively tailor a military response to any contingency, regardless of location.

Despite the enduring wisdom of the Key West Agreement, we recognized the need to review the underlying division of responsibilities. In addition to the mandate of Goldwater-Nichols, the dramatic changes we were designing for the Armed Forces demanded such a review.

Beginning in the summer of 1992, a comprehensive, "top-to-bottom" review of roles and missions was undertaken. This review, led by the Joint Staff, involved the Services and the CINCs at every step. Areas selected for examination were those in which

two or more Services perform similar tasks, where restructuring might generate significant cost savings, or where changes in strategy and force structure made a comprehensive review appropriate. One of the primary goals was the identification and elimination of *unnecessary* duplication of effort between the Services, recognizing that redundancy can be a good thing, especially in an emergency -- and that emergencies are less predictable today than at the height of the Cold War.

The 1993 *Report on Roles, Missions, and Functions* thus examines the US Armed Forces from a perspective entirely different from that of the 1989 report. It addresses many of the difficult questions being asked by Congress and the American people about their Armed Forces. In a number of areas, significant changes in the assignment of roles, missions, and functions are recommended. In others, the current division of labor makes the most sense. In still others, further study is needed before final recommendations can be made. The issues addressed and the resulting recommendations are highlighted below and in the table following this summary.

Significant Changes in the Unified Command Plan

A detailed review of roles, missions, and functions necessarily involves a review of the Unified Command Plan (UCP) because missions are assigned to CINCs, not to Services, and the UCP is the document that defines the CINCs' responsibilities. As mentioned, US Strategic Command already represents a major change to the UCP; nonetheless, we recommend one more major change and further review of another.

(1) A New CINC for US-Based Forces

During World War II, forces from all Services were assigned to theater CINCs who waged the war. We learned it was the best way to fight. The National Security Act of 1947, and subsequent congressional action in 1958, made this successful organization permanent. The Goldwater-Nichols Act put the finishing touches to this arrangement -- except for one major contingent of troops, those assigned to units in CONUS. By 1992, this exception had become all the more glaring because of the changes in our strategy, in our forward deployments, and in the structure of our forces.

With troop strength overseas reduced, our regionally-oriented strategy depends more on forces based in CONUS -- forces that must be trained to operate jointly as a way of life. Yet there is no CONUS-based CINC charged with this mission.

The lack of an appropriate joint headquarters to oversee Service forces based in CONUS has always been considered a problem. The Joint Chiefs of staff have tried twice to fix it.

US Strike Command was activated in 1961 to provide unified control over CONUS-based Army and Air Force units. Initially, Strike Command was given no regional responsibilities, but was assigned functional responsibilities to provide a general reserve for reinforcement of other unified commands, to train assigned forces, to develop joint doctrine, and to plan for and execute contingency operations as ordered. In attempting to fulfill its responsibilities as a trainer and provider of forces, Strike Command frequently collided with the Services' authority under Title X to organize, train and equip forces.

In 1971, Strike Command was replaced by US Readiness Command. It was given functional responsibility for training and providing forces, with no geographic area of responsibility. Readiness Command experienced some of the same Service resistance as its predecessor in fulfilling its assigned training responsibilities.

Over time, Readiness Command was given additional functional responsibilities, including a requirement to plan for and provide Joint Task Force headquarters and forces for contingency operations in areas not assigned to overseas CINCs. One of the Joint Task Force headquarters -- the Rapid Deployment Joint Task Force (RDJTF) -- eventually grew into a new combatant command, US Central Command (CENTCOM). Readiness Command was subsequently disestablished as a result of a combination of factors, not least of which was the fact that our strategy depended more on forward deployment and basing to contain Soviet expansion than on CONUS-based forces.

Today our strategy has changed, and we have reached a level of joint maturity that makes it possible to address once more the need for unified command over CONUS-based forces. Unified command would facilitate the training, preparation, and rapid response of CONUS-based forces currently under the Army's Forces Command, the Navy's Atlantic Fleet, the Air Force's Air Combat Command, and the Marine Corps' Marine Forces Atlantic. The time has come to merge these forces under a single CINC whose principal purpose will be to ensure their joint training and joint readiness. Units that are already accustomed to operating jointly will be easier to deploy. Overseas CINCs will be able to focus more on in-theater operations and less on deployment and readiness concerns.

This CINC could also be assigned certain other functional responsibilities, including:

- Undertaking principal responsibility for support to United Nations peacekeeping operations and training units for that

purpose.

- Assisting with the response to natural disasters in the United States and other requirements for military support to civil authorities, when requested by State Governors and as directed by the President.
- Improving joint tactics, techniques, and procedures.
- Recommending and testing joint doctrine.

After examining several approaches to setting up the required joint headquarters, we found US Atlantic Command (USLANTCOM) particularly well suited to assume this new mission:

- It is an existing CONUS-based joint headquarters.
- It already has a working relationship with the four commands that would become its permanent components.
- Its Cold War mission, to defend the Atlantic sea lanes and undertake offensive naval operations against the Soviet Union, has fundamentally changed. While continuing to perform a vital NATO mission, it has the capacity to undertake this additional responsibility in keeping with the revised military strategy.
- Its geographic area of responsibility, although large, presents only a modest warfighting challenge given the disappearance of the Soviet threat.
- It can continue to perform its vital NATO mission.

Under this arrangement, the present command in Norfolk, Virginia would shift from its predominately maritime orientation to a more balanced combatant command headquarters. We would probably rename the command so as to reflect more accurately its new focus. Its CINC would become a nominative position, which could be filled by any Service. The Army's Forces Command would no longer require "specified" status as a single-Service command reporting directly to the President and Secretary of Defense. With this change, the term "specified" would be retired, and all forces would belong to a joint team. While the Services would retain their Title X responsibilities, the training and deploying of CONUS-based forces as a joint team would be a new mission for this expanded CINC. Unification of the Armed Forces, which began in 1947, would at last be complete.

(2) Possible Consolidation of Space and Strategic Commands

The United States has developed a robust, highly capable, and complex framework for the launch and control of space vehicles and systems. Although the majority of space functions today reside within the Air Force, all the Services, plus US Space Command and several Defense Agencies and organizations, are involved in

space activities.

The Commander in Chief of US Space Command (CINCSPACE), headquartered in Colorado Springs, Colorado, is assigned combatant command of US forces providing warning and assessment of a bomber or missile attack on the United States. In addition, CINCSPACE supports other CINCs by ensuring that space operations and warning requirements are supported.

CINCSPACE is also Commander of the North American Aerospace Defense Command (NORAD), the US-Canadian command that provides air defense of the North American continent. CINCSPACE carries out his mission through three Service component commands: Air Force Space Command at Petersen Air Force Base, Colorado Springs, Colorado; Naval Space Command at Dahlgren, Virginia; and Army Space Command at Colorado Springs, Colorado.

Even with the end of the Cold War, our national security depends on a robust space capability. But we can no longer afford to allow multiple organizations to be involved in similar, independent, or duplicative space roles and functions.

A number of improvements are underway to streamline our space organization and systems and eliminate unnecessary overlap. Organizationally, the Joint Chiefs of Staff agreed in 1991 to "dual hat" CINCSPACE as Commander, Air Force Space Command. This led to a reduction in personnel and support costs. But these changes don't go far enough; it is time for an even bolder change to be examined.

The proposal we are evaluating would assign the space mission to the Commander in Chief of US Strategic Command (CINCSTRAT) and eliminate US Space Command.

Under this proposal, after appropriate consultation with the Canadians, the Commander of AFSPACECOM would assume command of NORAD in Colorado Springs. AFSPACECOM would also operate all space systems under CINCSTRAT's command. Small Army and Navy components would be assigned to CINCSTRAT to ensure space systems support for all Services' needs. All Services would also be represented in appropriate planning and requirements offices. The Air Force would be responsible for development of future military space systems. These actions would ensure Service-unique requirements for and uses of space are properly represented, and that Services and CINCs have trained personnel with the knowledge to exploit capabilities of space systems.

Other changes envisioned would include designating the Air Force as the lead Service to coordinate with NASA regarding LANDSAT remote earth sensing operations, and consolidating DOD's functions at NASA into a single organization under Air Force

Space Command. To streamline military satellite communications operations, all operational responsibilities for the Defense Satellite Communications System would transfer from the Defense Information Systems Agency to the Air Force. Responsibilities for the Navy's Fleet Satellite Communications system would also transfer to the Air Force. Both systems would remain under the combatant command of CINCSTRAT.

Under this proposed arrangement, requirements for space systems would continue to be submitted by the CINCs, Services, or agencies to the Joint Requirements Oversight Council for validation. Day-to-day requirements for operational space system support would be submitted to CINCSTRAT.

Such a consolidation would conserve scarce resources and eliminate a substantial number of positions. It is envisioned that this would improve warfighting support from space, allowing an increase in operational effectiveness, efficiency, and interoperability, while maintaining joint Service expertise and joint operational focus.

More analysis is needed before we assign the space mission to STRATCOM. This analysis will be done in the near future.

A Change in Depot Maintenance

Another change of significant proportions that does not involve the UCP is the proposal to consolidate all depot-level maintenance under a new joint command.

Over the years, all four Services established their own depot maintenance systems to perform complex mechanical and electronic work that includes overhauls, component rebuilds, and other operations beyond the technical ability of maintenance units in the field. These four Service maintenance networks, each independent of other Services' capabilities and sized to support a global war, can be reduced and restructured to reduce excess capacity and eliminate no-longer-needed facilities. A study group chartered by the Chairman of the Joint Chiefs of Staff has recommended closure of seven or eight of the military depots in order to reduce excess capacity. Savings of $400 million to $600 million per year are achievable when all these depots are closed. The group also recommended establishment of a Joint Depot Maintenance Command to oversee and administer all depot-level maintenance. This recommendation is still under review in the Department of Defense; meanwhile, the Services have been directed to identify and recommend depot closures and consolidations prior to the next deliberations of the Base Realignment and Closure Commission.

A Look at America's Air Power

The claim that America has "Four Air Forces," implying it has three more than it needs, makes a wonderful sound bite but distorts the facts. In fact, America has only one Air Force, the United States Air Force, whose role is prompt and sustained offensive and defensive air operations. The other Services have aviation arms essential to their specific roles and functions but which also work jointly to project America's air power.

It would make no more sense to assign all aircraft to the Air Force, as some would suggest, than it would to assign all items of any other militarily useful technology -- radios or trucks, for example -- to a single Service. The airplane and helicopter capabilities of the Army, Navy, Air Force, and Marine Corps are unique, complementary, and necessary. Together they constitute "America's Air Power," an indispensable ingredient in any situation where American lives are at risk. That said, it was recognized that the acquisition plan for major aviation programs would require more resources than might be available. Many issues associated with air power roles, missions, and functions were therefore examined, and a number of opportunities were identified to make the structure and systems that support and sustain America's Air Power more efficient. For example:

Continental Air Defense

Significant savings in manpower and operating costs can be achieved by eliminating or sharply reducing the 12 Air National Guard interceptor squadrons dedicated solely to this mission. General purpose and training forces from the Active and Reserve components of the Air Force, Navy, and Marine Corps can absorb this post-Cold War mission, perhaps in its entirety.

Theater Air Interdiction

Operations deep behind enemy lines are essential to any military campaign. The contributions of both bombers and attack aircraft should be considered when the total number of aircraft required for theater air interdiction is determined.

Close Air Support

The Key West Agreement has always been interpreted as limiting this support to fixed-wing aircraft. But this essential battlefield task can and should be performed routinely by attack helicopters as well. Service functions are being realigned to reflect this expanded definition. To ensure uniformity of execution by all Services that request and provide fixed- and rotary-wing close air support, standardized joint procedures are being developed.

Marine Corps Tactical Air

US Marines train and fight as a combined arms air-ground team, supported by organic aircraft that can operate from carrier decks and austere expeditionary sites ashore. Despite calls by some for its elimination, Marine Corps tactical air is a unique capability, essential to our military strategy. The number of aircraft types in the Marine Corps inventory will be reduced from nine to four, and Marine Corps squadrons will deploy more frequently aboard aircraft carriers.

Flight Training

To take advantage of the commonality of purpose and training programs among the Services for the primary phase of flight training, all Navy, Air Force, Marine Corps and Coast Guard flight students will begin training using a common fixed-wing training aircraft under joint development. Following primary flight training, student pilots will be selected for advanced training in one of four specific follow-on specialties or "tracks": Navy Fighter/Attack, Air Force Fighter/Bomber, Navy and Air Force Tanker/Transport/Maritime Patrol, or Helicopter.

Tanker/Transport/Maritime Patrol training consolidation is expected to begin in 1994, when the Navy plans to introduce advanced maritime training at Reese Air Force Base, Texas. A study will determine if it is cost-effective to move Navy, Marine Corps, and Coast Guard helicopter training -- currently conducted at Pensacola, Florida -- to Fort Rucker, Alabama, where Army and Air Force training is conducted.

Aircraft Requirements and Inventory Management

Each Service uses a different formula to determine how many aircraft it needs to buy, and different rules to account for aircraft once they're in the inventory. To ensure procurement and maintenance funds are not spent on unnecessary aircraft, standardized terminology and procedures will be developed to govern aircraft requirements and inventory management.

Common Aircraft

The 1993 review of roles, missions, and functions included a careful examination of aircraft common to more than one Service, looking for ways to do business more effectively or efficiently while preserving each Service's ability to perform required functions. The resulting recommendations are summarized below:

- ❑ Consolidate the two types of airplanes used for airborne command and control of strategic forces. Eliminate the Air Force EC-135 program. Use funds planned for EC-135 upgrade to pay for transition to the Navy's E-6A, and assign the function to the Navy.

- Continue to give each Service responsibility for its own Combat Search and Rescue. Use standard equipment to support interoperability while implementing joint doctrine to enhance training and operational effectiveness.

- Improve management of Operational Support Aircraft and reduce their numbers to only those required.

- Retain Attack Helicopters in the Army and the Marine Corps. Consolidate aircrew and maintenance training where practicable. The Army and Marine Corps pursue developing and procuring common airframes to fulfill future requirements.

- Consolidate maintenance training, simulator training and maintenance infrastructure for General Support Helicopters. Study the feasibility of consolidating overlapping Service support functions within certain geographic regions.

- Retain C-130 tactical airlift aircraft and KC-130 tanker support aircraft structures as currently configured. Review showed that consolidating these heavily-tasked aircraft under one Service would not be cost-effective, would degrade efficiency, and would greatly complicate their management and support.

- Retain and modernize the aircraft currently used by the Navy, Marine Corps and Air Force to jam enemy radar systems. The Navy/Marine EA-6B and the Air Force EF-111 airframes are optimized for the "from the sea" and "global reach" roles assigned to their respective Services. Both derive significant economies of scale from the fact that they share parts, support, and training procedures with the large fleets of A-6s and F-111s managed by the Navy and Air Force. Consolidating Jammer Aircraft into one airframe would degrade effectiveness and require purchase of additional aircraft.

- Retain current types of Electronic Surveillance Aircraft in the Navy and the Air Force. Existing quantities of Navy EP-3Es and Air Force RC-135s are barely sufficient to handle peacetime requirements for gathering electronic intelligence. Eliminating either type or replacing one with the other would be costly and would contribute nothing to effectiveness. Support structures already in place for the large fleets of Navy P-3s and Air Force KC-135s make the operation and maintenance of 12 EP-3Es and 14 RC-135s a small fraction of overall costs.

A Look at Other Key Questions

Forward Presence

Forward presence is the totality of US instruments of power and influence employed overseas. Forward stationing is one element of forward presence and is a key underpinning of US diplomacy. It contributes to conflict prevention and lends credibility to alliances. As the global security environment changes, additional reductions in forward stationed forces may be appropriate. However, as forward stationing decreases, other forward presence operations will increase in importance. A new concept is being developed which envisions using geographically and mission tailored joint forces to conduct forward presence operations. These "Adaptive Joint Force Packages" could contain a mix of air, land, special operations, space, and maritime forces tailored to meet the supported CINC's requirements, potentially at a lower cost than today's deployments.

Contingency and Expeditionary Forces

With its emphasis on rapid response to regional crises, the National Military Strategy places a premium on the expeditionary capabilities of the Marine Corps and the contingency capabilities of Army airborne and light infantry forces. Both types of forces should be retained; however, the review of requirements is continuous and may in the future include the possibility of further reductions in the Army's light infantry forces.

Tanks and MLRS for the Marine Corps

The Marine Corps is structured to integrate armor and artillery units into its maneuver elements. Severing armor from the organic structure of the Marines would markedly reduce unit cohesion and warfighting capability and produce negligible costs savings. The Marine Corps must retain enough tank battalions to support amphibious operations and outfit three Maritime Prepositioning Squadrons. Any requirement for additional tank support will be provided by Army armored units. There do appear to be advantages in making the Army responsible for all MLRS (Multiple Launch Rocket System) support; however, taking away the Marine Corps' organic general support artillery and having the Army take on the additional function of supporting the Marines is a major step that requires in-depth cost and effectiveness analysis before implementation can be considered. We will perform that in-depth analysis in the near future.

Theater Air Defense

All four Services currently operate theater air defense systems. Study showed there would be substantial near-term costs and personnel disruption associated with transferring these systems and associated

functions between Services. No long-term savings were identified. A comprehensive review of theater air defense is needed to ensure the planned mix and quantities of air and missile defense systems are appropriate. The Joint Staff will head a Joint Mission Area Analysis to review theater air defense requirements, capabilities, and deficiencies. The results of this analysis will determine if further refinements to Service roles and functions are appropriate.

Training, and Test and Evaluation Structures

The extensive array of training and test and evaluation facilities built for World War II and maintained throughout the Cold War can be restructured in keeping with the changed world. An integrated test and evaluation range structure will be developed under the management of an executive agent as part of the effort to lower costs and increase effectiveness. As an example, integration and electronic linking of the many Service training and testing ranges in six western states and off the California coast would provide a land, airspace, sea area and offshore supersonic operating domain to accommodate a large portion of our joint training, test and evaluation needs well into the next century.

Construction Engineers

Each Service has its own construction engineering capability, sized and structured over the years to support combat forces in a global war and maintain a worldwide array of bases and facilities. In view of the smaller requirements of our new military strategy, the Services are reducing their engineer structures -- the Army by 34 percent, the Air Force by 39, the Marine Corps by 20, and the Navy by 11 percent. The possibility of having one Service provide all wartime construction units was evaluated; however, such a consolidation was rejected because of the uniquely tailored support each Service's construction engineers provide to its operational units.

Operating Tempo

"OPTEMPO" is a term describing the pace of operations and training. OPTEMPO determines the rate at which funds are spent from the Operations and Maintenance (O&M) accounts to buy the fuel, repair parts, and supplies consumed during normal operations. When we examined whether additional O&M savings could be achieved through prudent reductions in OPTEMPO, we came to several conclusions. First, increased use of simulation helps train commanders and leaders in operational art and tactics, and weapons crews in engagement techniques. But the requirement to be ready to go on an instant's notice still demands that people be trained in the field,

at sea, and in the air on their weapons and support systems. Second, new forward presence concepts will reduce some OPTEMPO rates during routine peacetime operations. However, reduced overseas basing and increased emphasis on resource-intensive operations like peacekeeping and humanitarian assistance may mean an actual increase in OPTEMPO. Finally, for a smaller force, increasingly based in CONUS, keeping units fully trained is the only certain way to ensure they are ready to respond as part of a winning team when called.

Initial Skills Training

Current training establishments reflect Cold War training requirements -- they are big, expensive, and overlapping. While some training has already been consolidated, more training installations and facilities can probably be closed or consolidated to reduce costs. Toward that end, and as part of the continuous process of internal review and self-appraisal, the Services, with Joint Staff support, are conducting a comprehensive scrub of all military skills training.

Chaplain and Legal Corps

Chaplains and judge advocates are military officers, subject to the performance standards, regulations, policies, and particular customs of their parent Services. Consolidating all chaplains and lawyers under a single Service, which some have suggested, would result in insignificant cost savings and have a negative effect on the quality of pastoral care and legal support provided to the men and women of the Armed Forces and their families. Consolidation is therefore not recommended.

Intelligence

Despite steps taken to implement lessons learned in DESERT STORM and centralize management functions, the existing intelligence structure still largely reflects its Cold War origins. The Defense Intelligence Agency is assessing available intelligence resources with a view toward creating intelligence support units to provide Joint Task Force commanders a fully operational intelligence support organization. DIA is also nearing completion of a study that is examining additional consolidation of some Service-level intelligence production responsibilities.

Force Structure

As part of a continuing review, the Department of Defense will continue to work with Congress to determine the proper Active and Reserve force mix. As additional ways are sought to consolidate functions and reduce defense spending, a study of National Guard and Reserve headquarters and staffs should be conducted to identify duplication that may be unnecessary.

THE MAIN POINT

As US national security needs have changed, so has the US military. The recommendations in this report advocate the need to continue to reshape our military to address the challenges of the future, while recognizing that it must be done intelligently, prudently, and responsibly.

With the guiding premise of doing what's right for America, the tough issues facing the Army, Navy, Air Force, and Marine Corps have been addressed head-on. These thorough, frank, and frequently challenging appraisals have yielded concrete results. The 1993 *Report on the Roles, Missions, and Functions of the Armed Forces of the United States* outlines new approaches to how the Services intend to do business. The report represents a clear expression of our commitment to change. But above all, it documents the Armed Forces' firm recognition that the main purpose of assigning roles, missions, and functions is to protect America.

Table of Recommendations

ISSUE	RECOMMENDATION
Would a Joint Headquarters for US Based Forces improve the joint training, preparation, and rapid response of CONUS-based forces?	CONUS-based forces of FORSCOM, LANTFLT, ACC, and MARFORLANT should be combined into one joint command. LANTCOM will be responsible for: joint training, force packaging, and facilitating deployments during crises; supporting UN peacekeeping operations; and providing assistance during natural disasters.
Can efficiencies be achieved by assigning the Space mission to USSTRATCOM?	A review will be conducted to determine if the space mission should be assigned to STRATCOM, and if USSPACECOM should be eliminated.
Should the Services' Depot Maintenance facilities, which perform major maintenance on equipment, be restructured or reduced?	Consider establishing a Joint Depot Maintenance Command to reduce and restructure depot-level maintenance by 25-50%. Examine closing 7 or 8 of the 30 military depots which could achieve savings of $400M to $600M per year after these depots are closed. Services recommend depot closures and consolidations to the Base Realignment and Closure Commission.

ISSUE	RECOMMENDATION
Does America need four separate air forces; one each in the Army, Navy, Air Force, and Marine Corps?	America has only one air force, the United States Air Force. The Army, Navy, and Marine Corps each have aviation arms essential to their assigned warfighting roles. Each air arm provides unique but complementary capabilities. They work jointly to project America's Air Power.
Continental Air Defense, protecting the US from enemy air attack, is now performed by 12 Air National Guard interceptor squadrons dedicated solely to this mission. Is this dedicated force still necessary?	Eliminate or sharply reduce the force dedicated to this mission. Assign to existing Air Force, Navy, and Marine Corps general purpose and training squadrons.
Theater Air Interdiction (TAI), the destruction of enemy forces deep behind their lines, is currently done by attack aircraft and bombers. Is there an optimum mix of bombers and attack aircraft, with which to carry out this mission?	Sufficient numbers of land- and sea-based bombers and attack aircraft need to be forward-deployed or rapidly deployable to provide quick response to short-notice crises. Strategic bombers, previously dedicated to Cold War nuclear missions, are now available to support TAI. Therefore, in the determination of total aircraft required for TAI, it is necessary to consider the contributions of both bombers and attack aircraft.

ISSUE	RECOMMENDATION
Close Air Support (CAS) is the use of aircraft to directly support ground troops engaged in combat with the enemy. What types of aircraft should be included in the CAS mission?	Include attack helicopters as CAS assets and realign and clarify functions and doctrine to include CAS as a primary mission area for all Services.
Should Marine Corps Tactical Air wings be reduced or eliminated?	Marine Corps tactical aircraft are an integral part of the Marine air-ground team and should not be eliminated. Marine Corps aircraft will be reduced from nine to four aircraft types and deploy more frequently aboard aircraft carriers.
Fixed-wing Flight Training is now conducted by both the Navy and the Air Force; helicopter training is conducted by both the Army and Navy. Could flight training be consolidated?	Consolidate Navy, Marine Corps, Air Force, and Coast Guard initial fixed-wing training, and transition such training to a common primary training aircraft. Consolidate follow-on flight training into four training pipelines. (Navy Fighter/Attack, Air Force Fighter/Bomber, Navy and Air Force Tanker/Transport/Maritime Patrol, or Helicopter). Determine if it saves money to move Navy, Marine Corps, and Coast Guard helicopter training from Pensacola, Florida to Fort Rucker, Alabama.

