

November 1989

WEAPON  
ACQUISITION

Improving DOD's  
Weapon Systems  
Acquisition Reporting





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

**National Security and  
International Affairs Division**

B-221486.2

November 14, 1989

The Honorable Sam Nunn  
Chairman, Committee on Armed Services  
United States Senate

The Honorable Daniel K. Inouye  
Chairman, Subcommittee on Defense  
Committee on Appropriations  
United States Senate

The Honorable Les Aspin  
Chairman, Committee on Armed Services  
House of Representatives

The Honorable John P. Murtha  
Chairman, Subcommittee on Defense  
Committee on Appropriations  
House of Representatives

This report shows how the Department of Defense (DOD) could substantially improve the quality, timeliness, and presentation of data it provides to the Congress on its major system acquisitions. Case examples are used to demonstrate the benefits of presenting information in DOD's Selected Acquisition Reports (SARS) to Congress as it is in DOD's own internal acquisition status reports. This would permit internal and external status reports to be generated from a single data base. Consolidation of reporting would reduce effort, improve the integrity of the data, and enhance congressional confidence in SARS. We also discuss how greater use of graphics can improve SARS.

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## Background

Since 1969, SARS have been the primary means by which DOD informs the Congress of the status of major weapon system acquisitions.<sup>1</sup> The SAR contains information on each system's cost, schedule, and performance and compares it with earlier estimates established at the demonstration/validation, full-scale development, and production decision points.<sup>2</sup> As

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<sup>1</sup>Major acquisitions are programs with development costs over \$200 million or production costs over \$1 billion.

<sup>2</sup>Demonstration/validation is normally the second phase of the acquisition process, following concept exploration, in which prototypes are built and the system's design and engineering is verified. Full-scale development is normally the third phase in which principal items are fabricated, tested, and evaluated. Production is the fourth phase in which the system is manufactured.

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We also reported<sup>4</sup> that the presentation of SAR reports has not been modernized to take advantage of computer technologies that would improve timing and provide helpful graphics and data analysis.

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### DOD's Internal Acquisition Reporting Includes Actual Contractor Cost Data

In 1984, DOD's Under Secretary of Defense for Research and Engineering recognized the need for maintaining and reporting more timely, consistent, and reliable data on weapon system costs, schedules, performance, and funding status. This need led to the development of a quarterly report called the Defense Acquisition Executive Summary (DAES).

DAES is designed to alert senior DOD executives to potentially significant technical, operational, cost, schedule, performance, and funding problems in SAR programs. A standard microcomputer-based model is used to generate DAES reports that reflect "as of" data current to within 60 days.

We found that the DAES reports embody many of the project reporting attributes discussed in our 1985 report. For example, DAES includes, among other information (1) planned costs to date, (2) actual contractor costs and noncontract costs incurred to date, (3) the variances between actual and planned costs, (4) a schedule of planned deliveries, and (5) a schedule of actual deliveries. Cost data in DAES is taken directly from monthly cost reports submitted by contractors. The contractor cost data included in these reports comes directly from the contractors' accounting systems and is periodically verified by the Defense Contract Audit Agency.

DAES is divided into a number of sections. Each section includes information on a specific subject, such as cost data or delivery data. These sections provide straightforward tabular displays that make it easy for DOD officials to determine the actual progress of individual weapon systems. Similar sections provided to the Congress in SARs are less explicit, making it more difficult to determine progress or problems. For example, DAES provides more complete contract cost performance data than its counterpart section in SARs. Specifically, DAES compares the contractors' planned cost to date with actual accrued cost to date and shows the variance. SARs do not include such a comparison. Additionally, DAES pulls together the individual contract information and incorporates it into a program and contract cost information summary. We found the content and presentation of acquisition information in this manner to be more

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<sup>4</sup>Selected Acquisition Report: Suggested Approaches for Improvement (GAO/NSIAD-86-118, July 17, 1986).

any better or worse than those for other acquisition programs. Our case studies showed that:

- Cost, schedule, and delivery information can be made more explicit and meaningful in SARS and provide Congress with a better overall perspective on the progress of major weapon systems acquisitions. Including data on the contractor's actual cost incurred to date and integrating this with overall program costs, as it is in the DAES, enhances reader understanding of the program's status. (See app. I.)
- SARS include planned annual funding and estimated production rates, but do not include a schedule comparing quantities funded with planned and actual contractor deliveries. A schedule of planned versus actual deliveries as provided in the DAES would allow readers of SARS to see at a glance the trend of what is being received for the money expended. (See app. II.)

