The Army has developed an action plan to redesign its command and control systems to reflect changes in the world and the needs of a versatile, downsized, post-cold war Army. Because of continuing congressional interest in Army command and control systems, we reviewed the Army's action plan to determine how it affects the requirements for command and control systems and procedures.

Background

The demise of the Warsaw Pact and the ongoing changes toward democracy in the former Soviet Union have shifted the U.S. military's focus from a single Warsaw Pact contingency to smaller regional contingencies, such as Operation Desert Storm, which require a high degree of mobility. The Army no longer emphasizes fighting a well-known enemy on familiar battlefields with massive, forward-deployed forces in fixed positions. Instead, it must strategically deploy specific force packages with the appropriate command and control equipment at the moment of need to fight a less well-known enemy, wherever the location. According to the Army, Operation Desert Storm revealed a number of command and control shortcomings. A major deficiency was the lack of command and control on the move on the battlefield. Other developments, such as the Army's downsizing of its forces and revision of its war-fighting doctrine to account for fewer forward-deployed combat units, contributed to the need to restructure command and control and the subsequent Force Projection Army Command and Control Action Plan. The June 1993 plan, which resulted from an Army command and control effort started in February 1992, outlines a series of command and control concepts, initiatives, and recommendations for achieving effective command and control for the future force. The Army expects to implement this plan in 4 to 6 years.

The Army Command and Control System (ACCS) is a network of systems Army commanders use to employ and sustain military forces in a theater of operation. ACCS includes the command and control systems at the

1Force projection is the demonstrated ability to rapidly alert, mobilize, deploy, and conduct operations anywhere in the world.
strategic level, the theater army level, and the Army Tactical Command and Control System (ATCCS), which functions at corps level and below. The ATCCS program, which is one of the Army's highest acquisition priorities, is intended to enhance its war-fighting capabilities by automating its tactical command and control and improving its communications capabilities. It is designed to rapidly collect, process, analyze, display, coordinate, and exchange timely battlefield information to enhance the decision-making process. Currently, ATCCS consists of five major command and control segments to be linked together by three communication segments into one system of systems with common hardware and software.

Results in Brief

The Army has recognized the need to change its command and control structure to support a versatile, downsized Army while facing fiscal constraints and has made laudable progress toward defining the issues related to achieving that goal. In its 1993 action plan, the Army concluded that a major shift was needed from the cold war command and control architecture based on a European scenario to a post-cold war scenario. It identified 51 issues, resulting in significant changes to acquisitions needed to implement the concepts envisioned for post-cold war command and control.

However, the Army has not yet assigned priorities to these issues or identified the plan's impact in terms of cost increases or savings, and therefore, cannot target limited funding to the appropriately sequenced critical issues. In addition, the plan's effects on command and control systems' requirements and procedures have not yet been fully determined.

Army Plan Concluded That Major Changes Are Needed in Post-Cold War Command and Control

In June 1993, the Army Training and Doctrine Command and several other Army agencies completed the Force Projection Army Command and Control Action Plan to address how best to achieve command and control under a force projection Army. The plan noted that the command and control architecture designed for a Soviet and Warsaw Pact threat scenario required major changes. According to the plan, the European scenario with corps and divisions operating side-by-side with hierarchical distribution of information over ground-based communications systems has to be replaced by a scenario designed to support corps/division war-fighters moving rapidly across the battlefield.

The Army's current command and control structure is devised for a European scenario. According to the Army, the post-cold war scenario
requires such changes as command and control automation with supporting communications systems operating on the move, distant sustaining bases, a larger more fluid battlefield with extended distances between formations, and the more extensive use of satellite communication and position/navigation data. The Army stated that numerous factors, such as the changed threat, reduced budgets and forces, power projection strategy, and a new world order, have dictated this change. According to the plan, Force Projection Army command and control will give the Army the capability to meet the command and control demands of the future force.

The Force Projection Army Command and Control Action Plan contains 51 issues with recommendations that would restructure the Army's command and control systems and procedures. These issues vary greatly, covering such areas as satellite use, antennas, vehicles, command and control systems, and radio development. The Army has generally grouped the issues under categories of command and control on the move, intelligence, communications, command and control automation, supporting the force, and technology enhancements. For example, the command and control vehicle is a command-and-control-on-the-move issue while the Military Strategic and Tactical Relay satellite system is a communications issue.