ISSUE	RECOMMENDATION
The Services have different ways of calculating Aircraft Requirements and Inventory Management. Should this methodology be standardized?	Aircraft inventory terminology should be standardized. Common definitions among Services for all categories of aircraft will assure consistent rationale for requirements and ensure procurement and maintenance funds are only spent on necessary aircraft. This standardized approach will provide consistency in the number of airframes procured.
Should the Navy and the Air Force use a common airframe for Airborne Command and Control of strategic forces?	Consolidate the Navy and Air Force aircraft and functions into the Navy's E-6A program. The Air Force EC-135 program will be eliminated and cancellation of its planned upgrades will fund transition into the E-6A.
Should the Combat Search and Rescue (CSAR) mission belong to only one Service?	All four Services retain responsibility for CSAR operations. CSAR forces will be equipped to operate individually or together employing standardized joint doctrine, tactics, techniques, and procedures.

ISSUE	RECOMMENDATION
Should the Operational Support Aircraft (OSA) fleet be reduced and should management for all Services be consolidated to improve efficiency?	OSA aircraft are in excess of wartime needs and should be reduced. TRANSCOM will develop the capability to coordinate and schedule intratheater airlift.
Should the Army and Marine Corps both operate Attack Helicopters?	Army and Marine Corps continue to operate attack helicopters. Consolidate some aircrew maintenance and training. Develop and procure common airframes to fulfill future requirements.
Should some of the General Support Helicopter operations be consolidated?	Consolidate maintenance training, simulator training, and maintenance infrastructure. Study consolidation of overlapping Service support functions within certain geographic areas.
Should C-130 operations, management, and support be consolidated under one Service?	Consolidating C-130s under one Service would decrease operational effectiveness, complicate management and support, and would not save money.

ISSUE	RECOMMENDATION
Do the Navy, Air Force, and Marine Corps all need to operate Jammer Aircraft?	The similar but specialized capabilities of all Navy/Marine Corps EA-6B and Air Force EF-111 aircraft give military commanders options in combat to reduce aircraft attrition. Both aircraft should be retained and upgraded . Consolidating into one airframe would reduce effectiveness and require additional aircraft procurement.
Should the Navy EP-3E and Air Force RC-135 Electronic Surveillance Aircraft both be retained?	Navy EP-3E and Air Force RC-135 aircraft are fully committed and should be retained. Infrastructure is already in place to support the Navy P-3 and Air Force KC-135 fleets, of which the EP-3E and RC-135 are a small part.
As an element of Forward Presence, should forward stationing of US forces be further reduced?	Forward stationing is a key underpinning of US diplomacy. It contributes to conflict prevention and lends credibility to alliances. As the global security environment changes, additional reduction in forward stationed forces may be appropriate. However, as forward stationing decreases, forward presence operations will increase in importance. Continue to develop the concept of Adaptive Joint Force Packages.

ISSUE	RECOMMENDATION
Is it necessary to retain Contingency and Expeditionary Forces in both the Army and Marine Corps?	The capabilities of the contingency and expeditionary forces in the Army and Marine Corps provide decision makers with valuable alternatives and should be retained. The possibility of further decreases in the Army's light infantry will be studied as force structure is reduced.
Should the Army provide Tanks and MLRS to the Marine Corps?	Marine Corps will retain enough tank battalions to support amphibious operations and to outfit three Maritime Prepositioning Squadrons. The Army will provide any additional tank support required. There appears to be advantages in having the Army provide MLRS support for Marine Corps operations, however, an in-depth cost and operational effectiveness analysis is required before implementing this recommendation.
Should Theater Air Defense (TAD) responsibilities and systems be consolidated into one Service?	A review of Theater Air Defense is needed to ensure we have the appropriate mix and quantities of air and missile defense systems. The Joint Staff will head a Joint Mission Area Analysis to comprehensively review TAD requirements, capabilities, and deficiencies.

ISSUE	RECOMMENDATION
Should consolidations and reductions be made to the Services' Training, and Test, and Evaluation Infrastructure in order to focus investment to improve selected facilities and cut cost?	Designate an Executive Agent to streamline test and evaluation infrastructure. Using advanced data processing, electronically link test and evaluation, and training ranges, in broad geographic areas such as the Southwest US, to enhance joint testing needs and support joint training requirements.
Should Construction Engineers be consolidated in one service?	Consolidation of individual Service engineer units is not recommended because it would not save money and would provide no advantages. Reductions already underway decrease construction engineers in the Army by 34%, Air Force by 39%, Marines by 20%, and Navy by 11%.
Should Operating Tempo (OPTEMPO) be reduced as a result of the changes in the world security environment?	OPTEMPO cannot be reduced. The amount of warning time available before committing forces to combat is generally small; therefore, the need for a high state of readiness is increased. In addition, as forward stationing is reduced, forward deployments become more important in supporting US foreign policy.

ISSUE	RECOMMENDATION
Should the Services' Initial Skills Training be consolidated since the force structure is declining?	Some training is already being consolidated. Services are conducting a comprehensive review of all military initial skills training to identify additional areas for consolidation.
Should the Services' Chaplain and Legal Corps be consolidated?	Do not consolidate the Chaplain and Legal Corps. No savings are achieved.
Should Intelligence organizations be further reduced?	Further consolidation of intelligence production centers under a joint intelligence organization might reduce infrastructure and overhead. A nearly-complete DIA study will offer several options for additional consolidations.
Does the current and programmed Active Component and Reserve Component (AC/RC) mix meet the defense requirements for the 1990s?	Evaluate the RAND AC/RC study. As part of the ongoing review, determine the proper active and reserve force mix. A study of National Guard and Reserve headquarters and staffs should be conducted to identify any unnecessary duplication.

Chapter I
THE CHANGING STRATEGIC LANDSCAPE

ABOUT THIS REPORT

As amended by the Goldwater-Nichols Department of Defense (DOD) Reorganization Act of 1986, Title X, United States Code requires the Chairman of the Joint Chiefs of Staff to submit a report not less than once every three years, recommending such changes in the assignment of functions (or roles and missions) as the Chairman considers necessary to achieve maximum effectiveness of the Armed Forces. The law specifies that in preparing such a report, the Chairman shall consider changes in the nature of the threats faced by the United States, unnecessary duplication of effort among the Armed Forces, and changes in technology that can be applied effectively to warfare.

Since the report responds to a DOD-oriented act, unless noted otherwise this report does not address roles and missions of the Coast Guard, which by law is a military service and a branch of the armed forces at all times.

This is the second such report submitted under provisions of the Goldwater-Nichols Act. More than just a report produced once every three years to satisfy a Congressional mandate, it is a status report on a process -- a process of internal review and self-appraisal that goes on in the Armed Forces every day. Our most recent objective in this process has been to transition from a strategy and a force designed for global war to a regionally-oriented strategy and a force capable of responding decisively anytime and anywhere US interests are threatened.

It will be clear from this report that the military is mindful of a changing world, aware the American people want their defense investment managed wisely, and committed to change that ensures our Armed Forces remain second to none.

"ROLES AND MISSIONS" . . . AND FUNCTIONS

The terms "roles and missions" and "functions" are often used almost interchangeably, even inside the Defense Department. But the distinctions between them are important, particularly in the context of this report.

For the first century-and-a-half of our nation's history, roles and missions were easy. The Army's role, and its mission, was fighting on land. The Navy's and Marine Corps' role, and their mission, was fighting on and from water. It was that simple.

Roles and missions began to get complicated when the Services discovered the military usefulness of air power. By the start of World War II, carrier-based aviation was a well-established branch of the Navy, and the Army Air Corps had so grown in size and stature that its full independence was largely a matter of time.

When we entered World War II, we agreed with our British allies to divide the globe into theaters, each containing both land and water. The Pacific was a US strategic responsibility, the Indian Ocean and Middle East a United Kingdom (UK) strategic responsibility, and the Atlantic and European Theater a combined US-UK strategic responsibility. Theater commanders were appointed by the nation responsible for the theater and were generally from the Service providing the preponderance of forces. In our first exercise in global military operations, therefore, the Navy was put in charge of the Pacific mission, the Army got the European mission, and air forces of both Services performed an air warfare role in all theaters. Directives to Admiral Nimitz in the Pacific were transmitted by the Chief of Naval Operations on behalf of the US Joint Chiefs of Staff (JCS), and directives to General Eisenhower in Europe were transmitted by the Chief of Staff of the Army on behalf of the US and UK Combined Chiefs of Staff.

After World War II, the Joint Chiefs of Staff were established as a permanent, formal body, with a joint staff; the Air Force was established as a separate Service; the Department of Defense was created; and the Armed Forces were unified by the National Security Act of 1947. The Commanders in Chief (CINCs) retained their Service identities, and the Chief of Naval Operations and Chief of Staff of the Army, respectively, continued to act as executive agents for the Pacific and European theaters.

In 1958, however, the Secretary of Defense was given direction authority over the CINCs. Services retained their roles, as established by law, but missions were assigned, on a geographical or functional basis, to the CINCs.

In 1987, the distinctions between roles and missions were further modified when Congress established, in law, a new combatant command, the US Special Operations Command (USSOCOM), and gave it a role.

Today, **ROLES** are the broad and enduring purposes for which the Services, and USSOCOM, were established by Congress in law. In broadest terms, the role of the Services today is to organize, train, and equip forces, the Army for prompt and sustained combat incident to operations on land; the Navy for prompt and sustained combat incident to operations on and from the sea; the Air Force for prompt and sustained offensive and defensive air

operations; the Marine Corps for service with the fleet in the seizure or defense of advanced naval bases, and the conduct of such land operations as may be essential to the prosecution of a naval campaign; and Special Operations Command for special operations activities or missions.

MISSIONS are the tasks assigned by the President or Secretary of Defense to the CINCs of combatant commands. The responsibilities of the combatant CINCs are spelled out in the Unified Command Plan, a document prepared by the Joint Staff, reviewed by the JCS and the Secretary of Defense, and approved by the President.

One other term is used, and often confused, in discussions of roles and missions: **FUNCTIONS** are specific responsibilities assigned by the President and Secretary of Defense to enable the Services to fulfill their legally established roles.

In simple terms, then, the primary function of the Services, and Special Operations Command, is to provide forces -- each organized, trained, and equipped to perform a role -- to be employed by the CINC of a combatant command in the accomplishment of a mission. The terms roles, missions, and functions are used in this sense throughout this document.

THE NATURE OF THREATS FACING THE UNITED STATES

Three years ago, when the last "roles and missions" report was prepared, the Berlin Wall still stood. American strategic bombers, missiles, and submarines were on constant alert, successfully deterring the Soviet Union from conducting a surprise nuclear attack against the United States. Conventional US forces -- two full Army corps, and eight Air Force tactical fighter wings -- stood with their NATO allies along the fortified border that divided Europe. Two numbered fleets patrolled the seas, and additional forces in the United States were prepared to rapidly deploy in response to any aggression by the Warsaw Pact.

Today the Cold War is over. The Warsaw Pact is dissolved. The Soviet Union has ceased to exist. Nuclear and conventional arms control agreements have been concluded. Entire classes of nuclear weapons are being eliminated, and thousands of tanks, armored combat vehicles, and artillery pieces are being destroyed on both sides of the former Iron Curtain.

Ongoing adjustments to our military posture reflect the enormous strategic changes of the past years. The overall size of our forces is being significantly reduced -- forces stationed in Europe are being cut in half. Strategic nuclear forces are being extensively reorganized; and the nuclear roles, missions, and functions of the Services

and CINCs are being dramatically altered. All these changes are possible only because the prospect of a major East-West conflict, which drove our defense programs for more than 40 years, has disappeared.

But elimination of the threat of global conflict has not meant an end to conflict, nor an end to the risks facing American citizens and interests around the world, nor an end to the need for ready military forces. The Cold War has given way to a new era of uncertainty and unrest.

Since the last report on roles, missions, and functions, American troops have been committed to armed conflict in Panama and the Persian Gulf. Our Armed Forces have been called upon repeatedly, at home and abroad, to accomplish missions ranging from disaster relief and humanitarian assistance, such as Hurricane Andrew relief efforts in Florida and Operation RESTORE HOPE in Somalia, to evacuation of non-combatants from areas where conflict threatened, or had already erupted.

On the Eurasian land mass, the end of bipolar confrontation has seen the resurgence of long-suppressed conflicts stemming from ancient animosities, religious differences, and ethnic rivalries. Names like Bosnia-Herzogovena and Nagorno-Karabakh, once unknown, are now all too familiar. The presence of vast stores of conventional weapons and ammunition greatly increases the potential for these local conflicts to spill over. While the huge nuclear arsenal built by the Soviet Union is being slowly dismantled, enough of it remains to leave Russia the one nation capable of literally destroying the United States. Russia may not, however, be the only Soviet nuclear heir; the question of who controls weapons on the territories of other former Soviet republics is still not settled. And other countries may acquire or develop their own capability to threaten nuclear, chemical, or biological mischief.

In the Middle East and Southwest Asia, radical politicized Islam and a politically and militarily resurgent Iran threaten regional stability and directly challenge a number of US interests, including access to Gulf oil, political reform and democratic development, and settlement of the Arab-Israeli dispute. Iraq continues to defy United Nations (UN) resolutions and menace its neighbors. There have been some signs of progress in the Middle East peace process, but the parties remain unreconciled to the status quo, and violence continues. Even if negotiations succeed, long-term contentious issues, such as water distribution, will continue to provide potential for conflict. DESERT STORM taught Persian Gulf states that the United States can be a reliable security partner, and they expect us to remain engaged in their region.

In Africa, economic and social disintegration challenges fledgling democracies, exposes entire populations to violence and misery, and threatens to ignite

ethnic strife and civil wars. We can expect that American military forces and logistics resources will continue to take a major part in international efforts to relieve human suffering, as we are now doing in Somalia.

Asia represents a remarkable US foreign policy success. American commitments to mutual defense treaties, forward military presence, security assistance and education programs -- for example -- have helped produce a region of stability. Democracy now blooms in areas where only a few years ago we wondered if the idea could ever take root. Newly empowered citizens are forcing governments to change in ways once unimaginable. Political and economic success in Asia make it possible for friends and allies like Japan to take on a larger share of regional security responsibilities. But challenges to American interests and ideals also exist across the Pacific. Communist regimes remain in power in China, North Korea, Laos, and Vietnam. While leadership and generational changes underway in these states offer grounds for optimism, the outcome of these transitions is far from certain. American involvement in Asia and the Pacific is essential for promoting stability and nurturing constructive change.

In our own hemisphere, the collapse of world communism has left the production and export of illegal drugs as the major threat to US interests. Other factors contributing to uncertainty and unrest include the growing disparity between "haves" and "have-nots;" territorial and boundary disputes; international debt; environmental destruction; ethnic prejudices; and disruptive insurgencies. As in other regions, US presence contributes to stability and encourages the spread of democratic values.

Another factor contributing to instability is weapons proliferation. The growing sophistication of weapons technology and the possible emigration of former Soviet scientists and armaments experts, coupled with regional instabilities and the presence of totalitarian governments, poses an increasing risk. By the end of the 1990s, many regional powers could possess nuclear, chemical, or biological weapons; the means to deliver them accurately over long distances; and, in the absence of an effective deterrent, the will to use them. Technology on the open market, such as high-resolution satellite imagery and space navigation and communications systems, may also give advanced capabilities to powers that could never afford to develop them on their own.

Politically and economically driven immigration and the flow of refugees escaping wars, disease, and famine will contribute to uncertainty and unrest in the years ahead. Other factors that may affect United States security interests include environmental and health issues and international economic competition.

While the world may be less predictable today than it was during what President Kennedy characterized as the "long twilight struggle" of the Cold War, it is a far more promising world. The United States is safer now than at any time in all the years that separated our airlift to Berlin from the fall of the wall which divided that city. The investment America made in all those decades -- in money and materiel and in the sacrifices of our sons and daughters who stood watch in freedom's outposts -- has paid off. The best peace dividend is peace. The Armed Forces are aware of the part they played in this historic change and are ready to make a similar contribution to peace in the hopeful years ahead.

DUPLICATION AND REDUNDANCY

For five decades, two major themes influenced and shaped the assignment of roles, missions, and functions among the Armed Forces of the United States.

The first was the legacy of World War II. During that war, the United States fielded military forces of unprecedented size and scope. In the rush to assemble those ultimately victorious forces, little thought was given to the question of Service roles and missions. The Executive Branch and the Congress allocated resources and raised forces based on the simple principle that "whatever can be done should be done." As we expanded, some overlaps and duplications of effort developed between the Army and the Navy. This situation was tolerable because the massive national mobilization, combined with the *de facto* geographic division of labor between the Services made hard choices unnecessary.

Post-war budget cutting made resource allocation an issue of paramount importance. Partly for this reason, Congress passed the National Security Act of 1947. Among its several provisions, the Act established the Air Force as a separate Service and attempted to clarify Service roles and missions to provide a framework for program and budget decisions. Some provisions specified in the Act sparked immediate disagreement among the Services, so Secretary of Defense James Forrestal convened a conference in Key West, Florida, where the Chiefs of the Services agreed on roles and functions.

Some argue that the Key West Agreement is flawed, that it failed to resolve redundancy and duplication. In fact, what the Chiefs recognized in 1947, and Congress has supported ever since, is that there are a number of advantages in having similar, complementary capabilities among the Services. The availability of similar but specialized capabilities allows the combatant commander to tailor a military response to any contingency, regardless of geographic location.

At the national command level, the existence of robust forces with complementary capabilities adds to the options available in a crisis, especially when the crisis is unexpected. The similar but specialized capabilities of the Armed Services are not unlike the safety features of modern automobiles, which come equipped with automatic shoulder restraints, lap safety belts, and airbags. Whether these complementary safety devices come standard or as options, they are redundant and do add to the purchase price of a car. If purchase price were the only factor, buyers would reject this built-in redundancy. But purchase price obviously is not the only factor, especially in an emergency. In fact, it may seem insignificant when compared to the far greater costs associated with medical care for unprotected drivers and passengers. Congress clearly understood this difference in cost, between an ounce of prevention and a pound of cure, when it made air bags mandatory. Congress had similar reasoning in mind when it directed the Chairman of the Joint Chiefs of Staff to consider, in making this report, not duplication of effort, but only the unnecessary duplication of effort among the Armed Forces. Time and time again in our nation's history -- including and perhaps especially our recent history -- the availability of similar but specialized capabilities has made all the difference. The purchase price has turned out to be a bargain.

The coordinated performance of all the Armed Forces in Panama and in the Persian Gulf attests to the essential wisdom of the civilian and military leaders who forged the original Key West Agreement. Our unrivaled ability to conduct joint and combined operations today is the logical conclusion of the process that began when Congress undertook to unify the nation's Armed Forces and established the Department of Defense. The hope expressed at Key West forty-five years ago, of unified Armed Forces operating efficiently and effectively without bickering or unproductive competition, has become routine reality.

The progress we've made was exemplified in combat operations in the Gulf War, when the Tiger Brigade of the Army's 2d Armored Division was placed under the 2d Marine Division, and its heavy tanks and self-propelled artillery provided additional punch for the more lightly equipped Marines. That kind of cooperation between two Services makes the best of the capabilities of both, and results in a force greater than the sum of its parts.

The vision of Key West was also evident in Operation "GTMO", providing humanitarian assistance to 30,000 Haitian refugees. What began as primarily a Marine Corps effort grew very quickly into a joint operation with a peak strength of more than 2,000 active duty and reserve troops from all Services and the Coast Guard. Though ultimately the preponderance of troops were

Army, everyone at Guantanamo Bay got behind the Marine one-star commanding, and the joint task force did an outstanding job.

Our ability to operate joint and combined was also illustrated in Operation PROVIDE COMFORT -- humanitarian operations in northern Iraq. It too began small, but soon grew into a multinational force. The ease with which military forces from various Services of other nations were able to coalesce around the nucleus of a US Joint Task Force is further tribute to the clear vision of the DOD founders.

Another superb example was Operation EASTERN EXIT. When the American Embassy in Mogadishu, Somalia was threatened by rebel forces just as Operation DESERT STORM was about to break, options were needed for evacuating the embassy staff. Three days away, embarked on Navy amphibious ships, was a Marine force with the capability to get in, get our people, and get out. If the situation worsened in those three days, Army Rangers in Air Force transports, could have gotten there faster, but they'd have had less firepower on the ground and would have been harder to get out. As it happened, the situation did not deteriorate to the point where the Rangers were needed; the embassy staff was rescued by a daring naval operation. But the complementary capabilities of the Marines and Army gave the nation's leaders more than one option. As in so many other crisis situations, the nation was well served by the flexibility inherent in our Armed Forces.

The second major factor governing American force planning has been the Cold War. The Soviet Union was a formidable adversary in every respect, with large and technically sophisticated forces. Almost to the very end, the Soviet political leadership showed little restraint in allocating resources to its military or in using force to achieve its political goals.

To contain this Soviet military power, the United States fashioned a network of alliances. We maintained the largest peacetime force structure in our history, with land, sea, and air forces at forward bases in Europe and Asia. We opposed communist subversion and insurgencies throughout the world, with political and economic pressure and even with military force. We developed and sustained a large military-industrial complex, both to support our forces-in-being and to provide the means for emergency mobilization. And we invested billions of dollars in advanced technology in an effort to maintain a qualitative edge in the face of overwhelming numerical superiority.

THE IMPACT OF TECHNOLOGY

As new technologies have moved from the laboratory to the battlefield, they have been seized upon by the Armed Forces and adapted to the needs of air, land, and sea combat. One example of military technology that all Services have adapted to their specialized warfighting roles is the radio. Wireless communications were first used by the military in World War I and soon had a positive effect on the command, control, and communications capabilities of all Services. As technology advanced, radios increased in range and reliability, and we have come to rely on them in virtually every operation our forces undertake. Although in the past we have developed radios in one Service that could not communicate with radios developed by another Service, we have long since recognized and are fixing that problem. Today, interoperable communications capabilities are an indispensable part of our joint military operations.

The airplane is another example of technology that changed warfare. We began to see its effects in World War I. Following that war, the Navy embarked on one course leading to the fast carrier fleets that in World War II made victory possible in the Pacific. The Army embarked on a different course which led to the strategic bomber fleets that contributed significantly to the Normandy invasion and the liberation of Europe.

As radios and airplanes demonstrate, soldiers, sailors, airmen, and marines are always eager to get their hands on any new technology that promises to help them win wars. The advanced systems in which we invested so much national treasure during the Cold War years are no exception. Many of those systems had their baptism of fire in Operations JUST CAUSE and DESERT STORM.

The technologies that came of age in Panama and the Persian Gulf have clearly altered warfare, some in ways we have only begun to appreciate. Space systems, for example, were used extensively to provide early warning, intelligence, surveillance, navigation, command, control, and communications, and battle damage assessments to our coalition commanders in the Gulf. Satellites fed information to troops in their foxholes, aviators in their cockpits, seamen afloat, and missileers in their Patriot batteries. Information gathered from space supported every aspect of planning, controlling, and winning the war with Iraq.

The accelerating pace of technological development has implications for the division of labor among the Services, particularly the functions of developing and procuring new equipment. The nation that can most quickly incorporate technological innovations will have a decided edge on any future battlefield. To shorten the time between drawing board and operational availability, efficiencies and new measures of effectiveness must

continually be incorporated into the ways the Services go about equipping their forces.

The effect of new technologies on roles, missions, and functions will continue to be evolutionary. Technological breakthroughs will undoubtedly influence Service functions.

ADAPTING TO THREE YEARS OF BREATHTAKING CHANGE

The changes of the last three years led to a fundamental change in our strategy and our force structure. The military's task was spelled out by President Bush in a speech in Aspen, Colorado on August 2, 1990 -- the same day Saddam Hussein invaded Kuwait. Noting that the United States would be ill-served by forces representing nothing more than a scaled-back or shrunken-down version of the Cold War force, President Bush defined our task as one of shaping our capabilities to meet the needs of regional contingencies and peacetime presence.

