

GAO

Report to the Chairman, Subcommittee on
Defense, Committee on Appropriations,
House of Representatives

September 1987

BATTLEFIELD AUTOMATION

Army Air Defense Command and Control System Acquisition and Budget Issues



134125



United States
General Accounting Office
Washington, D.C. 20548

National Security and
International Affairs Division

B-223712

September 28, 1987

The Honorable Bill Chappell, Jr.
Chairman, Subcommittee on Defense
Committee on Appropriations
House of Representatives

Dear Mr. Chairman:

As requested, we reviewed the acquisition and funding of the Forward Area Air Defense Command, Control, and Intelligence (FAAD C2I) system, one of the five components of the Army Command and Control System (ACCS). We focused our review on system cost, schedule, performance, and the Army's fiscal year 1988 budget request. Our findings are summarized in this letter and more fully discussed in appendix I. Appendix II describes our objective, scope, and methodology.

Background

The FAAD C2I system is intended to provide an automated command and control capability for commanders to control the use of short-range air defense weapons. The system is designed to automatically acquire and identify incoming aircraft and provide aircraft targeting and tracking information to forward air defense battalions. The FAAD C2I program consists of four distinct segments: the automated command and control architecture (basic C2), ground sensor, aerial sensor, and aircraft identification.

The Army's acquisition milestones vary by program segment. For example, the basic C2 segment is in full-scale engineering development which is expected to be completed in July 1991. Conversely, the ground sensor has already been approved for limited production which is scheduled to begin in April 1988. Both of these dates are being revised due to schedule slippage. While the Department of Defense (DOD) has not approved the aerial sensor and aircraft identification segments, they are expected to be approved for full-scale development in fiscal year 1988 or 1989.

The Army estimates that when completed the total program will cost \$2.6 billion and the system will be significantly more effective than the existing manual command and control system. For fiscal year 1988, the Army requested \$207.8 million for FAAD C2I development and production.

Program Cost Estimate Is Understated

The \$2.6 billion FAAD C2I program cost estimate is understated by at least \$3.2 billion because it does not include all costs for the Army National Guard, some corps missile battalions, and war reserves. Project officials recognize this. They told us that their estimate is based on force structure plans and other guidance provided by higher commands and, therefore, they plan no adjustments to reflect these excluded costs. However, we noted that other Army command and control systems include such cost estimates.

Schedule Will Probably Be Delayed

The overall FAAD C2I acquisition schedule depends on other programs and has risks associated with concurrent development and production. Delays in any supporting program or FAAD C2I segment could delay the overall system acquisition and fielding. For example, the projected delay in the delivery of ACCS computer equipment and software could delay the basic C2 schedule by at least 6 months. This means that the planned fiscal year 1988 basic C2 contract for the second phase of software development and production integration may not be awarded until fiscal year 1989. Similarly, basic C2 and ground sensor system demonstration tests could be delayed from fiscal year 1990 to 1991 and initial operational capability from fiscal year 1991 to 1992.

Project officials told us that they plan to revise the basic C2 schedule to reflect the ACCS equipment delays. While project officials agree that deferring the second phase of software development and basic C2 production integration contract awards until fiscal year 1989 may be appropriate, the decision to defer the contracts had not been made as of September 1987.

Project officials do not plan to revise the ground sensor production schedule even though the basic C2 development is slipping and the ground sensor request for proposal has been delayed several months. They believe the ground sensor contract should be awarded by the end of fiscal year 1988.

Incomplete Systems Will Be Fielded

The initial FAAD C2I systems, expected to be deployed in fiscal year 1992, will include neither the aerial sensor nor all aircraft identification features. As a result, these early units will not meet all user requirements. The Army plans to add the aerial sensor in 1994 and all aircraft identification features by 1993.

Army officials believe that the urgent need for an automated command and control system outweighs the necessity of waiting to field a complete system.

Potential Budget Reductions

The Army may not need \$93.2 million of its \$207.8 million fiscal year 1988 FAAD C2I funding request because of projected schedule delays. The \$16.9 million contract award for the second phase of basic C2 software development, known as build II, could be deferred until fiscal year 1989 because of a delay in the first phase of software development and to reduce the concurrence in the software development phases. The \$15.4 million basic C2 production integration contract and \$45.8 million of the ground sensor procurement contract, expected to be awarded in fiscal year 1988, could be deferred until fiscal year 1989 due to schedule slippage and to reduce risks associated with concurrent development and procurement. If these two amounts are deferred, the Army would not need \$3.8 million requested for other contractor services and \$11.3 million for associated government furnished equipment.