The recommended changes will impact command and control requirements of the future force in such areas as (1) the development of new systems, vehicles, radios, and antennas; (2) systems improvements; (3) quantity reductions and terminations of ongoing programs; and (4) the redetermination of requirements for information flow to support both strategic and tactical command and control. One direct impact to tactical command and control is the planned addition of a satellite communication segment to the current ATCCS architecture of nine segments (five command and control, three communications, and one common hardware and software). Figure 1 illustrates the proposed addition of the satellite or fourth communications segment.
Figure 1: Proposed Addition of Satellite Communication Segment to ATCCS Architecture

According to the Army’s plan, the key difference between the communications architecture under the old European scenario and the post-cold war scenario is the ability to constantly maintain communications between the various decisionmakers on and off the battlefield. Besides the division, corps, and theater levels, satellite assets will be placed down to the maneuver brigade level to (1) prevent information bottlenecks connected with ground-based architectures and
extend the range of communications across the entire battlefield. The Army considers satellite technology a key initiative for its post-cold war communications requirements. It believes satellites will enable it to pass intelligence and other information directly to the user. This is a significant advance from ground-based systems. In addition, the Army believes that satellite technology can (1) apply to a wide range of functions, (2) provide significant improvements in battlefield information management, and (3) provide potential benefits such as savings in strategic lift by reducing deployments of oversized processing centers.

**Action Plan Lacks Priorities and Funding Impacts**

The Army's Force Projection Command and Control Action Plan did not prioritize the issues and did not contain an overall cost impact that identified the cost increases or savings connected with the plan's recommendations. With the Army's budget declining and the ongoing downsizing of the force structure, it is critical that the Army prioritize its command and control requirements along with the supporting communications systems to target limited funding to the appropriately sequenced critical issues.

**Action Plan Did Not Prioritize Issues**

Priorities have not been established for the 51 issues contained in the action plan. The issues were not assigned a priority ranking to consider such factors as relative importance to other issues, the status of system development, and appropriate sequencing.

Absent this prioritization, the Army risks spending scarce resources on systems that will not meet its needs. For example, the Army is currently acquiring a command and control vehicle that is intended to make the ATCCS systems mobile. This vehicle's primary purpose is to carry ATCCS computer and communications equipment to allow for full command and control capability on the move. However, the ATCCS systems, which have been in development for up to 14 years, continue to have development problems. It would seem prudent to prioritize the fixing of ATCCS over the development of the command and control vehicle. In other words, the Army should fix the command and control system before putting it on the move.

While we recognize that changing to the post-cold war command and control scenario has been a time-consuming, resource intensive effort and will have a difficult transition period, the assignment of priorities or ranking of issues is critical to focusing limited future resources on those
issues that will result in a successful effort. This is particularly important for those issues that would be the foundation for the overall effort.

Action Plan Did Not Have Cost Impacts

The 51 issues in the action plan have not been analyzed in terms of their cost increases or savings. Some issues could be expensive and take a long time to complete. For example, we noted that the command and control segments of ATCCS have been under development from 7 to 14 years at a cost of about $2.9 billion as of December 1992. The estimated total cost is about $9.5 billion.

The Army’s overall budget has declined over several years, and, according to the Army, it faces tight fiscal constraints in its future budgets, including pressures on its command, control, and communications funding. Consequently, it is important for the Army to develop realistic cost estimates for the plan’s issues so that limited resources can be directed toward priority issues that have been properly sequenced.

Recommendations

The Army is moving in a positive direction with its action plan to change command and control for the post-cold war environment. However, further progress toward this goal will require that it ensure that priorities and cost impacts are developed and considered as the plan moves forward in the Army’s planning and budgeting processes. We recommend that the Secretary of Defense ensure that the Secretary of the Army (1) prioritize the command and control issues and (2) determine the cost impact of the Force Projection Army Command and Control Action Plan. The results of these efforts could then be used to focus limited funding to the appropriately sequenced critical issues.

