

STATEMENT OF GEORGE L. DONOHUE, ASSOCIATE ADMINISTRATOR FOR RESEARCH AND ACQUISITIONS, FEDERAL AVIATION ADMINISTRATION, BEFORE THE HOUSE COMMITTEE ON SCIENCE, SUBCOMMITTEE ON TECHNOLOGY, CONCERNING THE FISCAL YEAR 1998 RESEARCH, ENGINEERING AND DEVELOPMENT AUTHORIZATION. MARCH 13, 1997.

Chairwoman Morella and Members of the Subcommittee:

I appreciate the opportunity to appear before you today to discuss the FAA's research, engineering and development (R,E&D) program. I would like to highlight for you some changes we have made in response to recent legislation, and also briefly discuss our role in responding to recommendations of the White House Commission on Aviation Safety and Security.

Let me begin by reporting on actions we have taken in response to the Federal Aviation Reauthorization Act of 1996. At this Committee's initiative, several important changes were included in the Act that affect the FAA's R,E&D program. These changes enhance the role of the R,E&D Advisory Committee in reviewing our research programs, and also improve the way our National Aviation Research plan is developed and presented.

First of all, as directed by the 1996 Reauthorization Act, we have made sure the R,E&D Advisory Committee is more closely involved in assessing our priorities. For our Fiscal Year 98 R,E&D programs, the Advisory Committee met last year to review our plans and provided its views. Its recommendations were considered in our allocation of resources to specific programs.



For the Fiscal Year 99 program, we plan to increase the Advisory Committee's role by using six standing subcommittees and regularly scheduled meetings to solicit the Committee's recommendations throughout the period when our investment priorities are developed. This should further heighten the Advisory Committee's valuable oversight of our plans. In my view, a principal strength of the FAA's R,E&D program is the expertise and commitment of the members of this Committee. Our enhanced use of the Advisory Committee is in direct response to this Subcommittee's concerns, and we appreciate your attention and encouragement in this area.

Another major area of change in the R,E&D program concerns our National Aviation Research Plan. The 1997 R,E&D Plan, which we delivered to the Subcommittee last month -- on time, I am happy to report -- included changes called for in the 1996 Reauthorization Act. For example, we reduced the scope of the plan from 15 years to 5 years, clearly showed the allocation of resources between long-term and near-term research projects, and described the way we assign priorities among competing R,E&D projects. We now highlight in the plan R,E&D activities that stem from Advisory Committee recommendations, and include our responses to those recommendations. We are grateful both to the Advisory Committee, and to this Subcommittee, for their assistance in substantially improving our R,E&D plan.

I would also like to address today the personnel and acquisition reforms initiated under the Fiscal Year 96 Department of Transportation Appropriations Act. Although I will focus primarily on acquisition reform, I would like to note that we recently hired a new Chief Scientist and Technical Advisor for our Technical Center, and new Chief Scientists for Software Engineering and Human Factors.

Our new acquisition management system, which took effect April 1 of last year, provides a simplified, more flexible way to meet our acquisition needs. Crucial to this process is a partnership between customers, users and industry which covers the entire life cycle of the equipment, from the time when systems are conceived to the time they are taken out of service. Our approach has been to bring together all these key players from the very beginning of the process through the use of integrated product teams (IPT).

We are committed to ensuring that these initiatives stay on course, and will keep a close eye on their progress using both in-house evaluations and independent assessments. Indications thus far are that the new systems are working well to help the FAA field critical equipment within budget and on schedule to meet our customers' needs.

For example, last year we awarded a \$1 billion contract for the Standard Terminal Automation Replacement System, or STARS. STARS is designed to replace aging computers at over 170 Terminal Radar Control facilities and pave the way for future upgrades that will allow the system to handle increased traffic safely and more efficiently.

Under the old system, a contract of this size would have typically taken up to 18 months from the time of request for proposal to contract award. In this case, however, we awarded the contract in just 6 months. The IPT used its pre-competition screening ability to eliminate unqualified bidders early in the process, which substantially cut the time needed for contract award. We also saved time because virtually all of the hardware, and most of the software, were commercial off-the-shelf products, not items developed specifically for this contract. I am happy to report that none of the losing STARS contractors filed a protest, which is unlike what we would have expected under the old system.

In addition to reporting on actions we have taken in response to legislative changes, I would like to touch briefly on the recommendations of the White House Commission on Aviation Safety and Security, which recently issued its final report. The Commission issued a wide range of recommendations that cover safety, air traffic control, airspace modernization, security and financial issues. Some of the recommendations affect virtually the entire agency, such as the principal goal of reducing the fatal accident rate by a factor of five over the next ten years. Another broad-based recommendation is to advance the timeline for modernizing the National Airspace System (NAS). These recommendations, as well as others concerning human factors research and security technology, for example, will involve the R,E&D program. We are now working quickly within the FAA to develop pertinent cost and resource information, as well as schedules and priorities, to determine how best to achieve the needed results.

One of our primary challenges will be the Commission's recommendation that we develop within six months a revised NAS plan that will accelerate the modernization schedule. I think we can all agree with the statement in the Commission's report that "modernization of our aging airspace system is critical to the safety of the traveling public, to maintaining our world leadership in aviation, and to our economic interests."

One of the main issues to be considered in airspace modernization, as the Commission also noted, is the availability of non-traditional means of financing capital improvements. Although the flexibility we have been given in the areas of personnel and acquisitions reform has been helpful, meaningful financial reform will be essential to our success.

Another concern I have about the modernized airspace system is making sure that new systems are demonstrated working together, under real operating conditions, for evaluation before we have systemwide acquisitions, training and deployment. This will significantly reduce the learning curve and ease the way for a faster and smoother transition to the new modernized system. Finally, I would note that achieving the full benefits of modernization will require significant additional private investment in avionics, and we are looking at ways to reduce those costs.

In closing, I would like to assure the Members of this Subcommittee that we are working in partnership with government agencies, including especially NASA and the Department of Defense, as well as with research institutions and others to leverage scarce R&D funds,

and to gain access to expertise in specialized areas of technology. We now have over 250 agreements for R&D partnerships with research organizations, foreign governments, and industry consortia. We have also established university-based Centers of Excellence for research. I would like to assure you that we consider this Subcommittee an important partner in helping us meet the challenges facing all of us as we work to modernize the National Airspace System to meet the aviation needs of the next century.

That concludes my prepared statement. I would be pleased to respond to questions you may have at this time.