Project officials agree that it may be appropriate to defer the basic C2 build II and production integration contract awards until fiscal year 1989. However, project officials do not agree that it would be appropriate to defer the ground sensor contract award until fiscal year 1989. They believe the sensor contract should be awarded in fiscal year 1988, if possible, to provide an economical production and more time to evaluate the selected sensor and resolve technical issues if any. Continuing with the sensor acquisition while delaying the basic C2 schedule by 6 months, increases program concurrence and related risk.

Conclusions

The FAAD C2I cost estimate should include all program costs, including those related to the Army National Guard, the corps missile battalions, and war reserves. The ground sensor schedule should be revised to reflect the ACCS equipment delay. To reduce schedule concurrence and related risks, the ground sensor production contract should be deferred until 1989.

Deferring the ground sensor production contract, along with the basic C2 software development and production integration contracts, will eliminate the need for \$93.2 million of the Army's \$207.8 million fiscal year 1988 FAAD C2I budget request.

**Recommendation to
the Subcommittee**

We recommend that the Subcommittee reduce the Army's fiscal year 1988 FAAD C2I funding request by \$93.2 million.

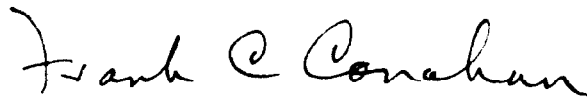
**Recommendations to
the Secretary of the
Army**

We recommend that the Secretary of the Army

- review the decision to exclude certain requirements when estimating the FAAD C2I program cost and
- direct the project office to include all valid requirements in subsequent cost estimates.

In order to provide this report prior to final consideration of the DOD fiscal year 1988 appropriation request, we did not obtain official agency comments. We have incorporated project officials' comments where appropriate. Unless you publicly announce its contents earlier, we plan no further distribution of this report until 10 days from the date of the report. At that time we will send copies to interested parties and make copies available to others upon request.

Sincerely yours,



Frank C. Conahan
Assistant Controller General

Contents

Letter		1
<hr/>		
Appendix I		8
Army Forward Area	System Description	8
Air Defense Command	Program Cost Estimate Is Understated	10
and Control System	Schedule Will Probably Be Delayed	12
Acquisition and	Schedule Calls for Concurrency	13
Budget Issues	Initially Fielded Systems Will Not Meet All User Requirements	13
	Potential Reductions to the FAAD C2I Fiscal Year 1988 Budget Request	15
	Conclusions	17
	Recommendation to the Subcommittee	18
	Recommendations to the Secretary of the Army	18
<hr/>		
Appendix II		19
Objective, Scope, and Methodology		
<hr/>		
Tables		
	Table I.1: FAAD C2I Acquisition Cost Estimate and Hardware Quantities	10
	Table I.2: Scheduled FAAD C2I Acquisition Milestones as of July 1987	12
<hr/>		
Figures		
	Figure I.1: ACCS' Battlefield Functional Areas	9
	Figure I.2: FAAD C2I Program Development, Production, and Testing Schedule (Basic C2 and Ground Sensor)	14

Abbreviations

ACCS	Army Command and Control System
DOD	Department of Defense
FAAD C2I	Forward Area Air Defense Command, Control, and Intelligence

Army Forward Area Air Defense Command and Control System Acquisition and Budget Issues

System Description

The FAAD C2I system is intended to provide an automated command and control capability for commanders to control the use of short-range air defense weapons. The system is designed to automatically detect and identify incoming aircraft and provide aircraft targeting and tracking information on enemy aircraft to forward area air defense battalions.

As shown in Figure I.1, FAAD C2I will be integrated with the ACCS, a larger program to automate the command and control of air defense, maneuver control, fire support, combat service support, and intelligence. Modified commercial computer equipment and a common software language will be used for FAAD C2I, as well as other ACCS components.