## Enhancing Presentation and Usefulness of SAR Data

In addition to the revised reporting format presented in this report, we believe the presentation and usefulness of SAR data could be further enhanced through automation and the use of graphs.

The SARS, which collectively contain approximately 2,000 to 3,000 pages of data, are provided to the Congress only in typed copy. This significantly limits use of SAR information. SARS could be made available on floppy disks. Ultimately, a single SAR data base could be established to allow congressional oversight committees access to SAR data through their own personal computers. SAR data could be formatted in such a way that congressional staff could query the system for key performance indicators relating to each acquisition program.

SAR data reported in tabular format is sometimes difficult to interpret. Our 1986 report showed how graphic displays could make SARS easier to understand and increase their use. Graphs can provide an immediate and easily understood view of cost and delivery trends. SARS primarily focus on changes that have occurred since the last reporting period. A major advantage of graphs is the ease with which longer term trends can be displayed. Appendixes I and II contain illustrations showing how graphics enhance the presentation and usefulness of SAR data.

DOD officials agree that graphics are useful for understanding data, but said that they present unique preparation problems and would not be practical to prepare within the allowed time for submitting SARS. We prepared the graphs in appendixes I and II using readily available and

automate weapon systems reporting using existing computer capabilities.

Since commenting on our draft report, DOD officials have stated they have begun the process of automating SARS. This includes consolidating SARS and DAES in a single data base within the Office of USD/A. DOD comments are included in appendix III. Because of extensive revisions to our draft report, most of DOD's comments on the report are no longer applicable, therefore, we have not included the detailed enclosure to their basic comments.

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## Objective, Scope, and Methodology

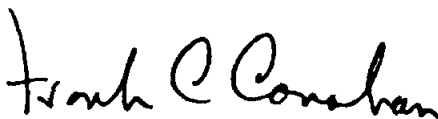
The objective of our review was to examine ways DOD could improve its acquisition status reports to the Congress. We identified and reviewed DOD, program office, and contractor information reporting systems for major weapons acquisitions. We also gathered actual contract cost and schedule information from selected program offices and incorporated it into a revised SAR format. We interviewed cognizant officials from the Office of the Secretary of Defense, weapon system program offices, and weapon system contractors. Our work was performed between September 1987 and February 1989 in accordance with generally accepted government auditing standards.

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We are sending copies of this report to the Secretaries of Defense, Army, Navy, and Air Force. We will send copies to other interested parties upon request.

This report was prepared under the direction of Paul F. Math, Director of Research, Development, Acquisition, and Procurement Issues, who may be reached on (202) 275-8400 if you or your staff have any questions. Other major contributors to this report are listed in appendix IV.

Sincerely yours,



Frank C. Conahan  
Assistant Comptroller General

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**Contents**

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**Abbreviations**

|        |   |
|--------|---|
| AMRAAM | Advanced Medium Range Air-to-Air Missile    |
| DAES   | Defense Acquisition Executive Summary       |
| DOD    | Department of Defense                       |
| IIR    | Imaging Infrared                            |
| RDT&E  | research, development, test, and evaluation |
| SAR    | Selected Acquisition Report                 |