Our response to the changing strategic landscape was further elaborated in the President's August 1991 National Security Strategy of the United States, which announced that by mid-decade, the military would be 25% smaller than the forces we maintained in the last days of the Cold War and described how planned reductions would cut forces to a minimum acceptable level -- the Base Force.

A few months later, in January 1992, the National Military Strategy of the United States was published. Reflecting the fundamental shift from a Cold War focus on containment to a regional orientation, it articulates a flexible new strategy designed to protect our interests and support our objectives worldwide, and it elaborates the strategic principles that underlie our force planning.

The Base Force was initially conceived as the minimum essential force required to meet the risks and uncertainties then prevalent. It was designed to maximize the capabilities of each Service and integrate their Active and Reserve components into an effective military team capable of responding across the full spectrum of conflict. But the Base Force has become a dynamic force. When the nation's military requirements change significantly, as they have with strategic nuclear weapons in the years since the Base Force was initially articulated, the Base Force can and should be adjusted.

As structured through 1995, the Base Force sets force levels appropriate to our national interests and the regional concerns we have around the world. It is a superbly trained, capable force, ready when called by the President to go to the scene of a developing crisis, go quickly, and go jointly.

RESHAPING THE MILITARY

With the end of the Cold War, the strategic threat that drove our planning, and upon which the division of labor among the Services was for so long predicated, has receded. Though we are still obligated to plan for the re-emergence of a global military threat, we are confident we would have sufficient time to reconstitute the forces required, and that we need not retain the forces necessary to fight a global war.

In the past we've been faced with similar opportunities to reduce the size of our military and cut defense spending. World War I was "the war to end wars," and when it was "over over there," we brought the troops home and settled into isolationism. Throughout the Roaring Twenties and the Great Depression that followed, maintaining a strong military was never a national priority. And we paid for it. We paid when totalitarian governments began their expansionist aggression, aggression that might have been deterred by the existence of strong US forces. We paid at Pearl Harbor, and at Kasserine Pass in North Africa.

When World War II ended in victory, we repeated our mistake. Again we failed to keep our forces ready, and we again paid the price in Korea, in the awful retreat to the Pusan perimeter. This time we are determined to get it right. With the Cold War's end, the great change in our strategy has been not only moving away from increasingly unlikely global warfare, but also making sure the force that remains is ready and able to deal decisively and successfully with regional crises -- the way we were ready for Operations JUST CAUSE in Panama, PROVIDE COMFORT in Turkey and northern Iraq, and RESTORE HOPE in Somalia. Being ready for crises like these means being ready with a total force, consisting of highly trained, come-as-you-are Active forces, augmented, and in some cases even preceded, by the specialized skills that reside in our Reserve components. When the crisis turns into something bigger, like Operation DESERT SHIELD/STORM, far greater numbers of National Guardsmen and Reservists must be called up. We simply cannot go to war without them.

We are confident we can maintain the capabilities we need for this new era of uncertainty and unrest, and that we can do so with fewer men and women in uniform; fewer Active forces in the Army, Navy, Air Force, and Marine Corps; fewer reserves; fewer defense civilians; and fewer defense industrial workers.

We can do it in a way that protects the nation from unacceptable risk, and that returns to the American people some of the treasure they've been devoting over the years to support a strong defense.

But we cannot maintain the necessary capability if we slash our operating and procurement accounts so severely that the

readiness of our superb forces is damaged.

We cannot preserve our military strength if we place perceived economy ahead of proven effectiveness, or if we place one Service or component ahead of others.

If we proceed too quickly, or impose changes so large they cannot be absorbed, the risk is that we may destroy the basic fabric of our fighting force. The superb balance demonstrated by our Armed Forces in their mastery of the air, sea, land, and space of the Persian Gulf must be maintained.

Over the past three years, the nation's military leaders have undertaken an exhaustive review of our strategy; our forces; and our roles, missions, and functions. We have sought areas for consolidation, streamlining, and outright reduction. Chapter II of this report highlights the changes we have already made to adapt our forces to the realities of a changing world. In the three years since the 1989 "Report on Roles and Functions of the Armed Forces," we have accomplished much toward building a force for an era of uncertainty. And so far we have gotten it right. In spite of reductions, reorganizations, and withdrawals, our forces have remained ready. They've proven their effectiveness time and again, by dealing decisively with sudden contingencies, large and small.

But not every restructuring proposal that sounds appealing stands up when carefully analyzed, and not every study we've commenced has been concluded. Chapter III of this report presents additional areas we've examined or continue to examine in our ongoing process of building Armed Forces that are right for America.

Chapter II

WHAT WE HAVE ACCOMPLISHED

More changes have occurred in the US military during the last three years than in any similar period since the National Security Act of 1947. Three key factors -- the end of the Cold War, increased budgetary constraints, and a revised Title X of the US Code which incorporates Goldwater-Nichols legislation -- have converged to provide the opportunity, necessity, and license to make changes. Indeed, these changes have already resulted in fundamental differences in the way we're structured, the way we train, and the way we fight. They have embraced all Services, affected all functional areas, and touched virtually every facet of the military.

This ongoing transition to a very different, post-Cold War military was not undertaken in a random or arbitrary fashion. Instead, we followed a deliberate approach, formulating a new National Military Strategy for today's security environment, establishing a "Base Force" structure specifically tailored to execute that strategy; concentrating our attention on a wide array of measures designed to improve capability and enhance efficiency; and finally, stepping back to specifically examine roles, missions, and functions in light of all the other changes we had implemented.

The Armed Forces of the United States are prepared to meet the challenges of the Nineties, not with a miniature version of the Cold War military, but with a new force designed for a new era. Lessons learned in our decisive victory in DESERT STORM and in successfully accomplishing a host of other military operations have contributed to the evolutionary process of organizing, training, and equipping our Armed Forces so they are ready to act decisively when called upon.

What follows in this chapter is a quick look at some of the major changes we have made since the last triennial review of roles, missions, and functions.

NATIONAL MILITARY STRATEGY

A dynamic and responsive military strategy is key to the effective employment of military forces. Our current strategy is spelled out for all the world to see in the National Military Strategy of the United States, an unclassified publication released in January 1992. This strategy takes into account the geopolitical environment of the post-Cold War era; contributes to the achievement of our national objectives, and focuses on protecting our vital interests during a period of reduced defense spending.

Deterring nuclear attack and containing communism -- the cornerstones of our military strategy and planning for more than 45 years -- have given way to a more diverse, flexible strategy which is regionally oriented and designed to respond decisively to the challenges of this decade. Built upon the four foundations of Strategic Deterrence and Defense, Forward Presence, Crisis Response, and Reconstitution, the strategy provides the basis for all US military activity. The principles which underlie the National Military Strategy have been embraced by the Services and incorporated in their respective papers, Army Focus 92; the Air Force Global Reach, Global Power; and the Navy and Marine Corps White Paper, ... From the Sea. It is against this strategic backdrop that the US Armed Forces are now organized, trained, and equipped.

THE "BASE FORCE"

As the world situation changed, the military undertook a thorough analysis of the force structure needed to accomplish the new military strategy. Today we have a force capable of deterring aggression, providing meaningful presence abroad, responding to regional crises, and, if ever necessary, reconstituting a global warfighting capability. As we continue our planned drawdown and contemplate additional changes, we must ensure the US Armed Forces retain these core capabilities.

The Base Force is a future force which anticipates continued progress and improvement in the strategic environment. It is a dynamic force which can respond to further favorable change. And it is a total force which includes all aspects of our Active and Reserve components.

Because it is smaller, the Base Force must also be more flexible, better trained, and able to adapt to changing circumstances. The new military strategy requires that units retain a high state of readiness, in order to respond to the dynamic challenges of the new world order, including rapid response to crises, natural disasters, and peacekeeping operations. It takes into consideration each Service's strengths and provides the greatest return from available resources.

The end of the Cold War and development of a new military strategy have affected more than just the size and structure

of our force. The past three years have also had a significant impact on the assignment of roles, missions, and functions among the Armed Forces and the combatant commands. Some of the significant changes we have already implemented are described below.

NUCLEAR FORCES

US Strategic Command (USSTRATCOM)

The end of the Cold War led the Joint Chiefs of Staff to conduct a comprehensive review of the Unified Command Plan, the document which establishes combatant commands and assigns their geographic and functional responsibilities. One key conclusion was that adjustments in command and control of the nation's strategic nuclear forces were necessary and appropriate.

As a result of this assessment, USSTRATCOM was created. For the first time in our history, all of America's strategic nuclear weapons are consolidated under one combatant CINC. Command of all strategic bombers, missiles, and submarines will alternate between an Air Force general and a Navy admiral -- an arrangement hard to imagine only a few years ago. This consolidation of the forces that truly do safeguard our way of life is perhaps the most dramatic and fundamental change in the assignment of roles and missions among the Armed Services of the United States since they first were established by law in 1947.

Establishment of USSTRATCOM also reduced costs, through consolidation of Airborne Command Posts and the disestablishment of the Strategic Air Command as a combatant command and as a major command within the Air Force. This restructuring not only centralized command and control of US strategic nuclear forces; it also eliminated over 1,100 staff positions, including more than half the associated general and flag officer billets.

President's Nuclear Initiatives

After the failed coup in Moscow in August 1991 and subsequent dissolution of the Soviet Union, long-stalled arms control negotiations were suddenly invigorated, and supplemented by unilateral initiatives and rapid bilateral and multilateral agreements. As a result of nuclear initiatives developed under the direction of the Joint Chiefs of Staff and the Secretary of Defense, and approved by President Bush and announced in September 1991 and January 1992, a wide range of unilateral actions has had a tremendous impact on every aspect of our land, sea, and air nuclear forces. Nuclear roles, missions, and functions have been fundamentally changed, commands reorganized, and entire classes of systems eliminated.

The President's nuclear initiatives included several measures to reduce the number of deployed nuclear weapons. Our entire worldwide inventory of ground-launched, short-range, tactical and theater nuclear weapons, including nuclear artillery shells and short-range nuclear ballistic missile warheads, has been withdrawn and is being eliminated. The Army and Marine Corps -- both of which had nuclear roles since the mid-1950s -- no longer have nuclear weapons, and instead rely on their sister Services for nuclear weapons support. The savings in force structure, equipment, materiel, and training from this measure are significant. Also at the President's direction, all tactical nuclear weapons were removed by July 1992 from aircraft carriers, surface ships, attack submarines, and land-based naval aircraft. Most of our tactical nuclear weapons have been returned to central storage locations on US territory. In addition to the obvious cost savings, this measure resulted in the "denuclearization" of our air forces in the Pacific.

For the first time since the 1950s, all US strategic bombers have been taken off alert, as have 450 Minuteman II Inter-Continental Ballistic Missiles (ICBMs).

Follow-on Agreements

On June 17, 1992 Presidents Bush and Yeltsin approved the framework of a new treaty intended to reduce US and Russian strategic forces even more radically. The resulting treaty, START II, was signed on January 3, 1993. When ratified and entered into force, START II will reduce strategic weapons to fewer than 3,500 warheads on either side. The treaty mandates that by 2003, no land-based ICBMs will have more than one warhead. The US agreed to reduce Submarine-Launched Ballistic Missile (SLBM) warheads by half. US Peacekeeper ICBMs will be eliminated and all Minuteman III missiles will become single-warhead.

These nuclear initiatives and their results illustrate clearly the dynamic nature of the Base Force. When we started developing our planned 1995 force, there were 21,000 strategic and tactical nuclear weapons in the US arsenal, including sea-based, air-delivered, and ground-launched systems. As our requirements for nuclear deterrence changed, the Department of Defense took the lead in recommending corresponding reductions in nuclear forces to a total of about 5,100 weapons -- a level representing one-quarter of the Cold War nuclear stockpile. These recommendations will eliminate every weapon and every unit that is no longer required for the nation's security. Reductions in our nuclear forces are also reflected in restructured roles, missions, and functions. As already noted, the Army and Marine Corps are without a nuclear role or function for the first time in four decades. Should they ever require nuclear weapons, they will call on the Navy or Air Force. The Armed Services of the

United States rely on one another for essential support: modern warfare is a team effort all the way.

CHEMICAL INITIATIVE

In September 1992, at the Conference on Disarmament in Geneva, 39 nations reached agreement on a total ban on lethal chemical weapons, and voted to forward the treaty text to the United Nations General Assembly, which approved the Chemical Weapons Convention (CWC) in November 1992. The United States signed the CWC in Paris on January 13, 1993, and in doing so renounced the use of chemical weapons for any reason, including retaliation.

The United States will retain countermeasures for chemical and biological warfare programs and deter an enemy's use of chemical and biological weapons by maintaining the military capabilities to deny an enemy a significant military advantage from such use. If US forces, facilities, or citizens, or those of our allies, come under chemical or biological attack, the US has the capability to respond with a wide range of military options. Any use of chemical or biological weapons would have the most severe consequences to the user. We may respond with all appropriate means consistent with our rights and obligations under international law.

US acceptance of the CWC results in the elimination of several functions for the Services. The Air Force and Marine Corps no longer have to certify aircraft for delivery of chemical weapons, and air and ground crews no longer train for this task. Army and Marine Corps artillery units are likewise relieved of these requirements. The Services are no longer required to maintain Personnel Reliability Programs or communication and security systems for control and release of chemical weapons. The Army does not have to maintain chemical stocks in a "ready-for-issue" status. This will produce monetary savings for the Services and reduce human risk due to decreased maintenance and surveillance requirements. The Army will be able to destroy the chemical stockpile in the safest and most cost effective and operationally efficient manner.

STRATEGIC LIFT

Regional focus, flexible and adaptive planning, and significantly reduced forward presence combine to increase our reliance on strategic mobility. It is essential to our new strategic focus that we be able to move quickly, anywhere in the world, with combat forces and accompanying support elements sufficient for the mission assigned. With these realities in mind, we have developed an integrated program to improve and modernize our strategic lift forces.

Since its establishment in October, 1987, the US Transportation Command (USTRANSCOM) has consolidated the previously diffused individual Service responsibilities for air, land, and sea transport of equipment and supplies. The unparalleled success achieved in improving efficiency and responsiveness has been clearly apparent during a host of recent relief operations. In speeding relief to the victims of Hurricanes Andrew and Iniki and Typhoon Omar, TRANSCOM coordinated the movement of nine ships, more than 800 aircraft, nearly 500 railcars, and almost 2,000 trucks. While responding to these three natural disasters, TRANSCOM simultaneously supported Operations PROVIDE RELIEF in Somalia, PROVIDE HOPE in the former Soviet Union, PROVIDE PROMISE in the former Yugoslavia, PROVIDE TRANSITION in Angola, and contingency operations in the Persian Gulf.

With the mission of transporting troops and equipment placed solely on TRANSCOM, what remained was to match our lift capabilities with the National Military Strategy and the planned force structure. The Mobilitiy Requirements Study (MRS), completed in January 1992, established the framework for current and future lift initiatives.

The approved program includes continuation of the Air Force C-17 program to improve airlift capacity and procurement of 64 additional ships to enhance our sealift capability. Twenty-two of these vessels, from new US construction or conversion, will support surge requirements and prepositioning efforts. The remaining 42 vessels will be acquired from the commercial market and assigned to the Ready Reserve Force to further expand the capacity of US sealift resources.

In addition, the MRS identifies and provides for major improvements in selected US seaports to increase the quantity of troops and materiel that can be moved through them in one day. We also seek to enhance the Ready Reserve Force by placing more "RO/ROs" -- roll-on / roll-off cargo vessels -- in an increased readiness status.

Various other strategic lift enhancements have also been undertaken. The Army is implementing an expanded afloat prepositioning program which includes

supplies and equipment for a heavy combat brigade. Additionally, we are studying enhancements to en route basing and host nation support programs; examining management initiatives for all strategic lift assets, including prepositioned ships and various Army craft; and recommending construction of a containerized ammunition port on the West Coast.

Envisioned mobility improvements will enable deployment of an Army light division and a heavy brigade to any "hot spot" in approximately two weeks, and two heavy divisions in about a month.

Perhaps more than in any other role, mission, or functional area, the requirements of strategic mobility illustrate the interdependence of today's Armed Forces. The capabilities of our Total Force are indeed greater than the sum of its individual parts.

FORWARD PRESENCE

Containing communist expansionism during the Cold War required a sizable contingent of US forces to be stationed overseas -- in anticipation of a global war that might start with little or no warning. Our new military strategy, which takes into account the dramatic changes since 1989, reflects the end of the era when large numbers of GIs were permanently stationed on foreign soil. As we continue to implement and refine the strategy, we will substantially but carefully reduce and restructure our forces around the world.

In Europe, we are reducing as rapidly as practicable toward a planned forward presence of one Army corps, three-plus Air Force fighter wings, and a tailored Naval expeditionary force. We are well on the way to reaching our current objective of 150,000 European-based troops by 1995, having withdrawn approximately 114,000 soldiers, sailors, airmen, and marines in just two years.

We will continue to honor our commitments to NATO -- the most successful alliance structure ever devised.

In the Pacific, our forward presence will remain primarily maritime, with half our projected carrier and amphibious forces oriented towards that region. As in Europe, we are reducing Army and Air Force forward-stationed forces, but not our commitment to the region. Already, 18,000

forward-deployed troops have been withdrawn. Further reductions of US forces stationed in South Korea are planned, but the Secretary of Defense suspended the drawdown in 1991 pending satisfactory resolution of certain concerns about North Korea. The changing strategic landscape also permitted us to close bases and facilities in the Pacific, particularly Clark Air Force Base and Subic Bay Naval Base in the Philippines.

The Armed Forces' continuing efforts to lower operating costs also resulted in streamlining and consolidating hundreds of Service activities. In Southern Europe, for example, our future basing concept envisions increasing the joint use of facilities, thereby reducing unnecessary duplication of bases and support functions. The Navy and the Air Force are planning to use the Naval Air Station at Sigonella, Italy for fighters, maritime patrol aircraft, and fleet support. The Naval Air Station at Souda Bay, Crete will host maritime patrol, fleet support, and surveillance aircraft for the Navy and Air Force. The air base at Incirlik, Turkey will be used for multi-Service contingency operations. In the Pacific, Navy and Air Force personnel in Singapore share legal; medical; housing; education; and Morale, Welfare, and Recreation services. And some Navy elements, displaced from the Philippines are now hosted by the Air Force at Andersen Air Force Base in Guam.

As we reduce the overall size of our forces and consolidate much of what remains in the United States, the potential exists for significant savings to be realized as a result of overseas base closures. Changes to the strategic landscape since the first report on roles, missions, and functions have allowed us to identify more than 500 facilities for consolidation among the Services or outright return to host nations. As restructuring continues, we will seek every opportunity to consolidate and close no-longer-needed military installations that supported our Cold War force structure.

Our plans for cutting costs while maintaining proven effectiveness include a new idea for forward presence operations. The concept explores the deployment of joint forces, configured to complement one another and meet peacetime and contingency operational needs. For example, a carrier battle group deploying to the Mediterranean without an amphibious ready group might rely upon the Army airborne task force in Italy to perform the ground tactical role in support of joint operations. Similarly, an amphibious ready group might deploy separately to "the Med," and rely on Air Force land-based air assets, rather than on carrier-based naval aviation. Future forward presence operations may thus consist of specially tailored joint task forces that can maintain essential forward presence at less overall cost.

Bringing an all-volunteer force home isn't easy. It requires detailed logistical planning and depends on the extraordinary efforts of our men and women in uniform, and their families. The troops we've brought home since 1990 had a proportionate share of husbands and wives, kids, pets, family cars, and prized possessions. Getting them home, whether to a Stateside assignment or to an unexpectedly early return to civilian life, without alienating their husbands and wives, traumatizing their kids, losing their pets, denting their cars, or damaging their personal property, is an immense task. We are bringing the troops home as fast as we can -- while continuing to maintain a forward presence that protects our vital interests, enhances stability, and reassures our allies. Once again, we emphasize that America must maintain its commitment to these superlative soldiers, sailors, airmen and marines -- and their families -- by bringing them home as fast as is reasonable, and no faster.

COUNTER - DRUG OPERATIONS

In 1989, the Department of Defense was given the mission to provide detection and monitoring support to help halt the aerial and maritime transport of illegal drugs into our country. Consequently, a comprehensive program has been established for attacking the flow of drugs -- at the source, in transit, and upon arrival in North America. Implementing this program requires the sustained employment of active duty and Reserve forces properly trained and equipped to perform a non-traditional role. We are developing new joint doctrine and using our pool of capabilities in new ways against threats we never had to confront in the Cold War. We are more involved with interagency organizations and host-nation police and military authorities in planning and executing the war against drugs. This campaign requires the involvement of several combatant commanders, who have worked closely together and shared joint lessons learned to improve their capability to perform this unprecedented mission.

With drug detection and interdiction efforts taking place in an area more than twice the size of the United States, coordination and cooperation are required among all branches of the Armed Forces and the Coast Guard. For example, special operations forces provide Active and Reserve components to theater CINCs for counter-drug missions and activities. In

addition, the Coast Guard provides law enforcement detachments as specialists aboard US Navy ships, enforcing counter-drug operations and UN resolutions on embargoed goods.

In Canada and the United States, Army, Navy, and Air Force mobile radars have been integrated into the North American Aerospace Defense Command (NORAD) surveillance system to provide real-time cueing and intercept information.

To increase efficiency and reduce costs in the war against drugs, the Navy is equipping three ships, originally designed and built for antisubmarine warfare, for continuous counter-drug surveillance. These smaller ships are able to provide equivalent capabilities at one-tenth the cost of combatants normally assigned the same mission.

The Navy is also reconfiguring maritime patrol aircraft to create a multi-mission aircraft better able to perform counter-drug missions than some of the shorter-endurance aircraft currently assigned the mission. And in the Pacific, reserve ships have been assigned to counter-drug operations, freeing active duty ships to support battle group deployments. Working closely with law enforcement agencies, the Coast Guard and National Guard support a full range of monitoring, detection, and seizure operations. The National Guard also operates the National Interagency Counterdrug Institute, training members of all Services, federal, state, and local enforcement personnel.

COMBAT LOGISTICS

Because our strategic focus has changed from planning for global war to planning for regional conflicts of shorter duration and less intensity, our logistics support requirements have also changed. Previously, our goal was to have enough stocks so that each theater command could fight its part of the anticipated global conflict simultaneously and without re-supply from the Continental United States (CONUS) for a considerable time. With a new strategy that envisions fighting, at most, two major regional contingencies concurrently, existing in-theater stocks are being reduced substantially. Only enough "starter" stocks are required to last until theater forces are resupplied from CONUS or from other prepositioned "swing" stocks that can be moved quickly from one region to another, as needed. To provide such flexibility, some stocks now based on land will be repositioned afloat.

In this way, inventories can be significantly reduced while maintaining peacetime materiel readiness and combat sustainability. The Army has estimated that a 50% reduction in war reserve requirements is achievable through this concept. DOD has already reduced overall inventories from $114 billion in FY 1989 to $80 billion by

FY 1992. The other goal is to provide commanders and logisticians with the information they need to plan ahead and to make sound decisions on materiel positioning and movement and on reducing inventories.

Each Service has efforts ongoing to improve logistics management and reduce its levels of stocks worldwide. For example, the Army has embarked on a major logistics initiative to reduce and withdraw its inventory of materiel and equipment from Europe. After a 40-year accumulation of materiel in Europe, the task is massive -- in a recent inspection an Army team identified some 42,000 items of equipment that must be withdrawn to the United States, sold to other countries, or eliminated.

Combat support has entered a new era with a new yardstick for defining combat logistics requirements. The emphasis is on being able to locate stocks on a regional basis so they best support our new strategy.

COMMUNICATIONS

An often-repeated, never-confirmed report from Operation URGENT FURY in Grenada tells how a young officer used his telephone credit card to call back to his base and asked them to relay his request for fire support to a nearby support unit. Whether true or not, the story illustrates how desperately we needed, in 1983, to improve communications among our forces. Operations JUST CAUSE and DESERT STORM showed how far we've come since Grenada, but they also demonstrated again how the coordination of multi-Service operations can stress the command-and-control communications structure.

We have continued to draw on the lessons of DESERT ONE and URGENT FURY, and we've incorporated new lessons learned in more recent joint and combined operations. We've made great advances in joint doctrine, joint training, and communications systems to improve our interoperability, responsiveness, and effectiveness.