Agency Comments and Our Evaluation

The Department of Defense (DOD) agreed that the Army must prioritize its command and control needs and determine the cost impacts of the plan’s issues. However, it did not concur with our draft recommendations that the Secretary of Defense should direct the Secretary of the Army to perform these tasks because DOD believes the Army already has a system in place that address prioritization and cost impact. The Army plans to use its routine planning, programming, budgeting, and execution system to prioritize issues and develop applicable cost impact figures.

We are concerned that, without a very focused approach initially, the existing system will not yield an adequate result in addressing the changes
that are required for command and control. For example, ATCCS has already been subject to the planning and budgeting system yielding only limited results, and the Army is still without a fully usable, interoperable ATCCS. In using this system, the Army has already provided $2.9 billion on ATCCS command and control systems, yet some systems have been ongoing for more than 10 years and are still not fielded. If the plan had assigned initial priorities to the individual issues and contained estimated cost impacts rather than just an inventory of issues, the Army could have had a very focused baseline from which decisionmakers could proceed for more definitive evaluation in its planning and budgeting system.

We have changed our recommendations to recognize the Army's routine process. However, we believe that the plan is very important to the Army's future capabilities. Therefore, DOD should ensure that the plan's issues are adequately considered in a resource-constrained environment. We also believe that our changed recommendations provide added emphasis that DOD should ensure that the Army makes effective decisions for post-cold war command and control that result in limited funding being appropriately sequenced to the critical issues first. We will therefore continue to monitor DOD and Army actions to implement our recommendations. DOD's comments on the draft of this report are included in their entirety in appendix II.

As the head of a federal agency, you are required by 31 U.S.C. 720 to submit a written statement on actions taken on our recommendations to the Senate Committee on Governmental Affairs and the House Committee on Government Operations not later than 60 days after the date of the report and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report.

We are sending copies of this report to the Secretary of the Army, interested congressional committees, and other interested parties. Copies will be made available to others on request.
Our scope and methodology are discussed in appendix I. Please contact me on (202) 512-4841 if you or your staff have any questions concerning this report. Major contributors to this report were William L. Wright, Assistant Director; Edwin B. Griffin, Evaluator-in-Charge; and Robert J. Gentile, Evaluator.

Sincerely yours,

[Signature]

Louis J. Rodrigues
Director, Systems Development
and Production Issues
Appendix I

Scope and Methodology

We reviewed the Army's Force Projection Command and Control Action Plan to determine its impact on the requirements for command and control systems and procedures. We reviewed various Department of Defense (DOD) and Army documents, including plans, briefings and cost information. We discussed this information with officials at the following offices:

- Program Executive Office for Command and Control Systems and Program Executive Office for Communications Systems, Fort Monmouth, New Jersey.
- Army Tactical Command and Control System (ATCCS) program offices, McLean, Virginia; Redstone Arsenal, Alabama; and Fort Monmouth, New Jersey.
- Office of the Secretary of Defense for Command, Control, Communications, and Intelligence; Department of the Army's Office of the Deputy Chief of Staff for Operations and Plans and the Office of the Director of Information Systems, Command, Control, Communications, and Computers; Deputy Assistant Secretary for Research and Technology; the Joint Staff Command, Control, Communications, and Computers Architecture and Integration Division, Washington, D.C.
- Combined Arms Command, Fort Leavenworth, Kansas.
- Army Signal Center, Fort Gordon, Georgia.
- Army Training and Doctrine Command, Fort Monroe, Virginia.
- Army Operational Test and Evaluation Command, Alexandria, Virginia.
- Army Science Board, Washington, D.C.

We performed our review from October 1992 to June 1993 in accordance with generally accepted government auditing standards.
Appendix II

Comments From the Department of Defense

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301-3000

September 16, 1993

Mr. Frank C. Conahan
Assistant Comptroller General
National Security and International
Affairs Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Conahan:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) draft report, "BATTLEFIELD AUTOMATION: Army Needs to Determine Command and Control Priorities and Costs," dated August 11, 1993 (GAO Code 395211), OSD Case 9497. The Department partially concurs with the report. The DoD is actively addressing all the issues discussed in the GAO report.

The Force Projection Army Command and Control Study and subsequent plan provided the Army fifty one issues for further study to determine the roadmap to meet its post cold-war command and control mission requirements. It should be recognized, however, that those efforts were not intended to prioritize issues and determine cost impacts. Instead, command and control priorities and funding needs are being accomplished through the Army Planning, Programming, Budgeting, and Execution System. The next Army Program Objective Memorandum will specifically reflect those priorities and associated funding needs.