Appendix I  
AMRAAM

**Table I.1: AMRAAM Project Status Report as of December 31, 1985**

Dollars in millions

| RDT&E phase                   | Planned cost to date | Actual cost to date | Cost variance        | Estimated cost at completion |                      |
|-------------------------------|----------------------|---------------------|----------------------|------------------------------|----------------------|
|                               |                      |                     |                      | Program manager              | Contractor           |
| Completed contracts           | \$28.8               | \$28.8              | \$0.0                | \$28.8                       | \$ •                 |
| Active contracts              |                      |                     |                      |                              |                      |
| Hughes full-scale development | 336.6                | 589.0               | [252.4] <sup>a</sup> | [547.1] <sup>a,b</sup>       | [767.0] <sup>a</sup> |
| Other                         | 13.4                 | 14.1                | [ 0.7] <sup>a</sup>  | [ 17.5] <sup>a</sup>         | •                    |
| Noncontract costs             | 214.7                | 214.7               | 0.0                  | 326.1                        | •                    |
| Future costs                  | 0.0                  | 0.0                 | 0.0                  | 52.1                         | •                    |
| <b>Total</b>                  | <b>\$593.5</b>       | <b>\$846.6</b>      | <b>\$253.1</b>       | <b>[\$971.6]<sup>a</sup></b> | <b>\$ •</b>          |

<sup>a</sup>Bracketed figures are included in SAR.

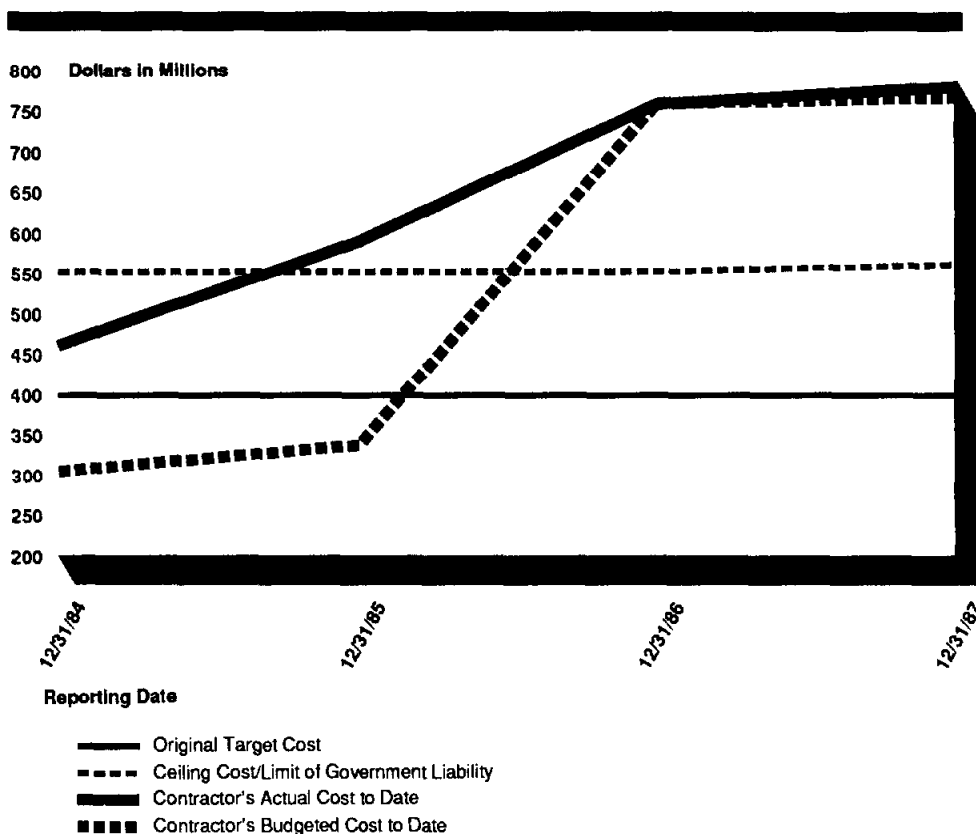
<sup>b</sup>The program manager's estimated cost at completion was limited to the government's liability under the fixed-price contract.

Planned and actual costs are taken directly from the contractor's accounting records and are reported monthly to the program office. These cost reports are required for most major weapon system contracts. They are not always required for fixed-price contracts. Noncontract costs, such as inspections, testing, and other "in-house" costs, are based on the program manager's best estimate.