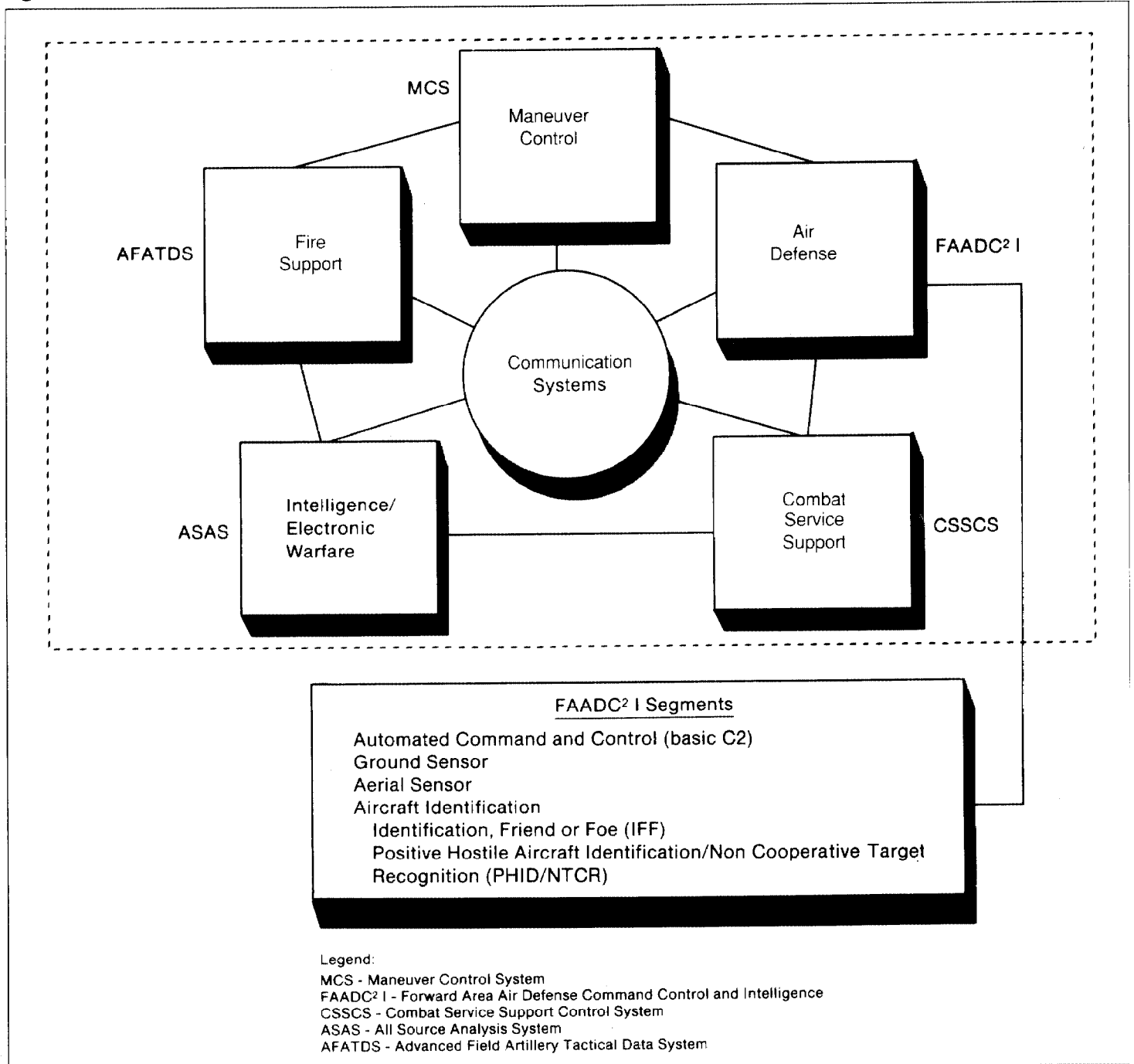
Previously known as the Short Range Air Defense Command and Control system, FAAD C2I is now part of the overall Forward Area Air Defense program which evolved from a series of DOD and Army reviews following the 1985 cancellation of the Division Air Defense gun program known as Sergeant York. The FAAD C2I program consists of four distinct segments: the automated command and control architecture (basic C2), ground sensor, aerial sensor, and aircraft identification.