A new concept, called "Command, Control, Communications, Computers, and Intelligence (C^4I) for the Warrior," sets forth an objective, guiding principles, and a road map for achieving global communications interoperability. This program is aimed at providing a responsive, reliable, secure, and affordable network that can provide an accurate and complete picture of the

battlefield, timely and detailed mission objectives, and clear target views. The program includes a "Quick Fix" phase to enable existing systems to communicate with one another; a "Mid-Term" phase to ensure inter-Service communications requirements are adequately evaluated during development, testing, and acquisition of new systems; and an enduring "Objective" phase during which evolving technologies and techniques will be continuously identified and assimilated. These program improvements add up to a giant step forward in our "communications jointness."

Today, our ability to talk and pass data between elements of the various Services is even better than it was when we launched the overwhelmingly successful air, sea, and land campaign that led to victory in Operation DESERT STORM.

INTELLIGENCE

Another critical area subjected to intense examination since the last triennial review is the defense intelligence structure. The dramatic changes in the nature of threats facing the United States required and permitted the Intelligence Community to analyze our future intelligence collection needs. As a result of this analysis, the Intelligence Community is modifying both its focus and its structure.

Two reports helped shape this shift in organization and focus. The first, initiated by the Director of Central Intelligence (DCI) at the direction of the President, was National Strategy Review-29. The second was a memorandum, Strengthening Defense Intelligence, issued by the Secretary of Defense.

National Security Review - 29

To ensure all elements of the Intelligence Community are prepared to meet the changing needs of intelligence consumers through 2005, a systematic review of anticipated collection and analysis requirements was conducted in 1991. This effort, which resulted in National Security Review-29 and the subsequent National Security Decision Directive 67, established intelligence priorities for the post-Cold War world. As part of this review, DOD identified and developed 12 specific areas of interest to serve as the focus for planning

future defense intelligence collection, analysis, and dissemination.

Strengthening Defense Intelligence

To capitalize on lessons learned from the Gulf War and continue adapting to a changing world, the Secretary of Defense in the spring of 1991 defined steps to be taken to centralize management and strengthen the performance of defense intelligence functions. Among the measures the Secretary directed were consolidation of Service component intelligence resources into a joint intelligence center (JIC) at each combatant command; consolidation of existing intelligence commands, agencies, and elements into a single intelligence command within each Service by Fiscal Year 1995; and reduction or elimination of no-longer required operating locations and intelligence units located overseas.

Some of the steps already taken to provide better intelligence for joint warfighting are outlined below. Others still under review are addressed in Chapter III.

Intelligence Support to Joint Warfighting

The intelligence support available to US and other Gulf coalition commanders during DESERT STORM was probably the best in military history. This success was partly due to measures implemented long before Iraq's invasion of Kuwait and partly due to innovations made on the spot.

Despite the overall intelligence success, some commanders at the theater and tactical level expressed frustration after the war over the lack of coordination and timeliness in dissemination of intelligence collected at the national level. In responding to lessons learned in the war, the Intelligence Community's aim was to institutionalize and enhance what worked well, and fix what didn't. Results of this post-war effort are outlined below.

Military Intelligence Board. A standing board comprised of senior Defense Intelligence Agency (DIA) and Service intelligence officials organized the full range of intelligence support for DESERT STORM. The board was such a success that its structure has been retained and expanded to include representatives from other DOD and Intelligence Community organizations. The Military Intelligence Board now serves as a key advisory body to the Director, DIA in recommending programming priorities and coordinating support for military operations.

Joint Intelligence Centers. Another success story from Operation DESERT STORM was the provisional establishment by US Central Command (USCENTCOM) of a forward-based Joint Intelligence Center. The CENTCOM JIC acted as the clearinghouse for intelligence requirements such as battle damage assessment, and production of unique intelligence for

CENTCOM; and served as the collection manager for theater-based intelligence assets. Created on an ad hoc basis during DESERT STORM, the JIC is now being institutionalized for all combatant commands.

In the US Pacific Command, for example, consolidation of all general intelligence production and analysis facilities in Hawaii into a single JIC resulted in a 25% manpower savings. US European Command has established a similar tri-Service organization to produce intelligence support for mission planning and operations by US and Allied commanders in peace, crisis, and war -- resulting in the elimination or reduction of about half the headquarters and component-level intelligence organizations. US Space Command and US Strategic Command plan to share the large intelligence infrastructure that was originally established to support the Strategic Air Command. This consolidation will eliminate the need for additional facilities and intelligence staff at Space Command headquarters.

A DIA assessment of command intelligence requirements enabled the JICs to optimize intelligence capabilities by specifying production responsibilities, facilitating information exchange among combatant command and national intelligence centers, and allowing Service intelligence organizations to focus on their own areas of expertise. In establishing a JIC at each combatant command, we have improved the quality of intelligence support to the warfighter while decreasing the resources required to produce such support.

National Military Joint Intelligence Center (NMJIC). Our difficulty at the start of the Gulf War in coordinating requests from multiple consumers to multiple producers of intelligence resulted in duplicative requirements that created costly and unnecessary confusion. To provide the needed coordination, the NMJIC was established in the Pentagon as the single fusion point for intelligence in support of DESERT STORM. The NMJIC performed so well that it is now manned by representatives of all military Services, the National Security Agency (NSA) and DIA. All Service current intelligence resources in the Washington DC area were consolidated at the NMJIC in 1992. The NMJIC serves as the focal point for support to the combatant commands and to Joint Task Forces by acting as a national clearing house for intelligence requests and by coordinating CIA, DIA, and NSA support.

National Security Agency. The area of signals intelligence also is being affected by significant reductions of overseas field stations and the consolidation of remaining overseas resources into regional operating facilities. The Director of NSA is working closely with the DIA and Service intelligence to tailor theater signals intelligence assets into a reduced intelligence structure that is focused on the combatant command JICs.

At the national level, NSA has expanded its presence in the NMJIC to allow for more effective management of collection operations and better support during periods of crisis.

Office of Military Affairs. In testimony after the Persian Gulf War, General Schwarzkopf expressed the frustration he'd experienced in getting intelligence products he wanted from the national level. In response, the DCI established an Office of Military Affairs within the CIA. Manned by a general or flag officer with a supporting staff that includes military officers, this office works with the CIA on a day-to-day basis to ensure national level intelligence capabilities are better integrated with the activities of military intelligence organizations in support of military operations.

Central Imagery Office. Another DESERT STORM intelligence shortfall was the insufficiency of imagery products for detecting and targeting enemy activities over a broad area. In May 1992, directives issued by the Secretary of Defense and the DCI established the Central Imagery Office (CIO), "to ensure that United States Government intelligence, mapping, geodesy, and other needs for imagery are met effectively and efficiently in a manner conducive to national security..." The CIO is a designated combat support agency under the overall supervision of the Assistant Secretary of Defense for Command, Control, Communications and Intelligence. The office includes representatives from CIA and DIA, the Military Services, and other agencies with intelligence responsibilities.

Human Intelligence. Authority for tasking all DOD human intelligence (HUMINT) has been assigned to the DIA. This consolidation was accomplished to coordinate more effectively operations of valuable, limited HUMINT resources and optimize collection capabilities.

ACQUISITION

Despite the proven success of advanced weapons systems first used in Panama and the Persian Gulf, three factors -- a vastly different security environment, the ever-increasing cost of advanced technology, and the growing need for interoperability to support joint and combined operations -- have led to fundamental changes in the way the Services select and procure defense hardware.

Joint Requirements Oversight Council (JROC)

Joint application and interoperability considerations now pervade the entire acquisition process. Following the Goldwater-Nichols DOD Reorganization Act of 1986, the Chairman of the Joint Chiefs of Staff established the JROC to examine the requirements for every major Service acquisition program. An important JROC function is to identify programs for direct joint participation and joint technology spin-offs which may be applicable to other Service programs. To provide necessary muscle and experience, the JROC is chaired by the Vice Chairman of the Joint Chiefs of Staff, and its members are the Vice Chiefs of the Services.

Military acquisition actions (including major systems, subsystems, and components) that involve formal management or funding by more than one Service during any phase of a system's life-cycle are now designated as joint programs. This change has substantially reduced duplication of effort; increased our ability to provide the best technology options for force planners and senior decision makers; and enhanced supportability, interoperability, and warfighting effectiveness. As Admiral David Jeremiah, Vice Chairman of the Joint Chiefs of Staff, stated during testimony before the Senate Armed Services Committee, this "joint perspective focuses on the contribution each program makes to the overall joint warfighting capability and how that capability contributes to the execution of our National Military Strategy."

Program Initiatives

We've already realized immediate rewards as a result of this major change in the acquisition process. Four programs are of particular note. The Advanced Medium-Range Air-to-Air Missile (AMRAAM) initiative will provide the next generation, all-weather, all-environment, medium range, air-to-air missile system for the Navy, Air Force, and selected NATO allies.

Our Unmanned Aerial Vehicle (UAV) program will develop a family of UAVs with specific range and payload capabilities to accommodate a variety of needs from small unit, over-the-hill reconnaissance to much deeper, over-the-horizon surveillance.

The Navy's Mine Warfare Plan emphasizes research and development of systems such as the Magic Lantern mine detection system, SQQ-32 sonar upgrades, and a shallow water mine neutralization system to conduct efficient, effective, and speedy mine counter measure (MCM) operations in the very shallow water and surf zone environments in support of amphibious operations. As a result of lessons learned from Operation DESERT STORM, an MCM support ship is also being planned that will provide better command and control, logistics, and personnel support of our MCM ships and helicopters.

Finally, the MILSTAR Satellite Communication System will provide a survivable, jam-resistant, worldwide secure communications system for command and control of US forces in future conflicts.

As Cold War threats have receded, many of the systems that were being developed to counter those threats no longer carry the priority they once had. As a result, we've identified several programs where cost, schedule, or technical challenges have grown to unacceptable levels; and we've taken appropriate action to eliminate or curtail them. The following are prominent examples of how we've been able to save billions.

- Because of nuclear arms agreements, programs such as the B-2 Bomber and Trident II SLBM have been reduced, and the Small ICBM, Peacekeeper Rail Garrison, and Short Range Attack Missile have been terminated.
- The diminished threat from potential enemy submarines has resulted in the termination of two torpedo programs and an antisubmarine surveillance system, and a major reduction in procurement of the SEAWOLF attack submarine.
- The Naval Advanced Tactical Fighter, the Navy's A-12 medium attack aircraft, and the Navy's new antisubmarine patrol plane, the P-7, have been canceled; and several air-to-air and air-to-ground missile programs have been restructured.

When we determine that capabilities we have now need enhancement, we carefully study the trade-offs between new acquisition and modifying our existing systems. In many instances, requirements to replace existing US weaponry in order to maintain a significant technological advantage are not as urgent as they were a few years ago. As a result, we've reduced concurrency in development programs and are retaining existing equipment for longer periods. We increasingly incorporate technological advances through upgrades instead of through initiation of new systems. Upgrade of the Navy's F-14As into F-14Bs, by incorporating new engines and modest avionics changes, is one example of this philosophy.

We are procuring less and procuring smarter. We are eliminating duplication of effort and exploiting joint application wherever possible.

DOCTRINE

A joint force, synchronized and integrated into an overall campaign plan, provides a combatant commander with a wide range of capabilities that can pose multiple and complex problems for any enemy. But this kind of orchestrated employment is by no means easy to accomplish. Joint doctrine is the medium that deals with the fundamental issue of how best to employ the nation's military power to achieve strategic ends. Joint doctrine and training capture our collective experience with warfare, and ensure we are ready to fight the next war -- not the last one.

The Armed Forces have made great strides in the development of joint doctrine, particularly since our experiences in DESERT ONE and Grenada.

Service doctrine is now required to be consistent with joint doctrine. A recent series of publications more clearly articulates considerations for joint operations. The prime example is Joint Publication 1, Joint Warfare of the US Armed Forces, "Joint Warfare is Team Warfare", which serves as the focal point for further doctrinal dialogue and development.

As the biggest test of joint doctrine since the establishment of the Air Force and the formal creation of the Joint Chiefs of Staff, DESERT STORM demonstrated beyond doubt that our emphasis on jointness has yielded a more effective and efficient fighting force. Emerging doctrine and concepts were made available to General Schwarzkopf, his staff, and components throughout the planning and execution of the campaign to liberate Kuwait.

Of particular note during the war was the establishment and use of a single Joint Force Air Component Commander -- the JFACC -- to oversee and synchronize all air component operations under the CINC's campaign plan. The effectiveness of air operations in DESERT STORM can be directly attributed to our emphasis on joint doctrine as exemplified by the JFACC.

DESERT STORM joint air operations also demonstrated that we have room to improve. We quickly learned that the Services lacked an electronic means to pass the JFACC's daily Air Tasking Orders (ATOs) to all the wings and squadrons executing the air portion of the campaign plan. To get the order to Naval Aviators eager to attack the targets they were assigned by the JFACC, a lengthy document had to be picked up in Riyadh every day and flown via naval aircraft to each of the carriers in the Red Sea and the Persian Gulf.

We've given priority to rectifying this inter-Service dissemination shortfall since the Gulf War. There are now at least nine naval vessels with an ATO data link capability, which permits high data-rate exchanges between air and naval forces. Seven more vessels have been modified so they can be similarly equipped, in an emergency, in less than one day. This new inter-Service command-and-control communications capability will allow the Navy battle group commander at sea to function as the JFACC when required. During exercise TANDEM THRUST 92, in a demonstration of the transmission of an ATO from a ground-based terminal to a terminal afloat, the daily ATO was transmitted to the naval force commander in under five minutes. Work continues to further enhance ATO interoperability with all the Services.

TRAINING

Training and education are indispensable to the effective application of military power. We perform in combat with the knowledge, skills, and attitudes we've attained through education, training, and exercises; and the abilities of our leaders rest in large part on the quality of these tools. Significant improvements have been made since 1989 in the areas of professional military education, training, and exercises.

Our military education system is now organized around a framework centered on the tactical, operational, and strategic levels of war. It constitutes an integrated, "cradle-to-grave" approach to preparing our soldiers, sailors, airmen, and marines for the challenges of the nineties and beyond.

To foster an enhanced joint perspective among all the Services, a two-phase program for joint education has been fully implemented by intermediate and senior level Service colleges. As vividly demonstrated in DESERT STORM, military leaders today face operational challenges that can only be met by a deep appreciation of jointness. Knowledge of the capabilities and limitations of land, sea, air, space, and special operations forces -- including emphasis on organization, operations, planning systems, and integrated command-and-control communications and intelligence requirements -- will ensure our commanders have a clear advantage in responding to

contemporary and future challenges.

Simply stated, we fight as we train; so we must train and exercise as we intend to fight. We have demonstrated, in major joint and combined exercises, our ability to control air, ground, and naval forces from afloat or ashore through a Joint Task Force commander.

The Army and Marine Corps have developed what they call the "endless exercise." This concept is an acknowledgment that joint interaction, especially between complementary units, should be a permanent condition and credo for action. The two Services have established a periodic visit program to pursue and expand upon operational issues of mutual interest. Joint exercises provide the proving ground for refining joint warfighting, intelligence, command, control, communications, and logistics operations among conventional forces and between conventional and special operations forces. OCEAN VENTURE 92 and TANDEM THRUST 92 -- conducted off the Carolina coast and in California and the mid-Pacific, respectively -- saw thousands of soldiers, sailors, airmen, and marines training together on joint wartime tasks. These large annual exercises (TANDEM THRUST alone involved 20,000 troops) plus others like TEAM SPIRIT in Korea and DISPLAY DETERMINATION in Europe, bring major air, naval, and ground units together regularly to train jointly and to contribute, through lessons they learn together, to the development and refinement of joint doctrine, tactics, techniques, and procedures.

Large and expensive exercises are increasingly being replaced by computer assisted exercises of more modest scale. This use of modern modeling and simulation techniques enhances the training value of exercises for combatant commands and subordinate Joint Task Force staffs while driving down costs. Smaller-scale, carefully focused exercises are proving invaluable in training joint forces to meet combatant commanders' mission requirements. In recognition of the importance of this concept, the Joint Doctrine Training and Simulation Center is being established to support joint exercises, serve as the focal point for joint doctrine development, manage the joint lessons learned system, and support joint training initiatives.

Consolidation of education and training between Service schools also contributes to joint operations, and moreover has resulted in impressive savings. More than 20,000 marines attend the schools of other Services every year. Marine artillerymen, tankers, engineers, unmanned aerial vehicle crewmen, and military police are trained at Army schools. Every year, the Army trains more than 8,500 marines, 13,500 airmen, 12,000 sailors, and 60 Coast Guardsmen, resulting in an unprecedented commonalty of approach to basic battlefield skills and large savings.

The Army is not the only Service training people in other uniforms. Worldwide Military Command and Control System (WWMCCS) operators, imagery interpreters, and military police working dog handlers are trained by the Air Force. The Naval Postgraduate School in Monterey, California is attended by all four Services. The Navy also conducts cryptology training in Pensacola, Florida. The Marine Corps conducts the Scout Sniper Instructor Course, the Computer Science School, and the Aviation Weapons and Tactics Instructor Course. The emphasis is on identifying the Service with the preponderance of requirements in a particular career field or skill area, and achieving economies of scale by having people from all Services train under one Service's roof. Where no one Service has a monopoly, training and education are consolidated under DOD. Examples include the Defense Mapping School and the Defense Intelligence College. As part of the Department's continuing effort to reduce costs and increase effectiveness, all information specialists -- journalists, radio and television commentators -- will be trained, starting in 1995, at the DOD American Forces Information Service School at Fort Meade, Maryland.

INFRASTRUCTURE REDUCTIONS

Our drawdown to achieve the levels planned by 1995 requires a concurrent reduction in military infrastructure in the United States. More than 170 activities have been identified by the Services for elimination, consolidation, or realignment. Congressional support for these reductions is essential.

The commissary functions of all Services have already been combined into a single Defense Commissary Agency. Other examples include the consolidation of aircrew simulator and training development facilities, combination of several advanced tactical radio development programs, elimination of the Army Intelligence Agency, reassignment of the Armed Forces Medical Intelligence Center and the Missile and Space Intelligence Center to the Defense Intelligence Agency, consolidation of 34 separate Navy laboratory activities into five facilities, and consolidation of the Air Force's Systems and Logistics Commands into one Materiel Command. In addition, DOD is conducting a detailed review of the roles, missions, funding, and management of the Defense Nuclear Agency to determine if efficiencies and reductions can be made to eliminate any duplication in capabilities that may exist. This DOD review, which is in progress, is expected to be submitted to Congress in May 1993.

Another innovation to eliminate unnecessary duplication is the assignment of an executive agent to oversee common functions for several Services. This concept eliminates competition in contracting for the same resources. The clean-up of former DOD-owned hazardous waste sites; operation of common user ocean terminals; and support for medical materiel, military postal service, and domestic disaster relief are functions for which one or another Service has been designated as the executive agent.

Substantial savings in personnel and other resources are also being achieved through the reduction and reorganization of Service staffs. The Army is reducing headquarters functions by 23% and has eliminated 42 general officer billets of the 63 planned over the next several years. The Navy staff has reorganized to enhance coordination with the Joint Staff, the Unified Commanders and the other Service staffs. This reorganization will reduce the headquarters by 24% and the number of flag officers in the Navy by 34. A restructuring of Headquarters Air Force will result in a 23% decrease, including elimination of 59 general officer positions. A similar reorganization effort has reduced the Marine Corps Service Management Headquarters by 24% and will eliminate 9 general officers.

These reorganizations reflect the reality of significant budget cuts as well as dramatic changes in the international strategic landscape. They are designed to attain greater levels of peacetime efficiency while maintaining and enhancing the combat effectiveness required to respond to future regional challenges.

Innovative steps are also being taken to control the spiraling costs of military and dependent medical care. Responsibility for the preparation and submission of a unified medical budget for all Services has been consolidated under the Assistant Secretary of Defense (Health Affairs) in order to standardize programs and procedures and conserve resources.

In Europe, the Army medical materiel center has become a tri-Service organization, providing services such as spectacle fabrication, equipment maintenance, and medical supply distribution and requisition support for all military medical treatment facilities in the European Command's area of responsibility.

Similarly, the Army's regional medical center at Landstuhl, Germany -- a major military medical treatment facility in Europe -- will soon be jointly staffed by the Army and Air Force.

The Central Command has also moved significantly towards the consolidation of Service medical functions, using a single manager for all medical logistics to eliminate duplication by streamlining planning and purchasing.

CONCLUSION

Changes since the 1989 review of roles, missions, and functions have fundamentally altered the Armed Forces of the United States. We are well along on our planned reduction and restructuring. As part of the continuous process of assessment, adjustment, and reassessment, we have eliminated considerable duplication, improved jointness, restructured part of the force, and developed effective plans to complete our planned reshaping by 1995.

These efforts fully comply with the Congressional mandate to review critically our roles, missions, and functions. In so doing, they affirm the military's strong commitment to change.

Chapter III

WHERE WE ARE GOING

Confronted with a drastically different world situation, the Armed Forces developed a new military strategy and began reshaping the force to orient it towards the demands of regional crisis and conflict. Even before the strategy and the force were finalized, however, they were put to the test in the Persian Gulf. The DESERT SHIELD and DESERT STORM experience confirmed the direction that had been taken, and as the troops came home, the lessons learned and experience gained were used to refine our course.

As Chapter II clearly depicts, much has already been done to improve the way the Armed Forces do their business. DESERT STORM demonstrated that Goldwater-Nichols reforms have changed the Service's warfighting roles by ensuring necessary inter-Service combat support is always available. The theater commander or his subordinate Joint Task Force Commanders now have the authority to decide how to allocate resources and employ the joint force. We've moved out with all deliberate speed to implement other important changes and give the American people a higher return on their defense investment.

But the process of examining how the Armed Forces organize, train, equip, and employ forces is continuous. Having developed a new National Military Strategy and begun reshaping the Cold War military to meet the challenges of the 1990s, we resolved to step back and take a specific look at roles, missions, and functions to verify that they are in tune with the strategy, that they foster no unnecessary duplication, and that they produce a joint force that maximizes military effectiveness per dollar spent on defense. Beginning last summer, a comprehensive, often painful, "top-to-bottom" review was undertaken.

The Joint Staff was directed to lead the study because a truly joint and collective effort would likely uncover options and offer perspectives not visible from a single Service's point of view. However, the Services were actively involved at every step, and the combatant commands also took part by examining their areas of interest and responsibility.

Areas selected for review were those where two or more Services perform similar tasks, where restructuring might generate significant cost savings, and where changes in our strategy and force structure made a comprehensive review appropriate. Study groups were formed to look at each issue,

each overseen by a Joint Staff general or flag officer with applicable operational experience or expertise on the issue. The groups met over a period of several months and prepared detailed assessments. This process formed the basis for much of the analysis and many of the recommendations presented in this chapter.

This fundamental reexamination of the Armed Forces' organization and structure involved many serious issues touching on the very existence of major communities within the Services. Disagreements were to be expected and, indeed, occurred. But the Chairman, the Joint Chiefs, and the CINCs took very seriously the challenge posed by Congress to conduct a "no holds barred" approach that had as its primary consideration not what is right for the Services or the Department of Defense, but what is right for America. While the study's results were discussed at length among the Joint Chiefs of Staff, it was the Chairman alone, as required by Title X, who ultimately decided what to recommend in this report.

Significant changes are recommended in a number of areas. In others, the current division of labor should remain as it is today. In still others, further study is needed before final recommendations can be made.

UNIFIED COMMAND PLAN

A detailed review of roles, missions, and functions necessarily involves a review of the Unified Command Plan (UCP) because MISSIONS are assigned to CINCs, not to Services. As discussed in Chapters I and II, the UCP is what prescribes the geographic and functional responsibilities of the combatant CINCs. Since it was first published in 1946, the UCP has been updated regularly. Under Title X, as revised by Goldwater-Nichols, the Chairman of the Joint Chiefs of Staff is required to review the UCP not less than every two years for missions, responsibilities, and force structure, and to recommend such changes as may be necessary in a report through the Secretary of Defense to the President.

Since the end of the Cold War, we have been reviewing the plan to ensure it provides the most effective and efficient command-and-control arrangements for a changing world. One recommendation, since approved by the President and discussed in Chapter II, was elimination of Strategic Air Command and establishment of USSTRATCOM as a new combatant command, consolidating command of all strategic nuclear forces under one CINC. This new joint Navy and Air Force command was a momentous UCP change and one which improved command and control of our entire strategic nuclear arsenal.

Additional changes to the UCP are being examined, including the possibility of assigning designated forces based in the United States to a single joint command and consolidating space responsibilities.