As shown in table I.1, Hughes had budgeted, or planned, \$336.6 million toward full-scale development of AMRAAM as of December 31, 1985. Actual cost incurred by the contractor was \$589 million. Thus, the contractor's actual cost exceeded the amount the contractor had planned or budgeted by \$252.4 million. The cost variance figure of \$252 million is reported in the SAR but the planned and actual cost figures used to derive the variance are not reported as it is in table I.1 and in DAES. By reporting only the cost variance, the reader cannot determine the significance of the variance in relation to the program's current status. For example, by including planned and actual cost to date figures, the reader can determine that the variance is 75 percent of the planned cost. This gives the reader a more informed perspective on the cost performance of the program than is currently offered in SARs.

Table I.2 updates table I.1 to November 24, 1987. The program's restructuring in 1986 significantly increased planned costs and thus reduced the cost variance. By 1987, the contractor's planned costs for the full-scale development contract had reached \$764.4 million with an actual

Figure I.1: AMRAAM Project Full-Scale Development Contract Costs



The figure clearly shows that the contractor had exceeded the target cost of the contract as early as 1984 and significantly exceeded the ceiling cost by December 1986.

In the case of AMRAAM, the Air Force minimized the implications of the cost overruns. For example, the 1983 SAR reported contract cost would go to the ceiling price and the schedule might extend slightly, but there would be no impact on program funding. By 1984 and 1985, cost overruns had reached \$156 and \$252 million, respectively. In each report, the Air Force dismissed the impact on the government of the overruns as being limited to the ceiling price of the contract. Even though the government is not technically liable for contractor cost overruns on fixed-price contracts, such as the case of the AMRAAM, questions need to be raised early concerning potential long-term cost implications of such overruns. The AMRAAM full-scale development contract was overrunning



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# Imaging Infrared Maverick Missile

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The Imaging Infrared (IIR) Maverick Missile program was designed to develop and procure 60,697 tactical, air-to-ground, anti-armor missiles. The Congress began funding the procurement phase of the program in fiscal year 1982. The cost of the program was estimated to be \$7.6 billion. According to the most recent SAR (December 31, 1988), the program has now been reduced to a total of 23,529 missiles at a cost of \$3.2 billion.

Over the first 3 years of the production phase, the missiles were not being produced at anticipated rates. As a result, funds were being appropriated and obligated for Maverick production much faster than the rate at which missiles could be produced. Although production rates had fallen behind production funding by about 2 years, the Air Force requested an additional \$586.6 million for the purchase of 4,700 Maverick Missiles in fiscal year 1987. After we reported the imbalance to the Congress in June 1986, the fiscal year 1987 funded quantity was reduced to 2,000 missiles. Ultimately, the Air Force was able to acquire 3,224 missiles with the reduced dollar amount.

We believe the Congress could have had a better understanding of the funding versus deliveries' backlog if SARs included a schedule of planned and actual deliveries. Delivery schedules are important to effective oversight of DOD weapon systems acquisitions. This information is routinely reported in DAES and could easily supplement the planned production rate information presently provided in SAR. Illustrations can also be particularly helpful in understanding the status of major acquisition programs. Figure II.1 is a graphic display of Maverick Missile annual funded quantities versus actual deliveries since 1982. The figure shows the sizable gap that had developed between Maverick production funding and actual deliveries.

# DOD Comments

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



COMPTROLLER OF THE DEPARTMENT OF DEFENSE

WASHINGTON, DC 20301-1100

APR 18 1989

Mr. Frank C. Conahan  
Assistant Comptroller General  
National Security and International  
Affairs Division  
Washington, DC 20548

Dear Mr. Conahan:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) Draft Report "WEAPONS ACQUISITION: Improving DoD's Weapon System Acquisition Reporting," dated February 10, 1989, (GAO Code S10272/OSD Case 7903). While disagreeing with many of the findings and conclusions contained in the draft report, the DoD nonetheless agrees that the Selected Acquisition Reports (SARs) can be improved and reiterates its offer to work with the Congress to that end. The Department cautions, however, that merely adding additional detailed information to the SAR will not necessarily improve it. All aspects of the SARs and related reporting requirements must first be examined to eliminate duplication of information and reporting schedule inconsistencies.