Since the Army is already accomplishing efforts to identify command and control priorities and funding needs, further Secretary of Defense direction is not required. My office will review the Army's command and control priorities and associated funding in the next Army Program Objective Memorandum submission, expected in October 1993.

The detailed DoD comments on the report findings and recommendations are provided in the enclosure. The DoD appreciates the opportunity to comment on the draft report.

Sincerely,

Emmett Paige, Jr.

Enclosure

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GAO DRAFT REPORT - DATED AUGUST 11, 1993
(GAO CODE 395211), OSD CASE 9497

"BATTLEFIELD AUTOMATION: ARMY NEEDS TO DETERMINE COMMAND AND
CONTROL PRIORITIES AND COSTS"

DEPARTMENT OF DEFENSE COMMENTS

* * * *

FINDINGS

FINDING A: Effective Command and Control for the Future. The GAO
reported that the Army must strategically deploy specific force packages
with the appropriate command and control equipment at the moment of
need, to fight an unknown enemy, wherever the geographic location. The
GAO reported that the June 1993 plan, which resulted from an Army
command and control effort started in February 1992, outlines a series of
command and control concepts, initiatives, and recommendations for
achieving effective command and control for the future force. The GAO
observed that the Army expects to implement the plan in 4 to 6 years.

The GAO reported that the Army Command and Control System is a
network of systems Army commanders use to employ and sustain military
forces in a theater of operation. The GAO observed that the Army
Command and Control System includes both the command and control
system at the theater army level and the Army Tactical Command and
Control System—which functions at corps level and below. The GAO
reported that the Army Tactical Command and Control System, which is
one of the highest Army acquisition priorities, is intended to enhance the
warfighting capabilities of the Army by automating its tactical command
and control and improving its communications capabilities. The GAO
explained that it is designed to collect, process, analyze, display,
coordinate, and exchange timely battlefield information rapidly—to
enhance the decision-making process. (pp. 1-4/ GAO Draft Report)

DOD RESPONSE: Concur. In February 1992 the Army initiated the Force
Projection Army Command and Control Study to determine changes
necessary to provide Army Command and Control requirements in the
post cold-war environment. The concepts, initiatives, and recommenda-
tions contained in the Force Projection Army Command and Control Study
provide a road map for analysis and evaluation of future command and
control initiatives that could achieve command and control objectives for
the Army in the post cold-war environment. The study was completed in
June 1993, and the results were approved for implementation as the Force
Projection Army Command and Control Plan.

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FINDING B: The Army Plan Concluded That Major Changes are Needed In Post-Cold War Command and Control. The GAO reported that, in June 1993, the Army Training and Doctrine Command and several other Army agencies completed the Force Projection Army Command and Control Action Plan to address how best to achieve command and control under a force projection Army. The GAO indicated that the plan noted that the command and control architecture, which had been designed for a Soviet and Warsaw Pact threat scenario, required major changes to address the post-cold war scenario of a force projection Army. The GAO pointed out, that according to the plan, the European scenario, with corps and divisions operating side-by-side with hierarchical distribution of information over ground-based communications systems, is to be replaced by a scenario designed to support the corps/division warfighter moving rapidly across the battlefield.

The GAO reported that the Army command and control structure and related acquisitions were devised under the fixed location, European scenario. The GAO noted that, according to the Army, the post-cold war scenario requires changes—including such items as (1) command and control automation with supporting communications systems operating on the move, (2) distant sustaining bases, (3) a larger more fluid battlefield with extended distances between formations, and (4) the more extensive use of satellite communication and position/navigation data. The GAO reported that, according to the Army, numerous factors—such as the changed threat, reduced budgets and forces, the power projection strategy, and a new world order, have dictated the change. The GAO reported that, according to the plan, Force Projection Army command and control will provide the Army with the capability to command and control the force and to meet the demands of the future force.