Joint Headquarters for US Based Forces

The unified command structure works well overseas, where CINCs with a geographic area of responsibility (AOR) effectively direct the forces assigned to them from the Services in accomplishing a wide range of missions. In exercising their combatant command authority, the overseas CINCs also have a major impact on the readiness of assigned forces in their theaters.

But unification has never been achieved in the United States to the same degree as overseas. While forces based in the United States are assigned, by law, to one CINC, many are assigned to overseas CINCs and have limited opportunities to train jointly with the overseas-based forces they would join for military operations in crisis or war.

This lack of an appropriate joint headquarters to oversee Service forces based in the Continental Unites States (CONUS) has always been considered a problem, and the Joint Chiefs of Staff have twice tried to fix it. US Strike Command (USSTRICOM) was activated in 1961 to provide unified control over CONUS-based Army and Air Force units. Initially, STRICOM was given no regional responsibilities but was assigned functional responsibilities to provide a general reserve for reinforcement of other unified commands, train assigned forces, develop joint doctrine, and plan for and execute contingency operations as ordered. Later, STRICOM was given geographic planning responsibility for the Middle East, South Asia, and Africa south of the Sahara. In attempting to fulfill its functional responsibilities as a trainer and provider of forces, STRICOM frequently collided with the Services' authority under Title X to organize, train, and equip forces.

In 1971, STRICOM was replaced by US Readiness Command (USREDCOM), whose mission was what STRICOM's had been originally: functional responsibility for training and providing forces, with no geographic area of responsibility. REDCOM experienced some of the same Service resistance as its predecessor in fulfilling its assigned training responsibilities.

Over time, REDCOM was given additional functional responsibilities, including a requirement to plan for and provide Joint Task Force headquarters and forces for contingency operations in areas not assigned to overseas CINCs. What began as the Rapid Deployment Joint Task Force (RDJTF) eventually grew into a new combatant command, US Central Command (CENTCOM). The Goldwater-Nichols Act of 1986 directed that REDCOM's missions and functions be reviewed in light of

CENTCOM's creation. REDCOM was subsequently disestablished as the result of a combination of factors, not least of which was that our strategy depended more on forward deployment and basing than on CONUS-based forces to contain Soviet expansion.

Today our strategy has changed, and we've reached a level of joint maturity that makes it possible to address once more the need for unified command over designated CONUS-based forces. As our forward presence declines, it is more important than ever that our forces be trained to operate jointly -- not just for occasional exercises, but as a way of life. Our new strategy demands forces that are highly skilled, rapidly deliverable, and fully capable of operating effectively as a joint team immediately upon arrival.

A joint headquarters would facilitate the identification, training, preparation, and rapid response of designated CONUS-based forces currently under the Army's Forces Command (FORSCOM), the Navy's Atlantic Fleet (LANTFLT), the Air Force's Air Combat Command (ACC), and the Marine Corps' Marine Forces Atlantic (MARFORLANT). The time has come to merge these forces into a combatant command whose principal purpose will be to ensure the joint training and joint readiness of our response forces. With force packages already accustomed to operating jointly, their deployment will be expedited. Overseas CINCs will be able to focus more on in-theater operations and less on deployment and readiness concerns.

In addition to developing joint force packages for overseas CINCs, this new combatant command could also be assigned certain other functional responsibilities, including:

- Undertaking principal responsibility for support to United Nations peacekeeping operations and training units for that purpose.
- Assisting with the response to natural disasters in the United States and other requirements for military support to civil authorities when requested by State Governors and as directed by the President.
- Planning for the land defense of CONUS.
- Improving joint tactics, techniques, and procedures.
- Recommending and testing joint doctrine.

After several approaches to constituting the required joint headquarters were examined, the conclusion was that US Atlantic Command (USLANTCOM) is particularly well suited to assume this new mission:

- It is an existing CONUS-based joint headquarters.
- It already has a component relationship with FORSCOM, LANTFLT, ACC, and

MARFORLANT.

- Its Cold War mission, to defend the Atlantic sea lanes and undertake offensive naval operations against the Soviet Union, has fundamentally changed. While continuing to perform a vital NATO mission, it has the capacity to undertake this additional responsibility in keeping with the revised military strategy.
- Its geographic AOR, although large, presents only a modest warfighting challenge. The command can probably handle additional functional responsibilities.

The Commander in Chief of LANTCOM (CINCLANT) also has NATO responsibilities in his dual role as Supreme Allied Commander Atlantic (SACLANT). Given responsibility for integrating joint force packages, LANTCOM would be better able to tailor forces to reinforce our European presence under any contingency that might arise.

Under this recommendation, LANTCOM would shift from a predominantly naval headquarters to a more balanced combatant command headquarters and might be renamed to reflect more fully its new focus. Its Commander in Chief would become a nominative position which could be filled by any Service.

The Army's FORSCOM would no longer require "specified" status as a single-Service command reporting directly to the President and Secretary of Defense. With this change, the term "specified" would be retired, and all forces would belong to a joint team. The Services would retain their Title X responsibilities, but training and deploying designated CONUS-based forces as a joint team would be the mission of this expanded CINC. Unification of the Armed Forces, which began in 1947, would at last be complete.

RECOMMENDATION: CONUS-based forces of FORSCOM, LANTFLT, ACC, and MARFORLANT should be combined into one joint command. LANTCOM will be responsible for: joint training, force packaging, and facilitating deployments during crises; supporting UN peacekeeping operations; and providing assistance during natural disasters.

Space

Since the 1950s, the United States has developed a highly capable and complex infrastructure for the launch and control of space vehicles and systems. The Army, Navy, and Air Force have all been involved in various aspects of the national space program. Air Force ICBM programs provided a number of the nation's early space launch vehicles, while the Army actively developed rocket motors and anti-ballistic missiles and the Navy orbited geophysical

and navigational satellites.

This broad-based Service involvement in space programs was largely a result of the urgency of the effort -- the Soviet Union's launching of Sputnik in 1957 during the height of the Cold War threatened long-term Soviet dominance in space. In response, the United States brought together the capabilities of its military Services and other agencies and the US space program was able to move rapidly forward in the 1950s and 1960s, achieving dramatic advances in communications, intelligence gathering, and space exploration.

Although the majority of space functions today reside within the Air Force, all the Services, plus US Space Command and several Defense agencies and organizations, are involved in space activities, including research and development, acquisition, testing, training, and operations. USSPACECOM, headquartered in Colorado Springs, Colorado, is assigned combatant command of US forces providing warning and assessment of a bomber or missile attack on the United States. In addition, CINCSPACE supports other CINCs by ensuring that space operations and warning requirements are supported.

CINCSPACE is also Commander of the North American Aerospace Defense Command (NORAD), the US-Canadian command that provides air defense of the North American continent. CINCSPACE carries out his mission through three Service component commands: Air Force Space Command at Petersen Air Force Base, Colorado Springs, Colorado; Naval Space Command at Dahlgren, Virginia; and Army Space Command at Colorado Springs, Colorado.

Even with the Cold War over, our national security depends on a robust space capability. But we can no longer afford to allow multiple organizations to be involved in similar, independent space roles and functions.

A number of improvements are underway to streamline space organization and systems and eliminate unnecessary overlap. CINCSPACE recently consolidated selected SPACECOM, NORAD, and Air Force Space Command (AFSPACECOM) staff functions, and combined their operations centers. National system program offices, the Strategic Defense Initiative Organization (SDIO) and the Defense Advanced Research Projects Agency (DARPA), are working on a program to exchange information on various technology developments. The newest national space satellite system will consolidate two existing systems, permitting the closure of six ground stations and consolidation of operations at one site. Other near-term consolidations include combining existing space surveillance and space defense operations centers into a single control center at SPACECOM.

Organizationally, the Joint Chiefs of Staff agreed in 1991 to "dual hat" CINCSPACE as Commander, AFSPACECOM, which led to a reduction in personnel and support costs. However, it is time for an even bolder change to be evaluated: assignment of the space mission to STRATCOM and elimination of SPACECOM. As this concept is studied, several important issues must be addressed.

Under this proposal, after appropriate consultation with the Canadians, the Commander of AFSPACECOM would assume command of NORAD in Colorado Springs. AFSPACECOM would also operate all space systems under CINCSTRAT's command. Small Army and Navy components would be assigned to CINCSTRAT and would be represented in space program offices to ensure space systems were developed to support all Services' needs. Personnel from all Services would also be assigned to a Joint Space Planning Staff within STRATCOM. Under this plan, the Air Force would be responsible for development of future military space systems. Such an organization would ensure Service-unique requirements for, and uses of, space were properly represented and that Services and CINCs had trained personnel with the knowledge to fully exploit the capabilities of space systems.

Other changes would include designating the Air Force as the lead Service to coordinate with NASA on LANDSAT remote earth sensing operations, and consolidating DOD's functions at NASA into a single organization under AFSPACECOM. To streamline military satellite communications operations, all operational responsibilities for the Defense Satellite Communications System (DSCS) will transfer from the Defense Information Systems Agency to the Air Force. Responsibilities for the Navy's Fleet Satellite Communications (FLTSATCOM) system will also transfer to the Air Force. Both DSCS and FLTSATCOM will remain under the combatant command of CINCSTRAT.

Under this proposed arrangement, requirements for space systems would continue to be submitted by the CINCs, Services, or agencies to the JROC for validation. Day-to-day requirements for operational space system support would be submitted to CINCSTRAT.

Such a consolidation would conserve resources and eliminate a substantial number of positions. In addition, it could improve warfighting support from space, allowing an increase in operational effectiveness, efficiency, and interoperability while maintaining joint Service expertise and joint operational focus.

RECOMMENDATION: A review will be conducted to determine if the space mission should be assigned to STRATCOM, and if USSPACECOM should be eliminated.

DEPOT MAINTENANCE CONSOLIDATION

Most equipment purchased and operated by the Department of Defense requires maintenance throughout its useful life. The required maintenance may be as simple as a routine oil change. The most complex work involving overhauls; the complete rebuild of parts, assemblies or subassemblies for weapons systems and their components; and other jobs beyond the technical ability of individual units is the responsibility of each Service's depot maintenance system. Depot maintenance is a vast undertaking, employing about 130,000 civilians and 2,000 military personnel at 30 major facilities. The Services collectively spend about $13 billion a year to rebuild, refit, and maintain over 700,000 different major items of equipment.

Four separate systems have been sized and organized to meet four Services' needs in a global war, each largely independent of other Services' capabilities. With the shift in strategic focus to regional conflicts of shorter expected duration, and the accompanying reduction in the size of our military forces, the collective DOD depot maintenance system can be reduced and restructured. Significant savings are possible by eliminating excess capacity, and duplicate capability and investments.

In September 1992, the Chairman of the Joint Chiefs of Staff chartered a special group, consisting of retired senior officers from each Service and a senior representative from industry, to study the depot maintenance system and identify the best way to scale down excess capacity and reduce costs without degrading the ability to meet current or future peacetime and wartime needs.

The study concluded that:

- The current DOD depot management structure has not substantially reduced capabilities or capacity. There is currently 25 to 50 % more depot capacity than will be needed in the future.
- Unnecessary duplication exists throughout the individual Service depots, especially when viewed across Service boundaries.
- Closure of seven or eight of the thirty military depots is the first step in reducing excess capacity and substantially reducing long-term costs.
- The most effective way to close depots is through the overall DOD effort to close or consolidate excess military bases and facilities, a process overseen by the Base Realignment and Closure (BRAC) Commission.

Closure of depots involves substantial upfront expenses, but if the study proposals are implemented, savings of $400M to $600M per year are achievable when all eight depots are closed.

The study group also identified three options for consolidating management of depot maintenance: designation of a Service executive agent for each major commodity, consolidation of all depot maintenance activities under a single Defense Management Agency, or creation of a Joint Depot Maintenance Command to oversee and administer all depot-level maintenance. It was the study group's view that a Joint Depot Maintenance Command, with the full authority to organize current depots as approved by the Joint Chiefs of Staff, would produce the greatest opportunities for efficiency and matching depot capacity with future requirements.

The Chairman of the Joint Chiefs of Staff forwarded this recommendation to the Secretary of Defense. As a result, the Services were directed to prepare integrated assessments outlining their recommendations for depot closures and management consolidations in time for the BRAC Commission's deliberations which will occur early in 1993. Still under review is the group's recommendation to create a Joint Depot Maintenance Command.

The concept contained within the study group's recommendation could have broader applications. Currently, there are a number of combat support agencies, such as the Defense Information Systems Agency and Defense Nuclear Agency, that are subject to the direction and control of civilian officials within the Office of the Secretary of Defense but retain, under Title X, a principal task of providing operational support to the warfighting CINCs.

A case can be made that some of these combat support agencies, which are so vital to our warfighting needs, would work more effectively and efficiently as joint commands supervised by the Chairman of the Joint Chiefs of Staff and the Joint Staff. For example, the Defense Information Systems Agency could become a Joint Information Systems Command. This concept will be explored in more depth in the next report to Congress on combat support agencies due in 1993.

RECOMMENDATION: Consider establishing a Joint Depot Maintenance Command to reduce and restructure depot-level maintenance by 25-50%. Examine closing 7 or 8 of the 30 military depots which could achieve savings of $400M to $600M per year after these depots are closed. Services recommend depot closures and consolidations to the Base Realignment and Closure Commission.

AMERICA'S AIR POWER

Aviation has been an important part of America's military capabilities almost from the moment the Wright Brothers first achieved manned flight. Initially employed as a military instrument in World War I, by that war's end in 1918 aircraft were already being used both to support troops engaged in battle and to attack enemy targets in rear areas.

Between the wars, innovative thinkers in the Army began developing more advanced theories on the use of the airplane to attack enemy strategic and tactical targets. The Marine Corps refined its use of air power, and the Marines' combined air-ground team was born. Meanwhile, in the Navy a group of officers was arguing that naval aviation and carriers should supplant the battleship as the Navy's primary offensive arm. As a result of these and other efforts, by the time Pearl Harbor was attacked in December 1941, America had two forces built around the airplane -- the Army Air Corps and Navy-Marine Corps aviation.

Both proved indispensable to victory in World War II. The Army Air Corps assured our return to Europe and assisted in the breakout from the Normandy beaches. In the Pacific, the Navy's fast attack carriers helped win the war at sea and joined Marine Corps aviation and Army Air Corps units in supporting the arduous island-hopping campaign from ground air bases. By war's end, the effectiveness of strategic bombing and the advent of the atomic bomb made air power a front runner in the nuclear age.

After the war, the Navy invested in longer-range aircraft and larger aircraft carriers to provide world-wide range and nuclear capability from the sea. With the proven success of strategic and tactical air power and the development of the intercontinental-range bomber, the Air Force was established by Congress and took its place alongside the other Services in fulfilling the vital role of global strategic deterrence.

Shaped and broadened by dramatic technological advances, the importance of aviation expanded as the helicopter came of age. The American military first used the helicopter in Korea, both to get the wounded safely to treatment and to move small numbers of troops. Later, during the war in Vietnam, the Army and Marines significantly enhanced their combat flexibility as gunships and troop-carrying helicopters were integrated into airmobile units of up to division size.

During the Cold War, our technological superiority and the demonstrated quality of America's air power, both land and sea based, contributed immeasurably to effective nuclear deterrence. And had we been forced to defend against a conventional attack by numerically superior Warsaw Pact forces, our air power would have been key to the outcome.

The Services adapted aviation technology to their quite different warfighting domains, and in the process gave their fighting units the lethality, mobility, and sustainability necessary for the evolving nature of the modern battlefield. Today, the fact that all have airplanes and helicopters causes some to argue that America has "Four Air Forces," implying we have three more than we need. In fact, America has only one air force, the United States Air Force whose role is prompt and sustained offensive and defensive air operations. The other Services have aviation arms essential to their specific roles and functions but which also work jointly to project America's air power.

With its global reach and global power, the Air Force brings speed, range, and precise lethality to any planning equation. Our Navy and Marine Corps air bring power from the sea, providing ready, visible, lethal, sustainable, and responsive presence worldwide, unconstrained by the politics of access ashore. The aviation elements of Army and Marine Corps forces are an integral part of the unmatched mobility and lethality that figured so prominently in the success of our ground operations during Operation DESERT STORM and that characterize America's modern ground maneuver forces. America's air power makes the prospect of conflict a sobering consideration for any who would consider opposing us.

So while some argue that we have four air forces, in reality each is different, playing a unique but complementary role. Together, the aviation elements of the four Services constitute "America's Air Power." It is a potent combination, proven over and over in combat. It has been developed over the years through the cooperation and the far-ranging vision of the Department of Defense, the Services, and the Congress of the United States. By creating the US Air Force, codifying Marine Corps Tactical Air in law, and supporting carrier aviation and Army helicopter programs, Congress bestowed on America's fighting men and women a force that has paid for itself repeatedly. Any American who has ever faced an armed enemy is grateful for the robust capability we possess.

America's air power offers the nation tremendous flexibility in peace, during crises, and in war. However, in this period of changing threats and declining resources, the aviation force structure that was planned in years past must be reevaluated. Recognizing that the acquisition plan for major aviation programs requires more resources than will likely be available, a review was conducted to determine if some air missions could be reduced or deleted; if existing aircraft, such as strategic bombers, could also perform other assignments; and if certain missions, performed by more than one Service, could be combined.

While America's air power has made a magnificent contribution to our nation's security, we recognize that it will be smaller in the future. The Services, in reducing the types and numbers of aircraft, will emphasize only those programs which contribute the most to satisfying the national mandate for a decisive fighting force in the air at a minimum burden to the American taxpayer. With the necessary reductions in aircraft inventory, there are now also opportunities to make reductions in support systems, such as training, maintenance, and testing.

The following recommendations on shaping America's air power for the future reflect the realities of a new security environment, exploit opportunities offered by advancing technology, and preserve required capabilities. These recommendations cover broad areas of direct warfighting concern, such as continental air defense, close air support, and airborne command and control. They also address supporting capabilities such as flight training and inventory management.

Continental Air Defense

The air defense of the North American Continent is the responsibility of the North American Aerospace Defense Command (NORAD), a US-Canadian military organization whose mission is to control sovereign airspace, provide warning, and respond as required to enemy air or missile attack.

A dedicated force of more than 180 aircraft in twelve Air National Guard squadrons currently performs this NORAD mission. These F-15 and F-16 interceptor aircraft operate from 14 bases nationwide.

The mission emerged during the Cold War, and the force was sized to intercept the Soviet Union's long-range bomber force if it attacked from over the North Pole. Over the past several decades, the interceptor force has maintained a 24-hour-a-day vigil, which it continues to this day, superbly defending America against any potential threat from enemy aircraft. Now that the threat has largely disappeared, we simply no longer need such a large, dedicated continental air defense force.

Significant savings in manpower and operating costs can be achieved by eliminating or sharply reducing dedicated air defense forces and taking a new approach to the mission. Already, approximately 30 squadrons of general purpose fighters are leaving the Air Force due to the decreasing threat. In light of the US-Soviet agreement

to take long-range strategic bombers off alert and the reductions called for in the START I and II treaties, it is now possible to go further. General purpose and training forces from the Active and Reserve components of the Services can absorb today's continental air defense mission, perhaps in its entirety. Flying from approximately 60 air bases in the continental US (CONUS) and Alaska, intercept-capable aircraft can cover NORAD's 14 alert sites spread throughout the United States. This will provide an ample force for the day-to-day air sovereignty mission.

As part of the next budget deliberations, we will determine how best to implement this recommendation. The actual savings resulting from this initiative will depend on the disposition of affected units and bases. Options range from inactivating units dedicated to continental air defense to reassigning them to another part of the Air Force.

This recommendation encompasses a major change in the way we perform the important mission of providing for the nation's defense and air sovereignty. It recognizes and responds to changes in the threat in a way that exploits existing capabilities, yet reduces costs.

RECOMMENDATION: Eliminate or sharply reduce the force dedicated to this mission. Assign to existing Air Force, Navy, and Marine Corps general purpose and training squadrons.

Theater Air Interdiction

The US relies on land- and sea-based attack aircraft, long-range bombers, cruise missiles, and surface-to-surface missiles to conduct interdiction. Theater air interdiction (TAI) describes offensive aerial actions intended to attack enemy forces deep within their own territory before they can engage our forces. This section will address the attack aircraft and bomber portions of our TAI force. Attack aircraft are multi-mission and contribute high sortie rates and tactical agility to TAI as well as other mission areas. Coming from both land and sea, they complicate an enemy's air defense planning. Long-range bombers offer large payload and global reach. Both types of aircraft can carry a wide variety of weapons. Our forces are deliberately structured to overwhelm an adversary from all directions, day and night, ensuring decisive victory while minimizing our own losses. Responsive, effective air interdiction is a "must have" for America and its allies.

A number of factors can improve the effectiveness of TAI.

- First, deploying forces forward substantially reduces the cost of theater air interdiction.
- Second, "stealth" aircraft are essential to destroy critical, highly defended targets early in a conflict. An adequate force with stealth capabilities allows a smaller number of aircraft to attain a much

higher probability of mission success, with fewer losses.

- Third, advanced precision guided munitions (PGMs) have a dramatic impact on interdiction effectiveness. The number of aircraft required to achieve mission objectives increases markedly when adequate PGM inventories are not available.

- Finally, bombers with upgraded conventional systems offer advantages and capabilities that could reduce attack aircraft requirements in certain conflict scenarios.

There are a number of observations that have been made concerning the composition of the theater air interdiction force.

- Strategic bombers, previously dedicated to Cold War nuclear missions, are now available to support theater air interdiction operations.

- The long-range bomber force should be capable of delivering advanced conventional precision-guided munitions (PGMs).

- Bombers can be especially effective in the early days of a short-notice conflict where deployment of CONUS-based attack aircraft has yet to occur. In such cases, bombers can reduce aircraft requirements. In operations such as DESERT SHIELD/STORM, where adequate buildup of attack aircraft occurred prior to the commencement of hostilities, bombers may not be as critical to the TAI effort.

- Basing makes a critical difference. Sufficient numbers of land- and sea-based bomber and attack aircraft need to be forward-deployed or rapidly deployable to provide a quick response to short-notice crises.

- Stealth reduces aircraft losses. As these high technology aircraft are procured, a smaller total number of bombers and attack aircraft are required. Stealth also increases the likelihood of destroying critical targets during the early days of conflict when enemy air defenses are intact.

- PGMs reduce losses, and their remarkable accuracy drives down the number of aircraft required to achieve damage objectives during interdiction operations.

Theater air interdiction should continue to be carried out using a mix of bombers and attack aircraft and modernizing current systems or replacing them as necessary. The capability and survivability of attack aircraft should be improved through upgrades to sensors and weapons delivery systems. The bomber force should be modified to give it a more effective conventional capability for the air interdiction task. All manned aircraft would also benefit from more PGMs. In the determination of total aircraft required for

theater air interdiction, it is necessary to consider the contributions of both bombers and attack aircraft.

RECOMMENDATION: Sufficient numbers of land- and sea- based bombers and attack aircraft need to be forward-deployed or rapidly deployable to provide quick response to short-notice crises. Strategic bombers, previously dedicated to Cold War nuclear missions, are now available to support TAI. Therefore, in the determination of total aircraft required for TAI, it is necessary to consider the contributions of both bombers and attack aircraft.

Close Air Support

Perhaps no aspect of roles and missions has spawned more debate since the Key West Agreement than the question of close air support (CAS). Close air support, according to the definition agreed to among the Services at Key West, is "Air action against hostile targets which are in close proximity to friendly forces and which require detailed integration of each air mission with the fire and movement of those forces."

The most recent review of close air support reached many of the same conclusions as the 1989 Chairman's report on roles and missions. Of primary importance is the need to keep the issue of who provides CAS separate from which type of aircraft will perform the function.

As this review proceeded, it also became clear that close air support must be the business of all the Armed Forces -- all of America's aviation elements can and must be prepared to support troops on the ground. With these thoughts in mind, and with the intention of clarifying responsibilities and ending unproductive controversy, several changes are proposed.

When the Key West Agreement was signed, attack helicopters didn't exist; the CAS definition therefore applied only to fixed-wing aircraft, and it has always been so construed. Today's highly capable attack helicopters can provide timely and accurate fire support to ground troops engaged in battle, as they did in DESERT STORM.