The Army's acquisition milestones vary by program segment. For example, the basic C2 segment is in full-scale engineering development which was expected to be completed in July 1991 but this date is being revised due to schedule slippage. The ground sensor, a nondevelopmental "off-the-shelf" item, has already been approved for limited production which is scheduled to begin in April 1988, but this date also is being revised. While DOD has not approved the aerial sensor and aircraft identification segments, they are expected to be approved for full-scale development in fiscal year 1988 or 1989.

The FAAD C2I acquisition strategy provides for maximum use of nondevelopmental items, concurrent development and production, and planned product improvements. In September 1986, the Army awarded the TRW Defense Systems Group a full-scale development contract for the initial phase of basic C2 development and system integration. The effort, known as build I, will provide the software structure to support the major functions of identifying and tracking incoming aircraft and alerting and cueing air defense weapons. A second phase, known as build II, will provide for completing basic C2 software development and integrating the build I software with the government furnished ACCS software and hardware.

**Appendix I
Army Forward Area Air Defense Command
and Control System Acquisition and
Budget Issues**

Figure I.1: ACCS' Battlefield Functional Areas



**Appendix I
Army Forward Area Air Defense Command
and Control System Acquisition and
Budget Issues**

The Army plans to acquire 31 basic C2 sets and 127 nondevelopmental ground sensors. These acquisitions support testing and fielding to 29 active units: 10 heavy divisions, 8 light divisions, 3 armored cavalry regiments, 5 corps missile battalions (ground sensors and associated equipment are not included), and 3 training units. The Army has not yet determined aerial sensor and aircraft identification requirements.

The Army estimates that when completed the total program will cost \$2.6 billion and the system will be significantly more effective than the existing manual command and control system.

Program Cost Estimate Is Understated

The Army's program cost estimate is understated because it does not include some program costs and it has not been adjusted for expected schedule delays. In addition, the program cost estimate (1) does not include an amount to fund expected modifications to the off-the-shelf ground sensor because these costs are not yet known and (2) includes early projections for the aerial sensor and aircraft identification features which are likely to change as these program segments are better defined.

Cost Estimate Does Not Include Some Known Costs

Table I.1 shows the Army's cost estimates for FAAD C2I development and procurement and related quantities.

Table I.1: FAAD C2I Acquisition Cost Estimate and Hardware Quantities

Program element	Cost ^a			Quantities
	Development	Procurement	Total	
Basic C2	\$465.2	\$304.3	\$769.5	31
Ground sensor	35.0	533.6	568.6	127
Aerial sensor	136.2	665.0	801.2	^b
Aircraft identification	305.6	195.2	500.8	^b
Total	\$942.0	\$1,698.1	\$2,640.1	

^aProgram estimate as of July 1987.

^bQuantities undetermined.

This \$2.6 billion program cost estimate is understated by at least \$3.2 billion because it does not include

- \$900 million for equipping the Army National Guard with basic C2 and the ground sensor,

**Appendix I
Army Forward Area Air Defense Command
and Control System Acquisition and
Budget Issues**

- \$608 million to fully equip the corps missile battalions with the basic C2 and the ground sensor,
- \$1.7 billion for war reserves for the basic C2 and the ground sensor, and
- at least \$7.5 million caused by the basic C2 schedule slip due to delays of at least 6 months in delivery of ACCS government furnished equipment.

Project officials recognize that the cost estimate is not all inclusive. However, they told us that they followed force structure plans and other guidance provided by higher commands in preparing the FAAD C2I estimate and that guidance did not include equipping these forces. Accordingly, they do not plan to revise the cost estimate to include the Army National Guard, corps missile battalions, and war reserves requirements. Project officials told us, however, that they plan to revise the cost estimate to reflect the delays in getting the ACCS equipment.

**Cost Estimate May
Increase**

The program cost estimate may increase because: (1) the ground sensor will have to be modified, (2) some early software will have to be redesigned, and (3) the plans for the aerial sensor and aircraft identification segments are likely to change.

To meet performance specifications, the nondevelopmental off-the-shelf ground sensor will have to be modified. Project officials know this and will include the cost for a sensor product improvement program when these costs can be reasonably estimated. The costs cannot be estimated until the candidate sensor is selected by the Army in fiscal year 1988.

Project officials also recognize that some software redesign will be required. Because of the delays in the ACCS program, initial software is being developed using substitute hardware rather than the standard ACCS hardware. Although the baseline cost estimate includes some costs for software redesign, as of July 1987, project officials did not know how much redesign would be required or how much it would cost.