The Department continues to disagree that detailed contract information of the type proposed in the draft report should be included in the SAR. In his October 28, 1981, testimony before the House Armed Services Committee Special Panel on Defense Procurement Procedures, then Deputy Secretary Carlucci made the case against including detailed contract execution information in the SAR. The panel was persuaded and, as a result, the SARs were revised to include only summary information on original and current contract estimates and cumulative-to-date contract cost and schedule variances. The Department's position was reaffirmed by Deputy Secretary Taft in his February 27, 1986, response to the House Appropriations Committee request for annual submission of contract cost performance data. It is the Department's position that the contract information currently provided in the SARs is adequate for congressional oversight. If, however, detailed contract execution information is required on a specific program, the data can be provided separately.

The DoD agrees that automation and graphical displays are worthwhile objectives. However, the Department has found that task to be a much more expensive and difficult undertaking than it would at first appear. The problems associated with

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**Our Comment**

The following is our comment on DOD's letter dated April 18, 1989.

Because of the extensive changes made as a result of detailed agency comments, the enclosure containing detailed comments on an earlier version of this report are no longer applicable and has been omitted.

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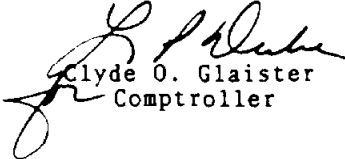
Appendix III  
DOD Comments

networking nearly 100 program offices nationwide, with varied hardware and software requirements, and the need to handle classified data are not trivial. It is doubtful that such an initiative would have sufficient priority to be funded in this time of austere budgets.

In summary, the DoD is interested in working with the Congress to develop more satisfactory weapon system acquisition reporting. Such an effort should include an examination of all information reported to Congress and the elimination of any identified duplications.

The Department appreciates the opportunity to review the draft report. Detailed DoD comments on the report findings and recommendation to the Congress are enclosed.

Sincerely,

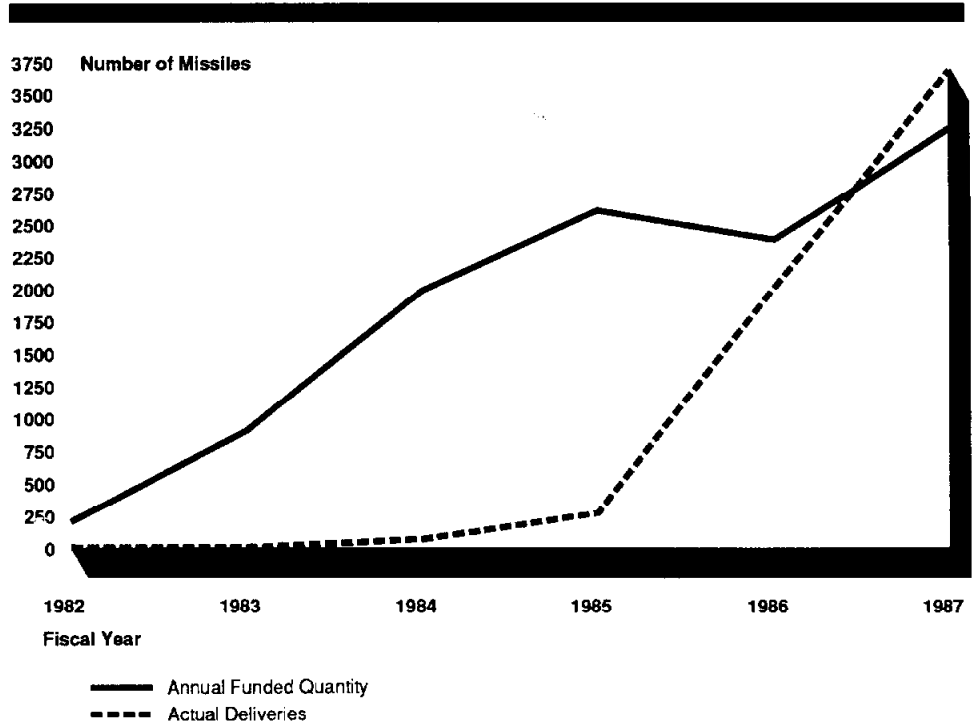
  
Clyde O. Glaister  
Comptroller

See comment.