While this robust capability in fact adds to the close air support fight, it has never been recognized in the CAS definition and is therefore not embedded in Service doctrine. By updating the definition of CAS in a way that captures all modern capabilities, a foundation for necessary doctrinal changes can be established. Basic joint publications will be changed to reflect this expanded definition and appropriate changes in Service doctrine will follow.

These doctrinal adjustments will ensure that CAS is available to ground commanders when needed, while allowing the theater commander the flexibility to employ the best platform for the mission theater-wide. The

integration of fixed-wing aircraft and helicopters for CAS will allow commanders at all levels to take advantage of the distinctly different, but complementary, capabilities of each type of platform. Each Service will be assigned a primary function for CAS, but will specialize in the type for which it is currently structured. To effect this change, recommend Service functions be realigned as follows:

- Air Force -- Primary: Provide fixed-wing CAS to the Army and other forces as directed. Collateral: Provide fixed-wing CAS to amphibious operations.
- Navy -- Primary: Provide fixed-wing CAS for the conduct of naval campaigns and amphibious operations. Collateral: Provide fixed-wing CAS for other land operations.
- Marine Corps -- Primary: Provide fixed- and rotary-wing CAS for the conduct of naval campaigns and amphibious operations. Collateral: Provide fixed- and rotary-wing CAS for other land operations.
- Army -- Primary: Provide rotary-wing CAS for land operations. Collateral: Provide rotary-wing CAS to naval campaigns and amphibious operations.

To get the most out of CAS-capable fixed-wing aircraft and helicopters, CAS procedures at the tactical level need to be standardized. Existing procedures for requesting, and controlling CAS are predominantly Service-specialized. The command and control systems and associated terminology also vary greatly across Service and CINC lines. These procedural differences, spread throughout the command and control system, magnify doctrinal differences and contribute to misunderstandings about Service commitments to, and effectiveness of, CAS.

It is essential that CAS capable aircraft be fully incorporated into joint operations. To ensure uniformity of execution, a standardized, joint procedural and control system is being developed. An executive agent will be designated to create a centralized training program for all officer and enlisted specialists charged by Service doctrine with integration of all fire support, including CAS, naval gunfire, and artillery.

With these changes in doctrine, procedures and training, CAS issues will no longer center around which Service stands to gain or lose the most, or the doctrinal implications of changes to traditional roles, missions, and functions. Only one issue really counts, and that is how to ensure that American troops, locked in combat with the enemy, get all the fire support they need.

RECOMMENDATION: Include attack helicopters as CAS assets and realign and clarify functions and doctrine to include CAS as a primary mission area for all Services.

Marine Corps Tactical Air

Marine fixed-wing combat aircraft are an integral element of the MAGTF and perform four tasks: offensive air support, anti-air warfare, electronic warfare, and reconnaissance -- all of which have as their primary purpose the support and protection of Marines on the ground, whether independently or as part of a joint force. Marines train and fight as a combined arms air-ground team and rely heavily on the support these aircraft provide. In an expeditionary operation, once airfields are established ashore, most of the Marines' supporting firepower is provided by Marine Air. This "airborne artillery" provides critical firepower to the ground commander, giving him a powerful force multiplier in combat operations.

Support of Marines and other forces ashore is often only available from carrier-based air power. Marine aircraft are carrier-capable and share with Navy aircraft a common procurement system and common maintenance training. Additionally, Marine fixed-wing combat aircraft have been designed to allow them to operate from austere expeditionary sites in situations where Air Force units lack the required base infrastructure, where adequate sea-based support is unavailable, or where the combination of Navy and Marine combat air can increase the sortie rate for aircraft supporting ground forces.

Like other elements of "America's Air Power," Marine aviation is restructuring to meet the needs of the future. The fixed-wing aircraft inventory will drop from nine types of aircraft to four, simplifying maintenance and support. The number of F/A-18 squadrons is being reduced, and the number of AV-8Bs is being reduced by a quarter. These changes alone will result in significant savings in force structure, equipment, and operating costs.

Beyond reducing manpower and equipment, greater emphasis will be placed on joint and combined operations and on further developing capabilities required in the complex operating environment of the "littoral" or coastal regions. While the Marine Corps will retain its unique capability to operate from the sea and from austere sites ashore, and will continue to provide the primary aviation combat element of its combined arms team, Marine Corps squadrons will deploy more frequently aboard Navy ships. Navy squadrons will sharpen their focus on littoral warfare and tailor their force structure more toward power projection and the support of forces ashore.

The Marine Corps has always been at the forefront in integrating ground and air elements into an effective fighting force. The unique structure of the Marine Corps is an essential element of the National Military Strategy.

RECOMMENDATION: Marine Corps tactical aircraft are an integral part of the Marine air-ground team and should not be eliminated. Marine Corps aircraft will be reduced from nine to four aircraft types and deploy more frequently aboard aircraft carriers.

Flight Training

During the Cold War, America's national security requirements led to the development of several organizations to train flight crews for the four military Services and the Coast Guard. While some reduction of these training organizations has already occurred, significant capacity still exists beyond what is needed for the years ahead.

Reductions in excess capacity can be achieved when training is combined or consolidated, which is practical when Services can use the same type of aircraft in similar phases of training. Such consolidation reduces costs through use of common maintenance and training facilities, and management organizations. The advent of new training aircraft and helicopters to be used by all Services, together with planned reductions in pilot training requirements, means we now have an opportunity to consolidate our flight training programs further.

Currently the Army, Navy, and Air Force each operate their own initial or undergraduate flight training program using 12 bases and various types of aircraft. Because of commonality inherent in certain portions of this training, some consolidation has already taken place. Two Services (Navy and Air Force) provide all fixed-wing aircraft pilot and navigator training, and two Services (Army and Navy) provide all helicopter training. Two training bases, one Navy and one Air Force, were closed in 1992.

Flight training is divided into two major phases, an introductory or primary phase that teaches basic skills and an advanced phase that integrates these skills and introduces the student pilot to military flying techniques. For the primary phase, training goals are similar for all Services. To take advantage of this commonality of purpose, all Air Force, Navy, Marine Corps, and Coast Guard flight students will begin training using a common fixed-wing training aircraft that is being jointly developed. At a specified point, pilots will be selected for Service advanced training in one of four specific follow-on specialties or "tracks": Navy Fighter/Attack, Air Force Fighter/Bomber, Navy and Air Force Tanker/Transport/Maritime Patrol, or Helicopter. While the 1991 Joint Interservice Training Review Organization (ITRO) report provided analysis that helicopter training consolidation would not

provide cost savings, a workable alternative may be to provide a common helicopter for basic helicopter training for all services. Continued study is warranted for both consolidation of helicopter training and development of a common training helicopter.

This initiative will reduce costs by combining flight training at the minimum number of installations and by reducing the types of aircraft flown. Training advantages and cost reductions will be gained when all activities are collocated, while still affording the Services a means for selecting students for advanced flying tracks and teaching Service-unique skills such as shipboard landings.

The objective is to have this training consolidation plan fully implemented by the year 2000. Near-term objectives are as follows:

- A joint Service team will meet in early 1993 to plan this transition and determine both costs and savings. This team will also oversee the development of training curricula to support consolidation.
- Beginning in 1993, flight instructors from the Services will be exchanged to provide first-hand experience and identify factors that may impact training consolidation. A limited student exchange will follow after training curricula have been developed and implemented.
- Tanker/Transport/Maritime Patrol training consolidation is expected to begin in 1994 at Reese Air Force Base, Texas after transition planning is completed by the Joint Service team. Eventually, Navy students selected for Maritime Patrol training will complete their entire undergraduate training at one location.
- By the end of 1994, the Navy and Air Force will have developed joint primary training squadrons at two locations. If it is cost effective, Navy, Marine Corps, and Coast Guard helicopter training will be moved from Pensacola to Fort Rucker.

With these steps, quality flight crews will be trained at reduced cost. Further initiatives, beyond those outlined above, may also be possible.

Since curricula of the two existing test pilot schools are similar, the Services will also explore the possibility of joint test pilot training at a single location. Costs to operate this program might be reduced through collocation of training assets and consolidation of selected parts of the academic and flying programs.

By altering the traditional approach to those portions of flight training where the Services share similar goals, and by undertaking sensible changes in this area, the high quality of "America's Air Power" will be sustained at reduced cost to the American

taxpayer.

RECOMMENDATION: Consolidate Navy, Marine Corps, Air Force, and Coast Guard initial fixed-wing training, and transition such training to a common primary training aircraft. Consolidate follow-on flight training into four training pipelines. (Navy Fighter/Attack, Air Force Fighter/Bomber, Navy and Air Force Tanker/Transport/Maritime Patrol, or Helicopter). Determine if it saves money to move Navy, Marine Corps, and Coast Guard helicopter training from Pensacola, Florida to Fort Rucker, Alabama.

Aircraft Requirements and Inventory Management

All together, the Services have more than 24,000 fixed-wing aircraft and helicopters of various types in their inventories. Over the years, aircraft inventories grew with expanding force structure and increased budgets in response to the threat from a Soviet military machine bent on both quantitative and qualitative advantage. Each Service defined its aircraft requirements and calculated inventory using its own methodology, terminology, and philosophy. Now, confronted with a much different world, Service requirements for primary mission aircraft as well as support aircraft for backup, attrition, testing, and training are inconsistent, outdated, and in need of revision.

Two examples show why a new system is needed to better measure existing inventories against the requirements of our new military strategy. In procuring F-16 aircraft during the 1980s, the Air Force developed its requirements based on an expanding force structure and included estimates for attrition losses over the F-16's entire life cycle. By basing production on these estimates, the Air Force was able to lower the average "per unit" cost for the F-16, both for itself and for potential foreign buyers. However, with force structure coming down and with attrition rates lower than predicted, the Air Force finds itself with more F-16s than its force structure requires. Congress has contributed to this excess by continuing to fund F-16 production in recent defense budgets at rates beyond that which was requested. Operations and maintenance funds are based on a squadron's authorized aircraft. The Air Force maintains aircraft above a squadron's authorized level on the flight line as "attrition reserve" aircraft. Attrition reserve is a category that is not related to expected attrition and one which none of the other Services use. Keeping this large reserve of aircraft undercuts the logistics system because, when an F-16 breaks down, it is easier to simply substitute another aircraft than to procure spare parts and do repairs at the squadron or wing level.

Another example is the Army's AH-1/AH-64 program, where "ground maintenance" aircraft are kept in the active inventory even though these aircraft are incapable of flying. The total number of flyable aircraft, therefore, is less than perceived.

An assessment was conducted to determine cost savings achievable through the use of updated DOD terminology and inventory definitions. The conclusion was that with common definitions among the Services for support and backup categories of aircraft, we could more clearly define primary aircraft requirements and ensure that funds were not spent on maintenance or modification of unnecessary aircraft.

The Services are committed to developing such standard terminology and inventory definitions. To this end, an implementation plan will be developed, and the common methodologies will be used in upcoming budget, force structure, and acquisition management activities.

Adopting a standardized aircraft inventory system carries with it several problems. First, we may discover that on-hand quantities of certain aircraft types exceed current requirements, forcing us to place aircraft in storage and/or cease ongoing production. Storage and reclamation programs could require additional manpower and operating funds. Ceasing production of particular aircraft has implications for the health of the defense industrial base and for America's ability to compete in foreign markets. Second, changes in inventory could require more repair parts at unit level and change the way each Service's maintenance structure is organized.

Despite these cautions, standardizing DOD aircraft terminology and inventory definitions is a necessary step that will enable the Services to more accurately measure existing inventories against requirements.

RECOMMENDATION: Aircraft inventory terminology should be standardized. Common definitions among Services for all categories of aircraft will assure consistent rationale for requirements and ensure procurement and maintenance funds are only spent on necessary aircraft. This standardized approach will provide consistency in the number of airframes procured.

CONSOLIDATING COMMON AIRCRAFT

Throughout the Cold War period, the Services purchased a wide variety of aircraft designed to meet their requirements. In some cases the same, or very similar, aircraft were purchased by more than one Service because of an established requirement for the capability that aircraft type could provide.

We have carefully examined these aircraft common to more than one Service looking for ways to consolidate operations, maintenance, and training to save funds or do business more efficiently while preserving each Service's ability to perform its required functions. The results of these studies and recommendations for consolidation of common aircraft are presented in the section that follows.

Airborne Command and Control

The airborne command and control fleet of our strategic nuclear forces has long been one of the most visible symbols of the Cold War. These aircraft, with their battle staffs and sophisticated communications equipment, were for years regarded as part of the ultimate "doomsday machine" whose primary mission was to initiate the launch of a retaliatory nuclear strike. At the height of the Cold War, the Air Force operated a fleet of 39 airborne command post (ABNCP) EC-135 aircraft, specially-configured for control of the bomber and intercontinental ballistic missile legs of the strategic triad. The Navy had a similar fleet of specially-modified C-130 aircraft to relay launch commands to our fleet of ballistic missile submarines. These C-130s were commonly known as "TACAMO" aircraft, short for "Take Charge and Move Out."

Over the past two years, the Air Force has more than halved its ABNCP force structure. Currently, only 11 EC-135s support the command, control, and communications needs of the Commander in Chief of Strategic Command (CINCSTRAT). The Navy's C-130 TACAMO fleet has been retired, replaced by 16 modern E-6As.

A review of possible further force structure reductions in this area concluded that a total consolidation of Air Force and Navy functions is possible and appropriate. The Navy's E-6A has been chosen as the common airframe due to its extended service life, ability to accommodate a battle staff, and capacity to handle the communications upgrades required to provide command and control of all three legs of the strategic triad. Funds required for modification of the E-6A will be provided by retiring the Air Force's EC-135 and canceling programmed upgrades. The engineering phase of this modification program is currently underway.

This new joint-Service ABNCP will have all the capabilities of two airframes for the price of one. Current plans call for a joint battle staff to augment the Navy TACAMO crews on STRATCOM missions. This manning scheme promotes efficiency in aircrew training while preserving the essential jointness of the command, control, and communications element supporting CINCSTRAT and component commanders.

RECOMMENDATION: Consolidate the Navy and Air Force aircraft and functions into the Navy's E-6A program. The Air Force EC-135 program will be eliminated and cancellation of its planned upgrades will fund transition into the E-6A.

Combat Search and Rescue (CSAR)

Finding and rescuing downed flight crews or other forces trapped behind enemy lines is a task of the greatest importance. Our CSAR capability has improved substantially over the past several decades as helicopters became more capable and the Armed Forces began to use this newly-acquired vertical lift capability to rescue downed aircrews where extraction by other means was not possible.

First employed during the Korean War, helicopter rescue operations expanded in capability and complexity in Vietnam. Land- and sea-based helicopters, escorted by fighters and other support aircraft, recovered downed aircrews throughout the combat zone, in many cases snatching them away from certain capture. The importance of CSAR operations justified the formation of dedicated units trained and equipped for the task. Despite the success of this approach, after the war ended, dedicated CSAR units were absorbed by other tasks and virtually disappeared from the military force structure.

CSAR tasks were then taken up as a collateral function by the individual Services. The Air Force modernized its Air Rescue Service forces, but looked to its special operations aviation assets for CSAR. The Navy employed its anti-submarine warfare helicopter and carrier-based assets to conduct both peacetime and combat search and rescue. The Army and Marine Corps relied on their existing aviation forces to perform CSAR, as did the newly-formed Special Operations Command (SOCOM), which has specially modified helicopters and fixed-wing aircraft capable of covert or longer-range CSAR operations.

Combat search and rescue procedures have not kept up with joint operational doctrine as each Service independently developed its CSAR program. During the Persian Gulf war a CSAR capability was pieced together to meet battlefield requirements.

The remedy for these shortfalls is to develop and train joint CSAR forces using the highly capable equipment the Services have today or are programmed to buy.

CSAR capabilities will be created on the basis of each Service's structure, with land-based and sea-based elements organized, trained, and equipped to work individually or together, in accordance with joint doctrine, employing standardized joint tactics, techniques, and procedures. These forces will be tied together in wartime by a Joint Rescue Center that will control and coordinate the forces needed to meet the joint force commander's CSAR needs.

Implementation has already begun. A series of joint CSAR tactical exercises was recently completed at Naval Air Station Fallon, Nevada. Lessons learned from these exercises and from other recent joint exercises will yield important standardized procedures for all CSAR forces. To further improve procedures, future CSAR exercises will be developed by the Joint Staff and incorporated into our exercise program. The new jointly trained CSAR forces will emphasize joint capabilities postured to provide critical lifesaving service to our soldiers, sailors, airmen, and marines -- anywhere, anytime.

RECOMMENDATION: All four Services retain responsibility for CSAR operations. CSAR forces will be equipped to operate individually or together employing standardized joint doctrine, tactics, techniques, and procedures.

Operational Support Aircraft

Currently about 500 aircraft, operated by all four Services and the Coast Guard, are dedicated to Operational Support Airlift (OSA) -- the transport of military personnel and high-priority cargo. Over the past few years, the Services have saved money in this area by conducting joint aircrew training and consolidating unit-level and depot maintenance. However, the size of this aircraft fleet and the overlap in support functions compelled us to look for ways to achieve further cost-savings in the areas of operations, training, and logistic support.

The aircraft involved in troop and cargo transport and VIP movement include C-9s, C-12s, C-20s, C-21s, C-23s, C-26s, C-137s, P-180s, and others. Each Service has its own fleet, for a total of 500 OSA aircraft overall, including the Reserve components. These aircraft are predominantly CONUS-based and traditionally have been under the operational control of the individual Services.

The current inventory, built to support a global war, exceeds what is required for our regionally oriented strategy. The current excess is compounded by the fact that Congress continues to require the Services to purchase OSA aircraft neither requested or needed. In the last two years alone, Congress "added on" funds to the Defense Appropriations Bill for some 15 C-12s, 4 C-20s, 10 C-21s, 10 C-23s, 19 C-26s, and 12 P-180s not requested by DOD.

Several alternative operations and management schemes were proposed for operating these aircraft. Among them were: contracting out the entire mission to civilian contractors; consolidating the OSA fleet under a single command which would determine scheduling and assume operations responsibility; and consolidating all assets under a single Service which would assume procurement, logistic, and support responsibilities.

Further study is necessary to determine which alternative will provide the best balance of efficiency and effectiveness. In the interim, USTRANSCOM is improving its capability to schedule intratheater airlift in support of wartime taskings. The Joint Staff, the Services, and TRANSCOM will continue to examine this issue and make appropriate adjustments as circumstances warrant.

RECOMMENDATION: OSA aircraft are in excess of wartime needs and should be reduced. TRANSCOM will develop the capability to coordinate and schedule intratheater airlift.

Attack Helicopters

The rapid evolution of the attack helicopter as an integral element of the forces engaged in ground maneuver warfare was underscored during the Persian Gulf War. The omnipresent attack helicopter, advancing just above coalition ground forces, was one of the classic images of DESERT STORM.

The successful integration of the attack helicopter into modern ground operations can be attributed to two factors. First, tremendous technological advances have been made in modern helicopter weapons systems such as the APACHE (AH-64) and COBRA (AH-1). Second, the introduction of these advanced weapons into our aircraft inventories was accompanied by a revolution in battlefield tactics. The ground battlefield has become a three-dimensional battlespace where the attack helicopter's advanced features give the ground commander unprecedented battlefield vision, mobility, and striking power.

Both the Army and the Marine Corps operate attack helicopters as an organic element of their ground maneuver warfare. Today, there are 736 AH-64 APACHEs and 875 AH-1 COBRAs in the Army, and 124 AH-1W COBRAs in the Marine Corps. The Army is phasing out its older COBRAs as new APACHEs come off the assembly line, and plans a future inventory of 811 APACHEs and 412 COBRAs. The Marine Corps will retain the COBRA for the foreseeable future and has invested heavily in upgrading its airframe and avionics in order to keep the COBRA's capabilities as near state-of-the-art as possible until the next generation of attack helicopter is produced. The Army and Marine Corps are planning to develop and procure a common airframe to fulfill their future requirements.

After an extensive review of force structure and functional alternatives, it was found to be inadvisable and impractical to have one Service attempt to provide this organic combat capability for the other. The demand for constant and integrated training at the unit level in peacetime -- in order to be victorious in battle -- precludes alternative approaches. However, the Services can, should, and will consolidate aircrew and initial maintenance skill training, as described elsewhere in this report.

Additionally, the Chief of Naval Operations, the Commandant of the Marine Corps, and the Chief of Staff of the Army have been asked to review the emerging requirement for armed helicopters aboard Navy ships. Their review will examine their Services' existing force structures, training flow, and logistics infrastructures to determine the most effective, efficient and economical way to meet this new requirement.

RECOMMENDATION: Army and Marine Corps continue to operate attack helicopters. Consolidate some aircrew and maintenance training. Develop and procure common airframes to fulfill future requirements.

General Support Helicopters

Commensurate with advances in rotary-wing technology, the helicopter has grown in importance as an integral part of military organizations. Its functional utility and versatility allow our military forces to accomplish a wide variety of essential missions, such as air assault operations, anti-submarine warfare, electronic warfare and jamming, field artillery aerial observation, reconnaissance, command and control, medical evacuations, and logistics. Although classified as support helicopters, these are highly specialized airframes that are an integral part of ground maneuver warfare. Other general support helicopters are used for non-Service specific tasks, such as test range support, transportation, courier service, and logistic support. The Army operates the largest number, but all Services have general support helicopters.

Ways were examined to achieve further efficiencies in operations, training, and maintenance while preserving essential capabilities.

To this end, the Services will move toward consolidating maintenance training, simulator training, and maintenance infrastructure. In addition, overlapping multi-Service administrative support functions in the same geographic regions will be closely scrutinized. A good example of an area where consolidation may be possible is in the Washington DC area where the Services operate VIP helicopter

detachments. As part of this effort, a review will be conducted to consider if the Reserve components or civilian contractors should assume some or all of this responsibility.

These planned consolidations will preserve the capabilities we require from general support helicopters while achieving cost savings.

RECOMMENDATION: Consolidate maintenance training, simulator training, and maintenance infrastructure. Study consolidation of overlapping Service support functions within certain geographic areas.

Tactical Airlift/Tankers -- C-130s

The importance of C-130 tactical airlift and tanker support to the Armed Forces and their operations has not diminished in the current security environment. From Operation DESERT STORM to Operations PROVIDE COMFORT, PROVIDE RELIEF, and RESTORE HOPE, American C-130s have been and will continue to be called on in war and for humanitarian relief around the world.

While configurations and traditional Service-specific approaches to functional requirements have evolved over 30 years, there are two basic types of C-130s -- transports (some with special capabilities) and air-to-air refueling tankers.

To meet tactical airlift and tanker support requirements, the Air Force currently operates approximately 600 C-130s, the Marine Corps 68, the Navy 17, and the Coast Guard 26. Air Force C-130s deploy worldwide for tactical airlift, humanitarian airlift, aeromedical evacuation, special operations, refueling, and other functions and tasks. The primary job of Marine Corps KC-130 tankers, as part of the Marine Air-Ground team, is to refuel Navy and Marine tactical fixed-wing aircraft. They also have a secondary task of refueling Special Operations Forces (SOF) and CSAR helicopters. Navy C-130s provide fleet service and support to the National Aeronautic and Space Administration (NASA). The Coast Guard uses C-130s for command-and-control communications, search and rescue operations, law enforcement, ice operations, and airborne early warning. These C-130s are all heavily tasked.

In reviewing the C-130 force structure, the objective was to preserve its capability to perform its basic tasks while determining if efficiencies could be achieved by combining operations, management, and support under one Service. A DOD C-130 Systems Requirements Working Group had already directed that the Air Force remain the sole acquisition agent for all DOD/USCG C-130 aircraft and retain responsibility for all depot-level maintenance for CONUS-based C-130s. The review showed that consolidating all C-130s under one Service would not be cost effective, would degrade efficiency, and would greatly complicate

management and support of these heavily utilized assets. As a result, consolidation is not recommended.

RECOMMENDATION:
Consolidating C-130s under one Service would decrease operational effectiveness, complicate management and support, and would not save money.

Jammer Aircraft

The employment of active electronic countermeasures against enemy radar and command-and-control systems, commonly referred to as "jamming," has taken on much greater importance as air defense systems have become more sophisticated. This fact was amply demonstrated during the Persian Gulf conflict when Navy, Marine Corps and Air Force "jammers" severely degraded Iraq's air defenses. In DESERT STORM, the availability of jammer aircraft was a prerequisite for a strike package to proceed to the target -- no jammers, no air strike. The result was an exceptionally low level of coalition aircraft losses despite Iraq's modern and elaborate air defense network. As air defense technologies proliferate, this requirement for advanced electronic countermeasures to support air operations is likely to increase.