In addition, the programs and cost for the aerial sensor and aircraft identification may change as these segments are better defined. These segments are in early development when program changes are likely and costs are difficult to project. A revised April 1987 estimate of the aerial sensor indicates how early estimates can change. This revised estimate totaled \$819.1 million, \$17.9 million more than the Army's July 1986 estimate of \$801.2 million. The cost estimate for the aerial sensor was made without knowing its platform or deployment concept. Platforms being discussed include aircraft, remotely-piloted vehicles, and balloons.

**Appendix I
Army Forward Area Air Defense Command
and Control System Acquisition and
Budget Issues**

The platform selected could have an effect on the aerial sensor's overall cost.

**Schedule Will
Probably Be Delayed**

The basic C2 and ground sensor schedules are expected to slip at least 6 months because of the previously stated delays in the delivery of government furnished equipment.

Table I.2 shows the current FAAD C2I program schedule.

**Table I.2: Scheduled FAAD C2I
Acquisition Milestones as of July 1987**

	Development		Production	
	Start	Complete	Start	Complete
Basic C2:				
Software development:				
Build I	9/86	7/91	a	a
Build II	7/88	7/91	a	a
Production integration	a	a	9/88	9/95
Ground sensor	b	b	4/88	9/95
Aerial sensor	4/89	4/93	1/91	c
Aircraft identification:				
IFF ^d	9/88	9/92	7/91	c
PHID/NCTR ^e	1/89	9/89	9/89	c

^aNot applicable.

^bNondevelopmental item.

^cNot established.

^dIdentification, friend or foe.

^ePositive Hostile Identification/Non-Cooperative Target Recognition.

To meet the current build I software development schedule, the software development contractor needs the ACCS hardware specifications by November 1987 and the software specifications by January 1988. Also, some hardware is needed by March 1988 to support software development and testing. However, the ACCS specifications and hardware will not be available when required because award of the ACCS contract, previously scheduled for October 1987, is not now expected until April 1988 at the earliest.

The delays in getting the ACCS specifications and equipment will delay build I software development 6 months.

Project officials plan to restructure the basic C2 schedule to reflect the build I software delay. While project officials acknowledged that the basic C2 program could slip at least 6 months and possibly more, as of September 1987 they had not yet revised the schedule.

The build I software delay may delay other aspects of the program, including the award of the build II software development and basic C2 production integration contracts. Similarly, the ground sensor production contract, expected to be awarded in April 1988, is slipping due to delays in releasing the request for proposal. The software delay also is expected to delay the fiscal year 1989 basic C2 and ground sensor system demonstration until fiscal year 1990 and the scheduled fiscal year 1991 initial operational capability until fiscal year 1992.

Acquisition milestones for the aerial sensor and aircraft identification elements are not expected to change because of the delay in the basic C2 schedule.

Schedule Calls for Concurrency

The current acquisition schedules for basic C2 and ground sensors shown in figure I.2 rely upon optimistic assumptions of concurrent development, testing, and production. For example, basic C2 production integration and ground sensor procurement are scheduled to begin before software development is completed. Similarly, many of the basic C2 and ground sensor units are scheduled to be produced before system developmental and operational testing is completed.

The impact of ongoing basic C2 and ground sensor schedule changes on the concurrency shown above is not yet known. Project officials believe that the FAAD C2I acquisition includes no new technology; therefore, the risk of awarding production contracts before completing software development and system testing is low. We did not fully assess the risk associated with beginning production before completing software development and system testing. However, since testing may require system modification, we believe the Army could help minimize concurrency risks by reducing the number of systems produced before testing is completed.

**Appendix I
 Army Forward Area Air Defense Command
 and Control System Acquisition and
 Budget Issues**

Figure I.2: FAAD C2I Program Development, Production, and Testing Schedule (Basic C2 and Ground Sensor)

Program milestones

Basic C2

Software development

Build I

Build II

Basic C2

Production integration^a

Ground sensor production^b

System demonstration tests

Developmental testing

Operational testing

1987 1988 1989 1990 1991 1992 1993 1994 1995
 Fiscal years

^aThe basic C2 production integration contract is scheduled to be awarded in September 1988, 34 months before the completion of basic C2 software development and system testing in July 1991.

^bThe ground sensor production contract is scheduled to be awarded in April 1988, 39 months before the completion of basic C2 software development and system testing in July 1991.

