REPORT TO THE CONGRESS

ON THE

FOLLOW-ON EARLY WARNING SYSTEM

15 APRIL 1991

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INTRODUCTION

(U)   Within the Tactical Warning and Attack Assessment (TW/AA) mission area, we have recognized the need to improve the Defense Support Program (DSP) since 1979. The current system cannot satisfy all of the validated military requirements. Therefore the Department has formulated an approach to satisfy these requirements and stay within funding constraints. This approach provides an improved capability over the present system and growth potential to meet the full set of TW/AA requirements.

BACKGROUND

(U)   In 1979 the Defense Systems Acquisition Review Council recognized that improvements were needed to the ballistic missile surveillance system. At that time the Council determined that a two track program was needed to detect future ballistic missile threats. The Council agreed that there were low risk, cost effective improvements that could be made to DSP to increase performance and improve survivability. As a result, the Air Force funded the Mobile Ground Terminal effort, increased the number of sensor detectors from 2000 to 6000, and initiated the laser crosslink program.

(U)   The Committee endorsed a technology push effort as the second track. This effort would increase sensor performance, develop onboard data processing that provided warning messages directly to users, and increased survivability. This program was called the Advanced Warning System (AWS).

(U)   In 1984, the Deputy Secretary of Defense, directed that the ballistic missile detection and warning requirements of the Strategic Defense System and the Tactical Warning/Attack Assessment (TW/AA) community be satisfied by a single platform. The Secretary transferred the AWS program to the Strategic Defense Initiative Organization (SDIO), and the program became the Boost Surveillance and Tracking System (BSTS).

(U)   In 1990, as a result of advances in the Brilliant Pebbles concept, the Director SDIO determined that the BSTS was not an essential element of the Strategic Defense System. The Deputy Secretary of Defense then returned the BSTS/AWS program to the Air Force to meet essential TW/AA needs.
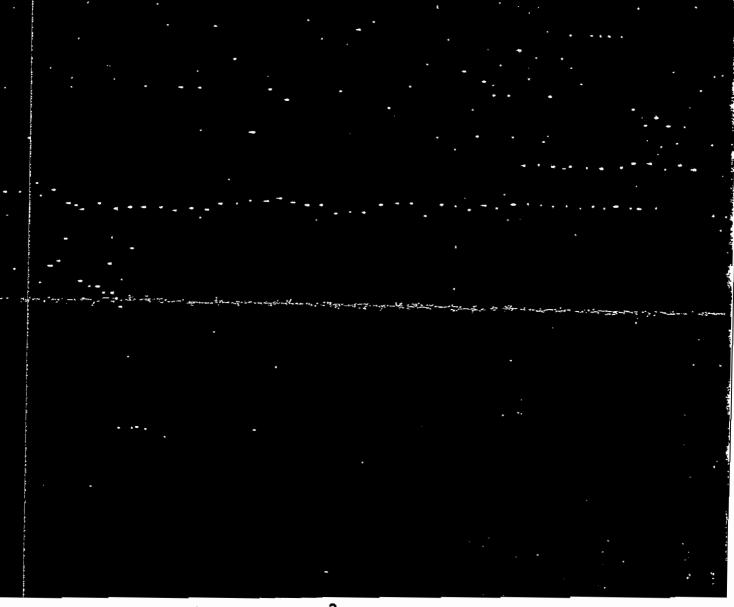
WHY WAS THE ADVANCED WARNING SYSTEM CANCELLED?

(U) In building the FY92-93 budget the Department had to
make cuts in ongoing programs in order to stay within budget
constraints. The Department therefore terminated the AWS
program, and replaced it with a competitive program that improves
performance over the present system and provides a growth path to
eventually meet all requirements. The Department did not change
or relax any of the TW/AA requirements.

WHY DO WE NEED AN IMPROVED SYSTEM?

HOW WELL DID DSP PERFORM IN DESERT STORM?

WHAT ARE THE OBJECTIVES OF THE FOLLOW-ON PROGRAM?

(U)   While we don't expect initial deployment of the follow-on system to satisfy all of the validated TW/AA requirements, contractors must demonstrate that their design does provide growth potential - a key objective.

(U)   The new system will reduce operating costs and manpower by eliminating the overseas ground stations. It will incorporate dual satellite crosslinks, so that more than one path exists for sending data back to the US for processing. This plan differs from today's crosslink plan which passes data in one direction and only to one satellite.

(U)   Some performance shortfalls can be eliminated by upgrading the present DSP, however, we believe that a competitive acquisition will allow the selection of the most cost effective approach toward better performance and reduced operating expenses.

(U)   We can reap benefits from prior investments because much of the required technology has already been developed through the BSTS effort. Detector material development, light-weight optics, and on-board data processing were the main efforts in the BSTS Demonstration/Validation phase. These are all key technologies needed for the follow-on system.

WHAT IS THE ACQUISITION PLAN?

(U)   Since the follow-on program takes a different approach
to meeting TW/AA needs than our previous BSTS/AWS efforts, we
will close out the BSTS/AWS contracts by 30 Jun 1991. Technology
projects applicable to the follow-on program will be continued to
natural break points (such as the end of design, fabrication or
test) to capture the benefits of the past development efforts.
The decision to stop funding the present contractor teams is
based on the plan for full and open competition from all sources,
and the need to conserve FY91 funds appropriated for AWS to start
the follow-on program Demonstration/Validation contracts.

(U)   We plan to release a Request for Proposal for the
follow-on program in late FY91. We will award contracts for the
Demonstration/Validation effort in March 92. This effort should
take eighteen to twenty-four months and will be structured to
develop the best capability possible within budget and schedule
constraints. We will down-select to a single contractor for full
scale development including construction of the first block of
satellites. First launch is planned for 2001.

INITIAL FUNDING ESTIMATES

(U)   The follow-on program will likely need RDT&E funds in
lieu of currently budgeted procurement funds. Refined cost
estimates will be included in an upcoming budget amendment, and
we will use these estimates to adjust the Future Years Defense
Plan.