The GAO explained the Force Projection Army Command and Control Action Plan contains 51 issues with recommendations that would restructure the Army command and control systems and procedures. The GAO pointed out that the issues vary greatly—covering such areas as (1) satellite use, (2) antennas, (3) vehicles, (4) command and control systems, and (5) radio development. The GAO found that the Army generally grouped the issues under the following categories:

- command and control on the move;
- intelligence and targeting;
- communications;
- command and control automation;
- supporting the force; and
- technology enhancements.
The GAO noted, for example, that the command and control vehicle is a command and control on the move issue, while the Military Strategic and Tactical Relay Satellite System is a communications issue.

The GAO reported that, according to the Army plan, the key difference between the communications architecture under the old European scenario and the post-cold war scenario is the ability to maintain constant communications between the various decision makers on and off the battlefield. The GAO added that, besides the divisions, corps, and theater levels, satellite assets would be placed down to the maneuver brigade level to (1) prevent information bottlenecks connected with ground-based architectures and (2) extend the range of communications across the entire battlefield. The GAO explained that the Army considers satellite technology a key initiative to meet its post-cold war communications requirements. (pp. 441/GAO Draft Report)

DOD RESPONSE: Concur. The Army leadership approved the Force Projection Army Command and Control Plan in June 1993, and in turn directed its implementation. The plan illustrates a departure from the European, Soviet and Warsaw Pact, threat scenario-driven architecture to one that will support the current Force Projection concept. The Plan also identifies reasons for needed command and control changes and further identifies differences between the European and the post cold-war scenarios. Inherent in the plan are 51 issues that were identified as candidates for restructuring Army command and control systems and/or procedures for supporting the post cold-war environment. The 51 issues were further tasked to various organizations, to include supporting agencies, within the Army, to study and provide analysis to determine the validity and applicability for supporting a Force Projection Army. Milestones for completion of the analysis were established.

FINDING C: The Army Action Plan Lacks Priorities and Funding Impacts. The GAO reported that the Army Force Projection Command and Control Action Plan did not prioritize the issues and did not contain an overall cost impact that identified the cost increases or savings connected with the plan’s recommendations. The GAO pointed out with the Army budget declining and the ongoing downsizing of the force structure, it is critical that the Army prioritize its command and control requirements, along with the supporting communications systems, to target limited funding to the appropriately sequenced critical issues.

Issues Not Prioritized—The GAO found that priorities have not been established for the 51 issues contained in the action plan. The GAO indicated that the issues were not assigned a priority ranking to consider such factors as relative importance to other issues, the status of system development, and appropriate sequencing. The GAO concluded that absent prioritization, the Army risks spending scarce resources on systems that will not meet its needs. The GAO cited the example that the Army is currently acquiring a command and control vehicle that is intended to provide mobility for the Army Tactical Command and Control System. The GAO asserted, however, that the Army Tactical Command and Control System systems, which have been in development for up to 14 years, continue to have development problems. The GAO concluded that it
would seem prudent to prioritize the fixing of the Army Tactical Command and Control System over the development of the command and control vehicle. The GAO recognized that the post-cold war command and control effort had been a time-consuming, resource-intensive effort and will have a difficult transition period. The GAO concluded, however, that the assignment of priorities or ranking of issues is critical to focusing limited future resources on those issues that will result in a successful effort.

Cost Impact Not Addressed--The GAO reported that the impact of addressing the 51 issues in the action plan in terms of cost increases or savings had not been determined. The GAO concluded, however, that some issues could be expensive to address and take a long time to complete. The GAO noted, for example, that as of December 1992, the command and control segments of the Army Tactical Command and Control System have been under development from 7 to 14 years at a cost of about $2.9 billion. The GAO reported that the estimated total cost is about $9.5 billion. The GAO further reported that, according to the Army, its overall budget had declined over several years—among them, constraints in its future budgets, including pressures on its command, control, communications, and intelligence funding. Consequently, the GAO concluded that it is important for the Army to develop realistic cost estimates for the plan issues so that limited resources can be directed toward priority issues that have been properly sequenced. (pp. 8-11/GAO Draft Report)