**Initially Fielded
 Systems Will Not Meet
 All User Requirements**

The initial FAAD C2I system will not meet all user requirements, primarily because aerial sensors and some new aircraft identification features will not be available when the first units are deployed. Also, some project officials question whether the nondevelopmental ground sensor will perform as the user requires.

**Appendix I
Army Forward Area Air Defense Command
and Control System Acquisition and
Budget Issues**

Positive hostile aircraft identification is a system for identifying hostile aircraft by comparing the characteristics of incoming aircraft with a library of known aircraft characteristics. An identification, friend or foe system identifies incoming aircraft by recognizing electronic signals transmitted by friendly aircraft. All the new aircraft identification features are not expected to be incorporated with FAAD C2I systems until fiscal year 1993.

The aerial sensor is required to enable aircraft detection "over-the-hill." The aerial sensor is in an early phase of acquisition, generally known as concept definition. The system is scheduled for limited production in fiscal year 1991 and initial fielding in 1994.

Off-the-shelf ground sensors may not provide the range and survivability the user requires. Some Army officials are concerned whether existing sensors will be capable of providing the range needed. Survivability against antiradiation missiles is also being debated. Project officials told us even if the ground sensor is unable to survive an antiradiation missile, other techniques, such as simply turning it off and on, will permit the sensor to meet minimal operational requirements.

Army officials believe that the urgent need for an automated command and control system outweighs the necessity of waiting to field a complete system. Officials believe that the FAAD C2I system, even without the required aircraft identification and aerial sensors, is a significant improvement over the current manual system.

**Potential Reductions
to the FAAD C2I Fiscal
Year 1988 Budget
Request**

Due to program delays, the Army may not need \$93.2 million of the \$207.8 million requested for FAAD C2I in fiscal year 1988. Specifically, total basic C2 requested funds of \$43.6 million may not be needed if contract awards planned for fiscal year 1988 are deferred to 1989—\$16.9 million for a build II software development contract award, \$15.4 million for a production integration contract award, and \$11.3 million for associated government furnished equipment. Also, \$45.8 million for nine ground sensors and \$3.8 million for contractor and in-house support may not be needed if ground sensor procurement is limited to four test units and production integration contract award is deferred from fiscal year 1988 until 1989.

Basic C2

In September 1986, the Army awarded the TRW Defense Systems Group a full-scale development contract for the initial phase of basic C2 software development and system integration. This effort, known as build I, will provide the software structure to support the major FAAD C2I system functions of identifying and tracking incoming aircraft and alerting and cueing air defense weapons to counter the enemy aircraft.

A contract with TRW to complete the basic C2 software development was expected to be awarded in July 1988. During this phase, known as build II, TRW would complete basic C2 development and integrate the build I software with the government furnished ACCS software and hardware. Also, the basic C2 production integration contract was scheduled to be awarded in September 1988. This contract would assemble ACCS hardware and other government furnished equipment into vehicles and shelters.

However, because of the delays in the ACCS procurement program, needed technical specifications for the ACCS hardware and software will not be available for TRW to use in the build I detailed software design work. Recognizing the risk of software redesign, if TRW completes software design without knowing the ACCS hardware and software, project officials plan to delay build I software completion and testing 6 months to coincide with the delay in the ACCS contract award.

While no final decisions had been made as of September 1987, the Army was considering delaying the build II and production integration contract awards until fiscal year 1989. If the build II and production integration contracts are not delayed, the concurrency in the development and production schedules will increase. If the awarding of these contracts is delayed, the Army will not need \$43.6 million of its requested funding for fiscal year 1988.

Ground Sensor and Production Support

The Army plans to award a contract in fiscal year 1988 to buy 13 ground sensors. The planned fiscal year 1988 procurement will be the first of five contract award options. The first option will buy nine production sensors with procurement funds and four test and evaluation sensors with research, test, and evaluation funds. These sensors will be used for preproduction qualification tests, system testing, and training. The test results will provide information to support decisions to exercise the subsequent production options.

Project officials believe that the nine production sensors, along with the four test and evaluation sensors, need to be procured in fiscal year 1988 to provide an economical production. In addition, early procurement of a limited number of sensors would provide additional time to evaluate the adequacy and performance of the selected sensor, before committing to another production option.