The responsibility for providing this capability is shared by Naval aviation and the Air Force. The Navy and Marine Corps operate 133 EA-6Bs and the Air Force operates 40 EF-111As. With no plans for a totally new jammer airframe until well into the next century, the capabilities of both the EA-6 and the EF-111 must be continuously upgraded to keep pace with the evolving air defense threat.

Differences in the basic capabilities of the EA-6 and the EF-111 are significant. The EA-6 is optimized for all weather operations in close support of carrier air wings and Marine Air-Ground Task Forces. It can also operate from expeditionary airfields ashore. Its performance characteristics are compatible with the Navy and Marine Corps tactical combat aircraft it escorts. In contrast, the EF-111 is a deep-penetrating, high-speed, long-loiter airframe with all-weather terrain-following capability that is designed for "stand-off" jamming. The similar but specialized capabilities of EA-6s and EF-111s give military commanders a range of options in combat, complicate any enemy's air defense planning, and reduce aircraft attrition.

If, for example, only EA-6Bs were in the inventory, Air Force bombers would be restricted in the way they could be employed to attack enemy targets as part of a "strike package." Similarly, if the EF-111 were the only jammer aircraft in the inventory, Naval carrier power projection capabilities and the ability to support certain long range Air Force bomber missions with essential jammer protection would be unacceptably degraded.

Several alternatives to the present operational arrangements were examined, with specific emphasis on combat capabilities, cost savings, mission responsibilities, ability to operate with other systems, peacetime training capabilities, aircrew training, maintenance training, and all levels of aircraft maintenance.

The EA-6 and the EF-111 both derive great "economies of scale" from the fact that they share many components and support and training procedures with the fleets of A-6s and F-111s managed by the Navy and Air Force, respectively. Where possible, efficiency will be improved by consolidating operations, basing, training, and logistics support. All jammer aircraft will soon be based at only three locations: Naval Air Station Whidbey Island, Washington; Marine Corps Air Station Cherry Point, North Carolina; and Cannon Air Force Base, New Mexico.

The feasibility of consolidating the currently programmed system upgrades to both aircraft was also examined. Because of the extensive engineering modifications that would be required, changing the EF-111 system to the upgraded EA-6 system would add more than $1 billion to current program costs. Replacing Air Force EF-111s with new EA-6s was also examined. Acquisition costs for additional EA-6 airframes to completely replace EF-111s would exceed $2 billion.

These critical combat support assets provide our air components added flexibility, survivability, and effectiveness -- qualities that will become more important than ever as overall force levels are reduced. Our plan is to retain both fleets of aircraft, modified as necessary to keep pace with technological advances in the defensive systems of potential adversaries worldwide.

RECOMMENDATION: The similar but specialized capabilities of all Navy/Marine Corps EA-6B and Air Force EF-111 aircraft give military commanders options in combat to reduce aircraft attrition. Both aircraft should be retained and upgraded . Consolidating into one airframe would reduce effectiveness and require additional aircraft procurement.

Electronic Surveillance Aircraft

Throughout the Cold War, the maintenance of robust signals intelligence (SIGINT) programs to help us understand the intent of an adversary as menacing as the Soviet Union was of paramount importance. This was especially true because Soviet doctrine called for a massive, short-notice invasion of Western Europe. Being able to detect preparations for such an attack well before it occurred dominated much of our intelligence-gathering hardware development. As a result, a capable fleet of surveillance aircraft was developed and purchased. Over time, as these aircraft were integrated into the Services, their unique

capabilities were found to be applicable to many types of crises and conflicts.

While the end of the Cold War has reduced the need for systems targeted specifically against Russia, it has actually intensified the need for the kinds of information these aircraft can provide. The uncertain nature of future military threats means that our leaders will have to be fully informed about the intentions of potential adversaries. The regional focus of our National Military Strategy has placed even greater emphasis on intelligence-gathering. The current situations in Bosnia, Iraq, and other regions of ethnic, religious, and social tension underscore the need for these types of systems.

Providing this information to senior decision-makers is the job of a small group of highly specialized aircraft and their crews. These unique airframes are the EP-3E ARIES operated by the Navy and the RC-135 RIVET JOINT operated by the Air Force. There are currently 12 EP-3Es and 14 RC-135s in the inventory. The EP-3Es are homebased at Naval Air Station Agana, Guam and Naval Air Station Rota, Spain. The RC-135s are homebased at Offut Air Force Base, Nebraska. Both Services have numerous forward operating bases and deployment sites around the world.

This force structure is barely sufficient to handle current peacetime requirements. During Operation DESERT STORM, all EP-3E and RC-135 aircraft were committed to the war. As a result, other theater CINCs had only limited electronic surveillance aircraft to cover their areas of interest. If another conflict had broken out, we would not have had sufficient assets to support our forces.

The distinctions between the EP-3E and the RC-135 are significant, yet their capabilities are complementary. The RC-135 is principally a strategic SIGINT asset with the capability to collect signals valuable to national intelligence agencies. The RC-135 flies at higher altitudes than the EP-3E, enabling it to collect certain signals at greater range. It can also be refueled while airborne, which gives it greater endurance.

The EP-3E is principally a tactical SIGINT asset configured to evaluate the battlefield electronic warfare threat, provide real-time threat warning, and conduct long-range radar targeting and analysis. The EP-3E can operate from shorter runways than the RC-135, with less ground support equipment and fewer personnel. Together, the two platforms provide military commanders and civilian leaders with unmatched airborne electronic surveillance flexibility and capability.

Several alternatives, including consolidating all RC-135 and EP-3E airframes under one Service, were examined. It was found that consolidation would actually cost more because each Service is able to draw on infrastructures already in place to support the Navy's large P-3 fleet

and the Air Force's sizable KC-135 fleet. These infrastructures make the operation and maintenance of these 26 airframes only a small fraction of the overall fleet costs.

Efforts will continue to streamline both programs where it makes sense to do so. For example, it is recommended that electronic warfare training and equipment maintenance be consolidated where feasible, pending the completion of a review by the DOD-sponsored Airborne Reconnaissance Support Program Steering Group. It is also anticipated that a DOD group will recommend a common electronic surveillance platform be developed and deployed early in the next century.

RECOMMENDATION: Navy EP-3E and Air Force RC-135 aircraft are fully committed and should be retained. Infrastructure is already in place to support the Navy P-3 and Air Force KC-135 fleets, of which the EP-3E and RC-135 are a small part.

Shaping Aviation for the 90s

We are justly proud of America's air power. When called upon, our aviation elements with their varied and complementary capabilities have performed brilliantly. To retain these strengths, America's aviation elements must continue to be shaped to face the challenges of the 90s.

This section has laid out some initial observations on how this restructuring should proceed. In some cases, significant changes in roles, missions, and functions have been recommended. In others, further review is required. To truly have an impact on resource allocation, these recommendations must be factored into current and future programmatic decisions.

All areas of aviation will continue to be examined for unnecessary duplication and potential cost savings. It is recognized that there remain a number of contentious issues that must be addressed -- that what has been provided here is only the beginning of the process. Recognizing that the acquisition plan for major aviation programs requires more resources than will likely be available, a review must be conducted to ensure they are brought into balance with the reduced threat and limited resources.

In the months and years ahead, we will continue to ask ourselves the hard questions about our aviation inventory, support infrastructure, training, and assignment of roles, missions, and functions. This will ensure that the aviation elements of the four Services remain a potent force in the future.

FORWARD PRESENCE

Since the end of World War II, the day-to-day presence of US forces in regions vital to US national interests has been key to averting crises and preventing war. American forces around the world demonstrate our commitment, lend credibility to our alliances, enhance regional stability, and provide a crisis-response capability while promoting US influence and access. In addition to forces stationed overseas and afloat, forward presence includes periodic and rotational deployments, access and storage agreements, combined exercises, security and humanitarian assistance, port visits, and military-to-military contacts.

Continued engagement in world affairs through forward presence remains essential to America's global interests. Forward presence is the totality of US instruments of power and influence employed overseas (both permanently and temporarily) to protect national interests, provide access, promote values, shape events in the best interest of the United States, and provide the leading edge of America's ability to respond to fast breaking crises in a region. Forward presence strengthens collective engagement through which the United States works with its allies and friends to protect its security interests, while reducing the burdens of defense spending and unnecessary arms competition. Additionally, the presence of a highly capable military force with a full range of combat power serves as a stabilizing factor in many regions.

We must also bear in mind that instability still exists throughout the world -- witness current events in the Balkans, parts of the former Soviet Union, and Somalia -- and our forward-based forces have been and remain a key underpinning to regional and world stability. During the Cold War, we executed a strategy of containment with large numbers of forward stationed forces and a permanent presence of rotationally deployed forces in fixed patterns. In the new security environment, we have shifted to a strategy of cooperative engagement with smaller levels of forward stationed forces, flexible deployment patterns, and using the totality of US capabilities deployed overseas to participate in forward presence operations that demonstrate our engagement in the world.

Forward presence operations include operational training and deployments, security assistance, peacekeeping operations, combating drugs and terrorism, humanitarian assistance, and protecting US citizens abroad through noncombatant evacuation operations. All of this contributes to regional stability, which supports US interests and promotes US values abroad. The challenge now is to meet forward presence goals with a smaller presence that is still sufficiently flexible and adaptive to satisfy enduring national security objectives.

An analysis of requirements reveals four major factors that may affect our forward presence posture. First, the changed strategic landscape permits a dramatic but carefully managed reduction in forward stationing, worldwide. Second, fiscal realities mean fewer resources will be available for defense. Third, post-Cold War geopolitical changes require a more regional forward presence capability. Fourth, the US Armed Forces have become a truly joint force and can complement one another in peace, crisis, and war.

These four factors led to a conclusion that further reductions in forward stationed forces can be made, but that the current rate of reduction should be maintained. We have already embarked on a plan to reduce to the Base Force levels by 1995. Going any faster would adversely affect the cohesion and readiness of the overall force structure. After 1995, if the situation warrants, further reductions in forward-stationed forces could be considered.

As forward stationing is reduced, the nature of our military-to-military contacts will also change. The European theater has the potential to be one of the most unstable areas in the world. As the likelihood of using unilateral military force declines in this decade and beyond, our influence will be exerted through existing multinational arrangements. In Europe, a place where US interests will continue to be focused, we have the most successful alliance ever devised. This alliance will continue to be the mechanism through which peace and stability are maintained, but only if we remain a part of the alliance, and only if we maintain a credible military presence within it. Even during times of peace, forward presence enables the United States to influence the emerging democratic process in Eastern Europe and the former Soviet Union in ways that would not be possible from a CONUS-based posture.

In the Pacific region, the key to our forward presence has been and will remain a network of largely bilateral security alliances with Japan, the Republic of Korea, Australia, the Philippines, and Thailand -- and cooperation with other friendly nations.

For example, Japan continues to be America's key Pacific ally and the cornerstone of US forward-deployed defense strategy in the Asia-Pacific region. Our relationship with Japan affords US forces geostrategically crucial naval, air, and ground bases on the periphery of the Asian land mass. Despite the breakup of the Soviet Union, our presence there remains a vital aspect of our forward deployed posture. Given the great distances associated with the Pacific theater, forces maintained in Japan could deal with a wide range of local and regional contingencies.

It should also be remembered that stationing forces in Japan is actually far less expensive than keeping them in the United States. The Japanese provide some 75% of

the cost for our forces and an average of over $3 billion in host nation support annually, more than any of our other allies.

While we maintain our long-standing overseas commitments, the nature of our forward presence operations can change significantly. In addition to forward stationed and rotationally deployed forces, smaller temporarily deployed forces, either joint or single Service, will take on increasing importance. These units will participate in small unit training, personnel exchanges, security assistance, seminars and conferences, medical support, humanitarian assistance, engineering assistance, disaster relief preparedness, and intelligence exchanges. These programs promote access and cooperation overseas with a small investment in resources.

As mentioned in Chapter II, a new concept is being developed to allow us to conduct forward presence operations at about the same pace but at lower cost. Forward presence operations will be conducted by deploying geographically and mission tailored joint forces. Tailored joint force packages will be employed whenever possible, sometimes in lieu of independent single-Service forward deployments, to complement existing in-theater capabilities and assist CINCs in achieving their regional goals and objectives. Joint Task Forces (JTFs) will become the common organization for peacetime forward presence operations, improving the ability to transition to joint command structures in response to regional crises. These JTFs will be built as adaptive joint force packages made up of both forces scheduled to deploy during a given period and designated units in CONUS and overseas. These packages could contain a mix of air, land, special operations, space, and maritime forces tailored to meet the supported CINC's geography and mission requirements. With new and planned upgrades aboard Navy ships, JTF commanders will also have the flexibility to be based afloat or ashore.

RECOMMENDATION: Forward stationing is a key underpinning of US diplomacy. It contributes to conflict prevention and lends credibility to alliances. As the global security environment changes, additional reduction in forward stationed forces may be appropriate. However, as forward stationing decreases, forward presence operations will increase in importance. Continue to develop concept of Adaptive Joint Force Packages.

CONTINGENCY AND EXPEDITIONARY FORCES

The capability to respond to regional crises is one of the key demands of our National Military Strategy. US forces must be prepared for differences in terrain, climate, and the nature of the threat, as well as for differing levels of support from host nations and other allies.

Both Army and Marine Corps forces possess the ability to respond to crises involving land combat. As outlined in Title X and amplified in DOD Directives, the Army's primary responsibility is "to organize, train, and equip forces for the conduct of prompt and sustained combat operations on land – specifically, forces to defeat enemy land forces and to seize, occupy, and defend land areas." The Marine Corps' primary responsibility is to be organized, trained, and equipped "to provide Fleet Marine Forces of combined arms, together with supporting air components, for service with the fleet in the seizure or defense of advanced naval bases and for the conduct of land operations as may be essential to the prosecution of a naval campaign."

The similarity of Army and Marine Corps capabilities provides alternatives to the President and the Secretary of Defense during a crisis. However, it leads to a question of why two Services have similar responsibilities for certain land operations. The answer lies in the unique, yet complementary capabilities of these two Services' capabilities that span both deployment and employment characteristics.

The role of Army forces is to defeat enemy land forces and occupy territory. Army contingency forces are organized and equipped for a full range of crises that require prompt and sustained land operations or presence. They include the following:

- Airborne forces capable of responding to a crisis within hours to show US resolve and to stabilize the situation.
- Light infantry forces specifically designed for rapid air deployment to provide sustained force in various types of terrain where maneuver and mobility are restricted.
- Air assault forces structured to hit hard and fast, using lift helicopters for rapid mobility over any terrain and attack helicopters to defeat even heavily armored targets.
- Armored and mechanized infantry forces capable of defeating the full range of enemy capabilities, including other heavy armored forces. Because their heavier equipment must be deployed by sealift, these forces take longer to deploy in response to a crisis.

In some situations, Army contingency forces can serve as the enabling force for additional contingency or expeditionary forces by establishing a secure lodgment and then transitioning into a sustained land

operation. A recent example of the Army in an enabling role occurred in DESERT SHIELD, when elements of the 82nd Airborne Division were inserted in the first days to secure lodgments at the ports of Dammam and Al Jubail in Saudi Arabia. These lodgments were then handed off to other Army and Marine Corps elements to develop into major bases of operation.

Marine Corps expeditionary forces are organized and equipped for a full range of crises that require operations from the sea. Marine forces are capable of seizing and defending lodgments in littoral areas, enabling the introduction of follow-on forces. They can deploy in two ways:

- As Marine expeditionary forces, they can use Navy amphibious shipping for crises requiring forcible entry by amphibious assault, conduct "show of force" operations coupled with the threat of US intervention, and conduct operations without sustained logistical support or host nation infrastructure.
- As Maritime Prepositioning Forces, which are Marine forces that have equipment and supplies staged aboard forward deployed Maritime Prepositioning Squadron ships, they can be airlifted to a crisis area, link-up with their equipment, and perform a variety of missions.

With the focus on regional crises and the increased uncertainties of the post-Cold War era, a mix of forces with distinct but complementary capabilities is essential. Situations will often demand that the two Services operate together. An example is the initial establishment of a lodgment area by the Marines, followed by a build-up of Army forces, or vice versa. Once Army forces expand the lodgment and begin sustained land operations, Marine forces can become the CINC's strategic reserve, threaten the enemy with an amphibious assault from another direction, or continue to fight on land -- as they did during DESERT STORM.

There are several advantages in having similar, complementary capabilities among the two Services. It allows the combatant commander to tailor a military response to any contingency, regardless of geographic location. At the national command level, it adds to the options available to senior decision-makers in a crisis, especially one that occurs unexpectedly.

In 1990, during Operation SHARP EDGE, Marines operating from Navy amphibious ships helped evacuate US citizens during a major upheaval in Liberia. The situation in Liberia steadily deteriorated over a period of days, permitting a Amphibious Ready Group to arrive on the scene and remain offshore for several months while continuing to monitor and evaluate events. Had the crisis erupted more quickly, Army airborne forces might have been more

appropriate. Another example, discussed in Chapter I, was the Somalian crisis. In January 1991, an amphibious force quickly shifted to assist in the evacuation of US embassy and other personnel. Again, had the situation required more rapid action, Army forces could have been used.

The comprehensive review that produced the Base Force in response to a changing world yielded significant reductions in our contingency and expeditionary forces. Accordingly, a number of Army heavy and light divisions and Marine Corps personnel were removed from the force structure. But our capabilities-based strategy demands the unique and complementary capabilities provided by the Army and Marine Corps. In fact, with its emphasis on rapid response to regional crises, the National Military Strategy puts a premium on these forces. Review of requirements is a continuous process, however, and may in the future produce additional areas of personnel and cost savings in contingency and expeditionary forces, to include the possibility of further reductions in the Army's light infantry forces.

RECOMMENDATION: The capabilities of the contingency and expeditionary forces in the Army and Marine Corps provide decision makers with valuable alternatives and should be retained. The possibility of further decreases in the Army's light infantry will be studied as force structure is reduced.

TANKS AND MLRS FOR THE MARINE CORPS

The Army and the Marine Corps both employ tanks and Multiple Launch Rocket Systems (MLRS) as integral parts of their doctrine for tactical operations. Both Services currently have tanks in their force structures, but only the Army currently has MLRS -- a system which saw its first combat service in DESERT STORM. The Marines have programmed to buy MLRS beginning in 1994.

The Marine Corps is structured to integrate armor and artillery units into its maneuver elements. Both are inextricably linked with the Marine infantryman. This connection is reflected in the Marines Corps' credo that "every Marine is a rifleman first." Armor and artillery are not separate units that simply support the infantry when necessary.

Tanks

In the Base Force, the Army has tanks in eight Active component heavy (armored and mechanized infantry) divisions and in two armored cavalry regiments and two separate brigades. In the Reserve components, the Army has tanks in five heavy divisions, two cadre divisions, three separate heavy brigades, six round-out and round-up brigades, and one armored cavalry regiment.

The Marine Corps Base Force armor structure consists of three tank battalions -- two active and one reserve -- to support the capability to employ two Marine Expeditionary Forces (MEFs) forward and outfit three Maritime Prepositioning Squadrons. This small tank force permits the Marine Corps to fulfill its role in the National Military Strategy. The Army conducts tank skills training for both the Services.

MLRS

Eight active Army heavy divisions each have one MLRS battery with nine launchers. Additional MLRS are located in corps artillery battalions. Marine Corps MLRS capability is programmed around a total of 42 launchers. MLRS systems are identical for both Services, and individual training for both would be combined at Army schools.

The Marines will rely on MLRS to provide general support field artillery to the Marine Air-Ground Task Force (MAGTF). In 1989, the Marine Corps selected MLRS to augment its general support artillery capability. In making that decision, the artillery force structure was realigned. Subsequent force planning decisions required additional artillery reductions. The Marine Corps gave up all self-propelled general support cannon artillery and retained the requirement for an MLRS battalion -- a decision based, in part, on the promise of projected savings in personnel and maintenance. The Marine Corps has argued that MLRS is essential to offset its 45% reduction in cannon artillery, the loss of self-propelled capability, and reductions in tactical aviation traditionally depended on to make up for shortfalls in artillery.

Acknowledging that armor and MLRS are necessary capabilities for enabling forces operating from the sea, the question of whether the Army can provide those capabilities to the Marines Corps was studied. Certainly, the Army possesses the tanks, MLRS launchers, and requisite crews to perform the mission. But the tougher question is whether separating tanks and MLRS from the MAGTF would have an unacceptable impact on the Marines' ability to fight as a cohesive team, and whether having to provide part of its structure to support the Marine Corps would leave the Army short of its warfighting requirements.

A range of alternatives was examined, from having the Army provide all tank and MLRS support to the Marine Corps to maintaining the current program. It was concluded that severing armor from the organic structure of the Marines would markedly reduce unit cohesion and warfighting capability and achieve negligible cost savings. The Marine Corps' unique role as an enabling force from the sea demands a force structure with enough armor to conduct its amphibious mission. Also examined was the related issue of how many tank battalions the Marine Corps should retain. There was consensus that the Marine

Corps must retain enough tank battalions to support amphibious operations and outfit three Maritime Prepositioning Squadrons.

A different conclusion was reached on MLRS. In keeping with the adage that "the artillery is never in the reserve," there are advantages in assigning the Army responsibility for all MLRS support. Because MLRS units are normally positioned in the rear and typically fire across maneuver unit boundaries, the impact on Marine unit cohesiveness for warfighting would not be as severe as losing armor. Adopting this course of action would result in significant savings -- preliminary estimates indicate on the order of $300 million over a six year period.

But eliminating the Marine Corps' organic general support artillery is a major step that warrants an in-depth cost and effectiveness analysis before being implemented. This study must also examine the impact on the Army if it is required to provide MLRS for the Marines, and whether tactical air and naval gunfire can provide sufficient fire support for Marines fighting ashore.

RECOMMENDATION: Marine Corps will retain enough tank battalions to support amphibious operations and to outfit three Maritime Prepositioning Squadrons. The Army will provide any additional tank support required. There appears to be advantages in having the Army provide MLRS support for Marine Corps operations, however, an in-depth cost and operational effectiveness analysis is required before implementing this recommendation.

THEATER AIR DEFENSE

Theater Air Defense (TAD) is a mission that includes "all defensive measures designed to destroy attacking enemy aircraft or missiles." TAD includes ground-, sea-, air-, and space-based systems with anti-aircraft and/or anti-missile capabilities. Since 1948, the Air Force has had the function "to develop, in coordination with the other Services, doctrine, procedures, and equipment for air defense from land areas." Likewise, the Navy provides sea-based air defense and the sea-based means for coordinating control of defense against air attack. All the Services have functions "to organize, train, equip and provide forces for appropriate air and missile defense operations in accordance with joint doctrine." All four Services currently operate TAD systems. The Army, Navy, and Air Force develop and acquire their own systems. Marine Corps systems are developed by the Army and the Navy.

During the Cold War, we developed robust ground-based theater air defenses to counter the significant threat to our ground forces posed by Warsaw Pact air forces and missiles. With that threat now gone, we have undertaken an evaluation of how much and what kind of theater air defense capability we need for the future.

Generally, we divide the TAD environment into high, medium, and low altitude threats. There will continue to be a threat from aircraft operating at high altitude (above 10,000 feet). However, the robust capability of our air forces leads us to believe that future ground-based systems need not focus on this threat. With our current air forces and ground-based TAD assets, we also possess a significant capability to counter any threat from manned aircraft operating at low and medium altitude.

In the near term, the primary threat will be from tactical ballistic missiles. In the longer term, cruise missiles will also become a threat. We expect potential adversaries to direct their ballistic and cruise missile attacks primarily against certain critical, high-value targets, such as maneuver force concentrations, command and control facilities, ports, and airfields.

To support the new regionally-oriented strategy, we must be able to rapidly concentrate mobile forces for decisive action. Forces must be able to conduct aggressive maneuver and offensive operations. Air and missile attacks against forces on land and at sea will remain of some, but considerably less, concern. Armed with chemical or biological warheads, enemy cruise or ballistic missiles can be a significant threat to maneuver forces and operations.