Enclosure

Appendix II  
Imaging Infrared Maverick Missile

Figure II.1: IIR Maverick Missile Funded Production Quantities Versus Planned Deliveries





hundreds of millions of dollars. Cost overruns of this magnitude are typically associated with development problems, schedule delays, testing problems, or reduced production rates and deliveries. Also, contractors may make claims against the government for cost overruns or attempt to recover these losses in later procurement contracts.

## Improving SAR Presentation of Schedule Data

SAR schedule data can be more explicit and complete. As shown by table I.3, the initial development estimates for low-rate and full-rate production phases for AMRAAM were not reported, and the actual schedule variances were not calculated.

**Table I.3: AMRAAM Program Schedule**  
(As reported in the current SAR format on December 31, 1987)

| Milestones                   | Development estimate | Current estimate |
|------------------------------|----------------------|------------------|
| Start full-scale development | Nov. 1982            | Nov. 1982        |
| Start low-rate production    | N/A <sup>a</sup>     | June 1987        |
| Start full-rate production   | N/A <sup>a</sup>     | Mar. 1989        |
| Initial operating capability | Sept. 1986           | Oct. 1989        |

<sup>a</sup>Reported in SAR as N/A (not applicable).

Table I.4 retains the initial development estimates from earlier AMRAAM SARs and shows the variance between the development and current estimates.

**Table I.4: AMRAAM Program Schedule Variance**

| Milestones                   | Development estimate | Current estimate | Variance (months) |
|------------------------------|----------------------|------------------|-------------------|
| Start full-scale development | Nov. 1982            | Nov. 1982        | 0                 |
| Start low-rate production    | Mar. 1984            | Jun. 1987        | -39               |
| Start full-rate production   | Dec. 1984            | Mar. 1989        | -51               |
| Initial operating capability | Sept. 1986           | Oct. 1989        | -37               |

As shown in table I.4, some important questions become evident with the reporting of more complete and explicit schedule data. The low-rate production milestone was reached 39 months later than originally estimated. This delayed full-rate production, which is now estimated to be 51 months beyond the original December 1984 estimate. Despite being more than 4 years behind originally scheduled milestones, it is now estimated that 14 months can be made up between the full-rate production milestone and initial operating capability.

Appendix I  
AMRAAM

cost of \$777.4 million. Therefore, the \$252 million cumulative cost variance reported in 1985 was reduced to only \$13 million in 1987.

**Table I.2: AMRAAM Project Status Report as of November 24, 1987**

Dollars in millions

| RDT&E phase                   | Planned cost to date | Actual cost to date | Cost variance       | Estimated cost at completion   |                      |
|-------------------------------|----------------------|---------------------|---------------------|--------------------------------|----------------------|
|                               |                      |                     |                     | Program manager                | Contractor           |
| Completed contracts           | \$98.8               | \$98.8              | \$0.0               | \$98.8                         | \$ •                 |
| Active contracts              |                      |                     |                     |                                |                      |
| Hughes full-scale development | 764.4                | 777.4               | [13.0] <sup>a</sup> | [552.5] <sup>a</sup>           | [807.1] <sup>a</sup> |
| Other                         | 23.0                 | 23.3                | 0.3                 | [28.4] <sup>a</sup>            | [23.5] <sup>a</sup>  |
| Noncontract costs             | 307.1                | 307.1               | 0.0                 | 374.3                          | •                    |
| Future costs                  | 0.0                  | 0.0                 | 0.0                 | 83.1                           | •                    |
| <b>Total</b>                  | <b>\$1,193.3</b>     | <b>\$1,206.6</b>    | <b>\$13.3</b>       | <b>[\$1,137.1]<sup>a</sup></b> | <b>\$ •</b>          |

<sup>a</sup>Bracketed figures are included in SAR.