Continuing with the sensor acquisition while delaying the basic C2 schedule by 6 months increases program concurrency and related risks. Committing to a ground sensor procurement earlier than necessary may result in costly modifications based on subsequent testing. As of September 1987, the ground sensor request for proposal had not been approved by the Department of Army. The delay is due in part to concerns about meeting user requirements in the request for proposal. Further delays in releasing the request for proposal may prevent awarding the ground sensor contract in fiscal year 1988.

For these reasons, we believe the Army should limit its fiscal year 1988 procurement to the four test units. If the procurement is limited, the Army will not need \$45.8 million of its fiscal year 1988 requested funding for the nine production ground sensors it planned to buy for FAAD C2I. The Army will not need \$3.8 million designated for contractor and in-house support if the production integration and ground sensor contracts are not awarded in fiscal year 1988.

Conclusions

The FAAD C2I program will cost more than the Army's \$2.6 million estimate and initial operational capability will not take place as planned in fiscal year 1991. The initial systems will not meet all user requirements primarily because they will not have aerial sensors and noncooperative aircraft identification capabilities. Also, the nondevelopmental ground sensor may not provide the range the user needs and it may be vulnerable to the antiradiation missile threat.

The program cost estimate is understated by at least \$3.2 billion. All valid requirements should be included in subsequent program cost estimates, including the requirements for the Army National Guard, corps missile battalions, and war reserves.

Delays in getting the ACCS equipment will delay several FAAD C2I acquisition milestones. Accordingly, the project office should restructure the overall FAAD C2I acquisition schedule. This would reduce schedule concurrency and related risks.

**Appendix I
Army Forward Area Air Defense Command
and Control System Acquisition and
Budget Issues**

Because of the anticipated delays in the FAAD C2I schedule, the FAAD C2I contract awards scheduled for fiscal year 1988 should be deferred until fiscal year 1989. These contracts include \$16.9 million for software development, \$26.7 million for production integration and associated equipment, and \$45.8 million for ground sensors. If these contracts were deferred, the Army would not need \$93.2 million of the \$207.8 million requested for fiscal year 1988 FAAD C2I funding.

**Recommendation to
the Subcommittee**

We recommend that the Subcommittee reduce the Army's fiscal year 1988 FAAD C2I funding request by \$93.2 million.

**Recommendations to
the Secretary of the
Army**

We recommend that the Secretary of the Army

- review the decision to exclude certain requirements when estimating the FAAD C2I program cost and
- direct the project office to include all valid requirements in subsequent cost estimates.

Objective, Scope, and Methodology

As requested by the Chairman, Subcommittee on Defense, House Committee on Appropriations, we reviewed the acquisition and funding of the FAAD C2I system. Our review specifically focused on system cost, schedule, and technical performance and the Army fiscal years 1987 and 1988 budget requests for FAAD C2I.

Our review was conducted at the U.S. Army Missile Command, Redstone Arsenal, Alabama. Some data was also obtained from the U.S. Army Materiel Command, Alexandria, Virginia; the U.S. Army Air Defense Artillery Center and School, Fort Bliss, Texas; and TRW Defense Systems Group, Redondo Beach, California.

We reviewed various program and budget documents and held discussions with program officials. We did not validate requirements excluded from FAAD C2I cost estimates, but relied on rough estimates provided by project officials. We also made no in-depth analysis of the concurrent FAAD C2I program schedule and associated risks, but relied extensively on the project office's risk assessment of the program schedule. Moreover, we did not attempt to validate Army officials' claim that the urgent need for an automated air defense command and control system outweighed the necessity of waiting to field a complete system.

Except as noted above, our review was performed in accordance with generally accepted government auditing standards from October 1986 through September 1987.



Requests for copies of GAO reports should be sent to:

U.S. General Accounting Office
Post Office Box 6015
Gaithersburg, Maryland 20877

Telephone 202-275-6241

The first five copies of each report are free. Additional copies are \$2.00 each.

There is a 25% discount on orders for 100 or more copies mailed to a single address.

Orders must be prepaid by cash or by check or money order made out to the Superintendent of Documents.

United States
General Accounting Office
Washington, D.C. 20548

Official Business
Penalty for Private Use \$300

Address Correction Requested

First-Class Mail
Postage & Fees Paid
GAO
Permit No. G100