DOD RESPONSE: Partially concur. The Department agrees that the Force Projection Army Command and Control Plan did not prioritize the 51 issues for funding purposes and did not provide any cost analysis for increases or savings as a result of implementation of the plan. However, it was never the intent of the Army to use the plan as a document to prioritize issues for funding purposes, or as a document to provide analysis to address increases or saving impacts. These actions will be accomplished through implementation of the Army Planning, Programming, Budgeting, and Execution System. The Force Projection Army Command and Control Plan provided a series of command and control concepts, initiatives, and investment strategies that the study identified as essential to the Army effort to achieve effective command and control in the force projection framework. Implementation of the Force Projection Army Command and Control Plan required further study and analysis of each of the 51 issues to determine which were valid and applicable to support the force projection command and control requirements. The valid issues must then be incorporated into the Army Planning, Programming, Budgeting, and Execution System process, through input into the Enhanced Concepts-based Requirements System. The elements identified in the Army Command and Control Master Plan and the Army Modernization Plan are eventually prioritized and funded in the Program Objective Memorandum, a part of the Army Planning, Programming, Budgeting, and Execution System.

The Force Projection Army Command and Control Plan specifically states, that the plan is a forerunner to the next Army Command and Control Master Plan. The Plan also identifies four concurrent approaches to implementation of the Force Projection Army Command and Control Plan.
One of those approaches states that the appropriate action issues must be incorporated into the Enhanced Concept Based Requirements System in order to ensure the Force Projection Army Command and Control concepts are represented and resourced in the Army Modernization Plan and funded in the Program Objective Memorandum. It is through those documents that the issues the Army has determined are valid will be prioritized, competed with other Army programs, and funded within the Army funding authorization.

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RECOMMENDATIONS

RECOMMENDATION 1: The GAO recommended that the Secretary of Defense direct the Secretary of the Army to prioritize the command and control issues. (p. 11/GAO Draft Report)

DOD RESPONSE: Partially concur. The Department concurs that the Army must prioritize its command and control needs to take advantage of limited resources. However, the Department does not concur that the Secretary of Defense should direct the Army to prioritize the command and control issues from the Force Projection Army Command and Control Plan. As explained in the DoD response to Finding C, the Army will prioritize the issues through the Planning, Programming, Budgeting, and Execution System process. The Assistant Secretary of Defense for Command, Control, Communications and Intelligence will review the Army Program Objective Memorandum submission for prioritization of command and control issues. Submission of the next Army Program Objective Memorandum is expected in October 1993.

RECOMMENDATION 2: The GAO recommended that the Secretary of Defense direct the Secretary of the Army to determine the cost impact of the Force Projection Army Command and Control Action Plan. (p. 11/GAO Draft Report)

DOD RESPONSE: Partially concur. The Department concurs that the Army must determine the cost impact of the issues from the Force Projection Army Command and Control Plan that are deemed valid and applicable. The Army will accomplish that during the Planning, Programming, Budgeting, and Execution System process. The Department does not concur that the Secretary of Defense should direct the Secretary of Army to determine the cost impact of the Force Projection Army Command and Control Plan, since the Army, as explained in the DoD response to Finding C, will accomplish that step through its ongoing Planning, Programming, Budgeting, and Execution System process.
The following are GAO's comments on DOD's letter dated September 16, 1993.

1. Our draft report recognized that the Army was moving in a positive direction with its action plan to change command and control for a post-cold war environment. We also realize that the Army has a routine process which is to prioritize issues and develop applicable cost impacts. We have changed our recommendations to recognize this process. However, we believe that the plan is very important to the Army's future capabilities. Therefore, DOD should ensure that the plan's issues are adequately considered in a resource-constrained environment. We also believe that our changed recommendations provide added emphasis that DOD should ensure that the Army makes effective decisions for post-cold war command and control that result in limited funding being appropriately sequenced to the critical issues first. If the plan had initially prioritized the issues and estimated its cost impact, the Army would have been further along in focusing limited funding to the appropriately sequenced critical issues. We believe that the action plan is too important to be handled as a routine matter. We will therefore continue to monitor DOD and Army actions to implement our recommendations.

2. We recognize that the Army plans to use its routine planning, programming, budgeting, and execution system to prioritize issues and develop applicable cost impact figures. However, we are concerned that, without a very focused approach initially, the existing system will not yield an adequate result in addressing the changes that are required for command and control. For example, ATCCS has already been subject to the planning and budgeting system yielding only limited results, and the Army is still without a fully usable, interoperable ATCCS. In using this system, the Army has already provided $2.9 billion on ATCCS command and control systems, yet some systems have been ongoing for more than 10 years and are still not fielded.