Graphic presentations of the tabular data would further enhance the readability and usefulness of SAR reports. In figure I.1, we used DAES reported information to visually demonstrate how the status of the AMRAAM program has changed over time.

Using the graph as a trend indicator of program progress, the decisionmaker will notice that a significant change took place between December 1985 and December 1986. This graphic presentation can act as a trigger for the decisionmaker to pursue the reasons for the large deviation.

By using our proposed format, the reader could compare previously reported, planned, and actual cost figures with current figures to see how much they changed. In our example, the large increase in planned cost compared to actual cost reflects the program's restructuring. Under the restructuring, the contractor increased its planned cost to a level nearly commensurate with actual cost incurred, which accounts for the cost variance narrowing from \$252.2 million to \$13 million. The December 31, 1987, SAR shows the \$13 million cost variance, but since contractor cost performance figures are not included, the reader does not know how the variance was derived or how it was reduced. A footnote in the 1986 SAR states simply that an over-target baseline has been implemented and therefore, previous cumulative variances no longer apply.

# AMRAAM

The AMRAAM program is an \$11.6 billion program to develop and procure air-to-air radar guided missiles. Since its inception in 1976, the program has experienced cost overruns and schedule delays. Program costs have more than doubled from the original development estimate to purchase missiles for both the Air Force and the Navy. These problems led to the program's restructuring in 1986 that included a \$350 million producibility enhancement program to identify and incorporate changes to reduce AMRAAM's production costs. Initial operational capability, originally estimated to be in 1986, is now estimated to be in 1989, but delays in testing and initial production make this schedule uncertain.

In this appendix, we present AMRAAM program information in a revised format similar to the one DOD uses in its quarterly DAES reports. We believe this type of status reporting, which incorporates actual contractor cost performance data with overall program information, would be more explicit and useful to the Congress.

## Comparing AMRAAM Planned Costs to Actual Costs

Table I.1 shows actual and planned full-scale development cost information for the research, development, test, and evaluation (RDT&E) phase of the AMRAAM acquisition program as of December 31, 1985. The figures in table I.1 are taken from the DAES report.<sup>1</sup> Some of the information in our proposed format is in SARs, but it is not presented together in a single format to easily allow the reader to see how the data relates to overall program status. For example, the cost variance figure (\$252.4) is shown in section 15 of the SAR but is not related in any way to the overall program cost summary presented in section 11 of the SAR. A program and contract cost information summary provides actual contract cost performance data and shows how these costs relate to the overall program status. (See tables I.1 and I.2.)

<sup>1</sup>DOD changed its DAES reporting format after December 1987 and no longer requires the planned cost column.

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widely used computer graphics software. The software easily and quickly converts tabular displays to graphs.

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## Recommendation to Congress

We believe the timeliness, usefulness, and presentation of SAR data can be significantly improved by incorporating key program and cost information formats similar to those in the DAES. Opportunities now exist for USD/A to develop a single weapon system data reporting system that can be used internally by DOD management and to generate status reports to the Congress. Weapon system status reports generated from the same data base used to manage those systems would bring more integrity to SARs and enhance confidence in the data reported to the Congress. Although DOD has some efforts underway, Congress should reinforce its interest by directing DOD to adopt reporting content and format changes presented in this report.

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## Agency Comments

This report was significantly revised in response to detailed comments provided by DOD. As a result, many of DOD's comments and concerns are no longer applicable. Nonetheless, several important disagreements remain.

DOD agreed that major weapon system status reporting could be improved and recognized some of the problems noted in the report. It also agreed with the general objective of our recommendation and stated it is interested in working with the Congress to develop more satisfactory weapon system acquisition reporting.

However, DOD disagreed that additional contractor cost information should be included in SARs. DOD expressed the view that the contract information currently provided in SARs is adequate for congressional oversight and that our report does not identify any significant SAR shortcomings that must be fixed. We believe congressional oversight would be enhanced by a schedule that compares actual contractor costs incurred to date with planned costs and shows the variance between the two. Such a schedule provides a more complete picture of a contractor's cost status than the current SAR format that reports only the variance.