Advanced technologies are being aggressively pursued to counter theater ballistic missiles as part of the GPALS (Global Protection Against Limited Strikes) program. The Army is developing the High Altitude Theater Missile Defense system, modernizing the PATRIOT missile (PATRIOT-3) system, and developing the CORPS AIR DEFENSE (CORPS SAM) system to provide improved defense against theater ballistic missiles at long, medium, and short-ranges, respectively. The Air Force and SDIO are jointly developing a deployable airborne laser prototype to engage and destroy theater ballistic missiles in the boost phase. The Navy is developing a variety of sea based systems, most notably the sophisticated AEGIS system which incorporates netting of sensors with sea, air, and land forces. Emphasis is being placed on deployable and rapidly re-locatable advanced theater missile defenses. These, along with space based systems, will provide protection of our deployed forces, as well as our friends and allies, from ballistic missile attack.

Several steps have been taken to improve coordination between the Services as we procure new systems. Under the SDIO's leadership, a management structure was created to integrate acquisition efforts. The Joint Requirements Oversight Council (JROC) validated the Theater Missile Defense Mission Need Statement in 1991, and has reviewed or will review key TAD systems. The Joint Air Defense Operations/Joint Engagement Zone program office is working to integrate fighters and surface-to-air missiles in a more effective

way.

Operation DESERT SHIELD/STORM demonstrated the capability and the integration of our modern theater air defenses. Each Service brought unique and complementary capabilities to the battlefield. Aircraft provided the first and prime line of defense against enemy aircraft, while ground systems engaged the ballistic missile threat and were also prepared to counter enemy fixed-wing aircraft, helicopters, and cruise missiles.

During this review of Service roles, missions, and functions, several options were examined for the theater air defense function, ranging from full consolidation of the function into a single Service to maintaining the current functions.

The Air Force believed it should be responsible for the entire TAD function, but the joint working group concluded that full integration of ground-based TAD assets into Army maneuver forces was key to providing for their protection. Furthermore, making changes in TAD roles and missions did not significantly improve efficiency or the ability to address the emerging missile threat to critical assets. Finally, there would be substantial near-term costs and personnel disruption associated with transferring TAD systems or functions between Services and no long-term savings were identified. Therefore, the conclusion reached was that the current functions, with each Service providing TAD assets, gives the best protection to our forces. A change in functions would severely disrupt the current structure, provide little benefit, and spend taxpayer dollars unnecessarily.

Coordination and cooperation on TAD system development will be increased across Service lines. As one current example, the Army and Navy, with SDIO funding, are developing a cooperative engagement capability between the Army's PATRIOT and the Navy's AEGIS air defense systems. This will enable one system to communicate and coordinate its response to any threatening aircraft or missile with the other system.

It is also recognized that we must continue to review the total TAD area to ensure that all current systems and those in development complement each other without providing unneeded duplication. Toward this end, we plan to conduct a Joint Mission Area Analysis, headed by the Joint Staff, to review the TAD mission. Results of this analysis will determine if further refinements are required in roles, missions, and functions associated with TAD.

RECOMMENDATION: A review of Theater Air Defense is needed to ensure we have the appropriate mix and quantities of air and missile defense systems. The Joint Staff will head a Joint Mission Area Analysis to comprehensively review TAD requirements, capabilities, and deficiencies.

TRAINING, AND TEST AND EVALUATION INFRASTRUCTURE

The Department of Defense owns and operates an extensive array of training, and test and evaluation ranges and facilities spread throughout the United States. These were developed and sized over the past several decades in response to Cold War requirements and a modernization/acquisition pace driven by the need to retain technological superiority. Each Service approached training, and test and evaluation from its unique perspective and developed its own infrastructures, leading to DOD-wide overlaps and redundancy.

The end of the Cold War has provided the necessity and opportunity to reevaluate our weapons test and evaluation infrastructure and to examine the potential of electronically linking various ranges in order to create facilities to support joint training exercises. Late in 1990, a formal process was begun to integrate test and evaluation procedures and ranges. This process, called PROJECT RELIANCE, has already resulted in savings and consolidations throughout the Defense Department's test and evaluation infrastructure.

To better other technology research, efforts were begun to develop more efficient ties between operational field commanders' warfighting requirements, the Services, and the technology research community (including DARPA and the Strategic Defense Initiative). This initiative better relates test and evaluation planning with evolving research and development. Especially exciting in this area is the potential to take full advantage of cutting-edge computer modeling technology advances which enable very realistic substitutes for some testing.

Despite far ranging PROJECT RELIANCE agreements, there is still much room for innovation, consolidation, and savings. The dilemma is that DOD test and evaluation facilities are valuable national resources, unlikely to be replaced once eliminated. Therefore, a deliberate review must be conducted of the test and evaluation facilities as part of our commitment to a defense-wide reduction of unneeded infrastructure.

As part of a continuing effort to streamline test and evaluation range infrastructure, an executive agent would be designated to oversee the management and integration of activities currently conducted by the many independent test and evaluation ranges. This integration of existing facilities would provide a combination of land, sea, and air ranges to fulfill test and evaluation requirements.

As an example, in the Southwestern United States, all four Services have training, and test and evaluation ranges that provide a land, airspace, sea area, and offshore supersonic operating domain that could accommodate a major portion of our joint

test and evaluation needs. In addition, with proper electronic linking, this integrated facility could be used to support joint training exercises to augment training conducted on the Service training ranges.

The Services would retain their responsibilities for range maintenance and site operations. The executive agent, as single manager for the test and evaluation ranges, would be responsible for central scheduling of joint operations, validating range modernization needs, and developing advanced data processing to interactively tie the ranges together. This step would expand the availability and quality of joint weapon system testing and would also provide improved joint training opportunities. This combination of operationally-oriented management and advanced technology would create an unmatched, world-class infrastructure to meet training, and test and evaluation needs well into the next century. Equally important, it would provide the opportunity to divest ourselves of unnecessary infrastructure -- duplicative jobs, ranges, and installations. As a result, we see the potential for a test and evaluation infrastructure that is modern; meets our needs; promotes joint systems development, testing, and training; and reduces long-term costs.

Another proposal being reviewed is for the Army to have testing responsibility for surface-to-air missiles, the Air Force to test air-to-surface missiles, and the Navy to execute the air-to-air missile test program. In the Services, the guiding philosophy is to cooperate, eliminate, and consolidate. By the mid- to late-90s, the Services will have eliminated 4900 personnel involved in test and evaluation and will have saved over $1 billion. They are also cooperating on nearly 50 technology efforts that support testing and evaluation.

RECOMMENDATION: Designate an Executive Agent to streamline test and evaluation infrastructure. Using advanced data processing, electronically link test and evaluation, and training ranges, in broad geographic areas such as the Southwest US, to enhance joint testing needs and support joint training requirements.

CONSTRUCTION ENGINEERS

In the past 45 years, each Service developed a robust contingency construction engineering capability sized and shaped to provide construction support to combat forces and maintain bases and facilities around the world.

Construction Engineers provide construction skills and base operating services under combat conditions. In peacetime, these uniformed engineers, 70% of whom are in the Reserves, augment base maintenance personnel in areas technically beyond day-to-day, base-level capabilities. Often they are a key part of humanitarian assistance operations such as recent disaster relief operations in Florida, Hawaii, and Guam.

The option of having a single Service provide all wartime construction units was considered. However, consolidation was rejected because of the uniquely tailored support Army, Navy, Air Force, and Marine Corps construction engineers provide to combat units of their Services.

However, construction engineering manning is already being reduced as the force structure is cut back. Army engineer units are being reduced by 34%; Air Force units by 39%; Marine Corps units by 20%; and Navy units by 11%. Further engineer unit modifications will occur as requirements are refined.

The Services are also committed to eliminating redundant entry-level and advanced construction skill training by reducing to a minimum the number of training sites. This initiative is discussed in greater detail in the section on training consolidation contained elsewhere in this report.

The functional review also considered a wide range of management alternatives for consolidating engineering functions above the base level. These Service functions extend from headquarters, through regional offices, to the installation level for planning, technical services, and work performance. There are policy and programmatic differences between the Services in the resource levels dedicated to installation support, the mixture of contract versus in-house operations, military manpower use, and financing and budgeting methods.

We plan to evaluate consolidation of broad installation support responsibilities, currently provided by technical support units, both geographically and functionally, in programs such as environmental services, contract administration, engineering design, facility standards, technical guidance, processes and forms, civil engineering R&D, and automated management systems.

RECOMMENDATION:

Consolidation of individual Service engineer units is not recommended because it would not save money and would provide no advantages. Reductions already underway

decrease construction engineers in the Army by 34%, Air Force by 39%, Marines by 20%, and Navy by 11%.

OPERATING TEMPO (OPTEMPO)

Well-trained military units fight effectively and win. This nation's soldiers, sailors, airmen, and marines must go into combat believing in themselves, their equipment, and their units. Their lives and the success of the mission depend on proper preparation. OPTEMPO is the term used to describe those training and readiness programs that contribute to that preparation. OPTEMPO is specified in terms of average flying hours per aircrew per month, average days underway at sea per ship or submarine per quarter-year, or average operating miles per combat vehicle per year. It includes the maintenance and support of specific equipment as well as the operating crew. Thus, all activities associated with OPTEMPO contribute directly to the readiness of units.

The Services have aggressively pursued the use of new technology to reduce OPTEMPO costs. One example is the Navy's use of Battle Force In-port Simulator Training, where senior naval decision-makers can simulate moving ships and aircraft to train rather than involving the actual ships or expending the ammunition necessary to refine these skills at sea. Similarly, the Army and the Air Force have increasingly used simulations for major exercises such as REFORGER. Instead of deploying 114,000 troops and their equipment to Europe as was done in REFORGER 88, for REFORGER 92 sophisticated simulations were used and only 26,000 troops were actually moved. This saved an estimated $16 million in transport costs and $23 million in reimbursement costs for maneuver damage to European roadways, forests, and fields.

The cost of introducing new weapons systems is also being reduced by increasing the use of simulators to improve the skills of our people before they enter the cockpit, tank, or get their ship underway. Rather than troops spending more time in the field training on these new systems, simulators provide operators a portion of the training they need to develop their skills. For some of our troops, simulators provided the only exposure to new weapons systems prior to DESERT STORM.

As forces are reduced, the overall aggregate cost of operations and maintenance will be reduced. Moreover, our new concepts for conducting forward presence operations, described earlier in this chapter, will have the added effect of reducing certain OPTEMPO rates. But because there will be fewer units forward-based near likely trouble-spots, and because resource-intensive missions such as humanitarian assistance will likely increase, OPTEMPO rates may increase for many units.

However, there is a limit to cutting back on field training. To maintain peak readiness, our troops must train often with other Services and with our allies. The new military strategy puts a premium on forces that are ready to respond to regional crises and can be rapidly integrated into a coalition force. We remember all too well how, after the Vietnam War ended, we severely cut OPTEMPO resulting in reduced readiness levels and the "hollow" military forces of the 1970s. We are determined not to allow that to happen again as our force structure is drawn down.

OPTEMPO is critical to readiness and combat capability. To cite one example, our aviators worked hard for nearly a decade and a half to increase OPTEMPO from its low point following the Vietnam War. Because operational aircraft fly more sorties per month, aircrews have achieved a higher state of readiness. In the opening days of DESERT SHIELD, this higher training readiness allowed us to have our first fighters in place in Saudi Arabia just 34 hours after receiving the order to deploy. In addition, two carrier battle groups already operating in the vicinity of the Gulf, as well as the naval forces of Joint Task Force Middle East, were fully ready for combat operations. In large measure it was peacetime training OPTEMPO that provided the combat skills to defeat rapidly and effectively one of the world's largest and best equipped militaries while suffering relatively few US or coalition casualties.

Higher OPTEMPO also translates into safer operations. For example, during the 1980s the ability of the Air Force's Tactical Air Command to sustain a higher training OPTEMPO led to a far lower mishap rate that saved the equivalent of 300 aircraft and 250 lives. Navy tactical aviation experienced similar safety improvements, where an 11% increase in flight hours resulted in a 45% decrease in aircraft mishaps.

With a smaller structure, all of America's Armed Forces must be ready to respond on short notice. Maintaining adequate OPTEMPO will enable these men and women to defend America's interests wherever in the world they are sent.

RECOMMENDATION: OPTEMPO cannot be reduced. The amount of warning time available before committing forces to combat is generally small; therefore, the need for a high state of readiness is increased. In addition, as forward stationing is reduced, forward deployments become more important in supporting US foreign policy.

INITIAL SKILLS TRAINING

Initial skills training in the military is the responsibility of Air Force Air Training Command, Naval Education and Training Command, Army Training and Doctrine Command, and Marine Corps Combat Development Command.

Current Service training establishments reflect Cold War training requirements -- they are big, expensive, and overlapping. Each Service trains annually a large number of personnel in a wide array of specialties and skills. As a result, there are a number of duplications in training performed at more than 100 military bases.

Steps have already been taken in some areas to eliminate redundant training. The Interservice Training Review Organization (ITRO), a voluntary, Service-chaired group, currently reviews proposed training consolidations and collocations for potential cost savings. During the past twenty years, ITRO studies have resulted in training course consolidations and collocations which have saved over $300 million. One example is the consolidation of much of DOD's intelligence instruction at Goodfellow Air Force Base, Texas and at the DOD Mapping School at Fort Belvoir, Virginia. ITRO also was of major assistance following the closure decision on two of the Air Force's six large technical training centers; Chanute Air Force Base, Illinois; and Lowry Air Force Base, Colorado; in determining where to move training courses affected by the closure.

The Services will also be conducting a comprehensive review, with Joint Staff support, of all military skill training, specialty by specialty, to identify potential training areas for further course collocations and/or consolidations. The review will begin by establishing firm training and facility standards and by identifying ways to use the best of the current infrastructure. An aggressive, phased review schedule will be developed along with solid ground rules for the review's conduct.

While the review will concentrate on initial skill training, it will cover all military skills. It is expected that the review will result in significant cost savings. Most importantly, the resulting training efficiencies will enable the Armed Forces to train more effectively, producing an even better and more capable fighting force.

RECOMMENDATION: Some training is already being consolidated. Services are conducting a comprehensive review of all military initial skills training to identify additional areas for consolidation.

CHAPLAIN AND LEGAL CORPS

Chaplain Corps

Each Service (except the Marine Corps) is responsible for recruiting and training its own chaplains. The functions of chaplains in each Service differ and are unique to the communities they serve. Accordingly, each Service has taken a different approach to these tasks. The Army and the Navy direct their pastoral care primarily to the soldiers, sailors, and marines assigned to operating forces. The Air Force concentrates more on community structure and family pastoral care.

While the chaplain corps takes up only a small part of the overall defense budget, it will be reduced as the overall force structure comes down over the next few years. Authorized active duty end strength for chaplains in FY 1997 is forecast at 2,755, a reduction of 565 or about 20% from today.

A number of alternatives for consolidating the chaplain corps were examined, but because the chaplaincy is in place and working well, there is no need to fix it. There would be insignificant cost savings from other alternatives, and they would have a negative effect on the provision of quality ministry to the men and women of the Armed Forces.

Legal Corps

The Army, Navy, Air Force, and Marine Corps all have uniformed judge advocates who provide a wide range of legal services to their Service. They work for the commander or head of activity under the technical supervision of the Judge Advocate General concerned or the Staff Judge Advocate to the Commandant of the Marine Corps. The DOD General Counsel, who is by law the chief counsel for the Department of Defense, renders opinions that are binding on all lawyers in DOD, including judge advocates. Day-to-day legal services are rendered to commanders, military members, and their families by judge advocate organizations that are part of the Service force structure. Although they serve in joint commands and DOD-level positions, judge advocates are primarily dedicated to serving their parent Service.

Eight areas of law are basic to all four Services: criminal law, administrative law, litigation, international law, acquisition law, labor law, claims, and legal assistance. While these areas of law practiced by judge advocates within each Service are similar, the actual practice of law varies significantly from Service to Service. Moreover, while judge advocates have common legal skills, they serve first as officers of their particular Services, subject to the same performance standards, regulations, policies, and procedures as all other officers of their Service. Their practice of law is predicated

upon, and intertwined with, the unique force structure, operational context, and policy decisions of their Service.

Each Military Department maintains a school for training its judge advocates and civilian attorneys in Service-unique and common areas of law. Many of the courses are open to attorneys from all the Armed Forces and other Federal agencies. Enlisted legal personnel are trained and assigned within the Service personnel system, with oversight by the Judge Advocates General. The Services have taken steps to increase efficiency and reduce costs through several cooperative efforts. These efforts are centered around professional development training, both at the officer and enlisted levels.

A range of alternatives was examined to consolidate or centralize legal services within DOD in order to eliminate duplication, improve quality, or reduce costs. Options included centralized training of all court reporters, consolidating claims functions, and combining all headquarters-level judge advocate functions. Some of these options had already been considered, and rejected, during the Defense Management Review process as not cost effective. Others would require significant statutory revisions and would disrupt the current statutory scheme envisioned by Congress. After careful analysis, it was decided to maintain the present DOD legal service system while continuing to investigate additional opportunities for cooperation among the Services, with a particular emphasis on consolidating legal training wherever possible.

RECOMMENDATION: Do not consolidate the Chaplain and Legal Corps. No savings are achieved.

INTELLIGENCE

Despite the efforts described in Chapter II to strengthen performance of intelligence functions and centralize management in response to the changing world situation, the existing intelligence structure largely reflects a focus on the Cold War Soviet threat. Therefore, the DIA is continuing to assess the intelligence resources available at combatant commands, Services, Joint Task Forces, and national and departmental levels to improve the utility and cost effectiveness of intelligence products.

Future operational requirements demand that intelligence systems interoperability be the first order of business. Several specific steps are being taken to improve the support the Intelligence Community provides to the country.

The success of the Joint Intelligence Center concept was well proven during the Gulf War and stimulated the development of a JIC to support each of the combatant commanders. However, as future crises or contingencies develop, the intelligence

system must be able to surge to provide planning and operations support to the commanders in the field. Although the JTF commander can receive intelligence support from the combatant CINC's JIC, such an organization doesn't provide the commander the ability to rapidly integrate intelligence information from the battlefield with information from national and Service intelligence units. This capability is necessary to assist timely decision-making during combat and other contingency operations.

Therefore, during future JTF deployments, intelligence support units will be drawn from the supporting JIC and assigned to the JTF commander to provide a fully operational intelligence support organization. This unit will be able to exchange information with all JICs, the National Military Joint Intelligence Center, and all Department of Defense agencies. In his capacity as senior uniformed military intelligence officer in DOD, the Director of DIA is conducting a study to determine the proper structure and organization for this new intelligence support unit.

Another area reviewed was the military intelligence production infrastructure. The Services each maintain distinct intelligence production organizations to support the intelligence requirements of the Service and component organizations and to support Service intelligence-related systems acquisition. Analysis of intelligence is conducted at six Service-level intelligence production centers, two of which are in the Washington, DC area. In addition, there are five intelligence production centers, located around the United States, that focus on analysis of scientific and technical information. DIA also has significant general military intelligence capabilities and is charged with providing specific intelligence products for the Secretary of Defense, the Chairman of the Joint Chiefs of Staff, and the combatant commanders. DIA also manages the Service science and technology intelligence production centers.

Consolidation of some or all of these intelligence production centers under a joint intelligence organization would reduce infrastructure and overhead and could result in substantial savings. A DIA study, which is nearly complete, will offer several options for such a consolidation.

The collection of intelligence and production of intelligence products is a complex effort that has evolved as various threats have been identified and new technologies have been exploited to provide needed information. With the change in our security focus and in the nature of threats facing the United States, it is possible for the Intelligence Community to consolidate intelligence functions at the department level, while preserving separate Service intelligence branches to fulfill requirements unique to a particular Service. Traditional or artificial boundaries among Services and intelligence

organizations must not interfere with the ultimate mission of providing high quality, timely intelligence to operational forces, force planners, and defense policy makers. The maximum capability for the least cost must be vigorously pursued and unnecessary duplication rooted out.

RECOMMENDATION: Further consolidation of intelligence production centers under a joint intelligence organization might reduce infrastructure and overhead. A nearly-complete DIA study will offer several options for additional consolidations.

RESERVE FORCE STRUCTURE

The Reserve force structure is an essential part of our total force policy and of the Base Force. National Guard and Reserve forces were critical to the success of Operation DESERT SHIELD/STORM, just as they have been invaluable in other military operations before and since. As we reduce the active force structure, DOD has been working with the Congress to also reduce the Reserve force structure in a balanced way. The goal is to eliminate reserve elements, primarily Army, which are no longer required to face threats that have disappeared -- threats that led to the significant build-up in the 1980s in our Reserve forces.

Last year, Congress directed the Secretary of Defense to conduct an independent review of the Active component and Reserve component (AC/RC) mix of forces and submit a report assessing alternatives to the current and programmed AC/RC mix to meet the defense requirements of the 1990s.

This study was conducted by the RAND Corporation, a Federally-Funded Research and Development Center (FFRDC) independent of the Military Departments, with support provided by other FFRDCs. In its review, RAND assessed the existing total force policy, including the methodology used to determine how force reductions should be distributed within and among Active and

Reserve components. The study also examined several possible mixes of Active and Reserve forces, assuming a range of manning levels and declining budgets. Finally, the review considered possible revisions in the missions assigned to Active and Reserve units, training practices, and the organizational structure of Active and Reserve components.

DOD received the RAND Report on December 1, 1992 and is evaluating its findings and recommendations. Based on this evaluation, the Chairman of the Joint Chiefs of Staff and Secretary of Defense will identify the mix of Active and Reserve forces needed to carry out future military missions. DOD's analysis of the RAND report will be forwarded to Congress by February 15, 1993.

Preliminary review of the RAND Report found it to be a thoughtful treatment of the ongoing debate regarding the appropriate structure and mix of active and reserve military forces for the post Cold War era. The report acknowledges the careful preparation that went into construction of the Base Force and its plan to use reserve forces in crisis response operations, particularly in the areas of strategic airlift and combat service support forces.

The report identifies and assesses a number of innovative and potentially useful initiatives to improve training and, hence, increase the readiness and early deployability of reserve ground combat forces. Careful consideration will be given to proposed initiatives as the ongoing analysis and evaluation of force reductions are examined.

As we look for additional ways to save taxpayer dollars, a review of National Guard and Reserve headquarters and staffs should be conducted to identify any unnecessary duplication. Care must be taken to preserve the Reserve components' ability to fulfill their essential role in the Total Force policy and their other statutory obligations including the Guard's unique links to the state governors.

RECOMMENDATION: Evaluate the RAND AC/RC study. As part of the ongoing review, determine the proper active and reserve force mix. A study of National Guard and Reserve headquarters and staffs should be conducted to identify any unnecessary duplication.

CONCLUSION

As America's national security needs have changed, so has America's military. We have undertaken the largest restructuring in the last four decades while in the midst of the greatest force reductions since the end of World War II.

With the guiding premise of doing what is right for America, we have addressed head-on the tough issues facing the Services. We have reported on the numerous changes already accomplished in the past three years. We have conducted an across-the-board

examination of those areas where further change held the promise of increased efficiency or economy. These have been thorough, frank, and sometimes painful appraisals, and they have yielded concrete results.

We should also point out that this report represents but a single frame of a continuing movie. The changes featured here, the studies we are undertaking, and the directions in which we are moving are not the final steps in this process. We will continue to adapt our thinking, our processes, and our forces to stay on the leading edge of operational excellence and responsible fiscal stewardship.

This report represents the culmination of a period of intensive review that was undertaken to streamline the way we do business on a day to day basis. It documents a fundamental recognition within the Armed Forces of the United States that roles, missions, and functions are not cast in stone, but continue to evolve as circumstances warrant. Although many measures were used to evaluate whether to accept or reject a change, in the final analysis the decision was based on two criteria. First, was it smart? And second, did change increase the productivity, efficiency, and capability of our men and women in the Armed Forces?

The recommendations presented represent decisions on each issue, but these are not all the changes that will take place. During the upcoming budget deliberations, priorities will be established and decisions made that will affect all of the Services. The inherent shortcomings in conducting a review of one's own organization are also recognized. Therefore, individuals and organizations are encouraged to come forward with ideas and suggestions that might result in additional efficiencies or economies in our Armed Forces. These ideas must include real practical savings that do not detract from the readiness and capabilities that the American public demands from the military forces.

We have a superb military organization that has served our country well both at home and abroad. Although change is inevitable and necessary, we must guard against precipitous recommendations for changes that lack thorough and thoughtful analysis. We simply must provide the proper training, equipment, and support to all of the men and women in the Armed Forces, whom we ask, on a daily basis, to go in harm's way.