DOD also stated that the use of graphics may reduce reporting timeliness and the task of automating SAR reporting may be difficult and costly. We disagree. The graphic displays used in our report were quickly and easily prepared using SAR data. We also believe that much can be done to

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informative and useful than that provided in SARS. Overall, the DAES is less detailed than SARS and the information is presented in concise, easy to read, formats. We believe that the quality and usefulness of SARS could be substantially enhanced if selected DAES sections were included in or replaced sections of SARS. This report provides examples of how selected DAES sections could be presented in SARS.

At the time of our review, SARS were administered by the Office of the Assistant Secretary of Defense (Comptroller). However, as a result of the Secretary of Defense's recently completed management review, this responsibility was transferred to the Under Secretary of Defense for Acquisition (USD/A). Under this reorganization, the USD/A will be responsible for improving the timeliness, relevance and utility of SARS, DAES, and other information on acquisition matters. Administration of both SARS and DAES within the Office of the USD/A provides an excellent opportunity to consolidate reporting requirements by drawing information from a single automated data system. Some initiatives to reduce, consolidate, and improve acquisition reporting are already underway.

DOD, in commenting on our previous report's suggestions on SAR format changes, stated that it did not object to such changes if the Congress wanted them. DOD noted that it has repeatedly encouraged the Congress to suggest such improvements.

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### Case Studies Demonstrate the Benefits of a Revised SAR Format

Over the last several years, we have reported on cost growth, schedule delays, and other problems associated with a number of major weapon systems programs. These programs have included the B-1B bomber, Advanced Medium Range Air-to-Air Missile (AMRAAM), Maverick Missile, MK-50 torpedo, AN/BSY-2 submarine target detection and classification system, and the command, control, and intelligence component of the Army's forward area air defense system. In each of these cases, SARS provided to the Congress could have contained more useful and timely information if presented in the format suggested in this report.

To demonstrate how SARS can do a better job of highlighting areas in need of attention and raising important questions on the progress of major acquisition programs, we took information on the AMRAAM and Maverick Missile programs and incorporated it into a revised SAR format. Where applicable, these formats replicate those already used by DOD in its DAES reports. The AMRAAM and Maverick programs are used simply for illustrative purposes. SARS on these programs are not judged to be

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of December 31, 1988, DOD had 94 programs, with a total cost of \$819 billion, that were included in SARS.

SARS, however, do not include actual contractor costs incurred to date, or a schedule comparing funded quantities to planned and actual contractor deliveries. Also, original milestone dates are not always retained and therefore, the variances from original milestone dates are lost. Including better cost and schedule information and improving the manner in which it is presented could increase the SARS usefulness to the Congress in making multimillion and sometimes billion dollar program funding decisions.

The Congress has continuously expressed dissatisfaction with the lack of timely and complete data in SARS. In its 1982 report, the House Committee on Armed Services Special Panel on Defense Procurement Procedures noted that "the SAR is inadequate in its reporting on major weapon systems to the Congress, thus inhibiting proper oversight."

The need to keep the Congress apprised of weapon systems status through SARS was emphasized in the 1987 hearings on the B-1B bomber before the House Armed Services Committee. It was pointed out that the December 31, 1986, B-1B SAR did not adequately describe the cost, schedule, and performance status of the weapon system. The Committee emphasized that the Congress wanted SARS to provide full, open, and timely disclosure to facilitate communication between DOD and the Congress. More recently, a member of the House Armed Services Committee stated that over the last 15 years SARS had grown in length and complexity, but not in usefulness or intelligibility.

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## Improving Weapon System Reporting

In previous reports we have suggested changes to improve SARS. One suggested change was to compare the contractors' actual costs with planned cost in the reports. Our February 1985 report<sup>3</sup> outlines key elements of a modern financial management structure for producing clear, consistent, and reliable project reports. The report discussed a revised SAR format that would compare planned costs with actual costs and include estimates of time needed to complete a project. The actual cost data would come directly from the contractor's accounting system.

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<sup>3</sup>Managing the Cost of Government: Building an Effective Financial Management Structure (GAO/AFMD-85-35 and 85-35A, Feb. 1985).

