



Highlights of [GAO-05-759T](#), a report to the Chairman, Subcommittee on Federal Financial Management, Government Information, and International Security, Committee on Homeland Security and Governmental Affairs, U.S. Senate

Why GAO Did This Study

The Advanced Technology Program (ATP) supports research that accelerates the development of high-risk technologies with the potential for broad-based economic benefits for the nation. Under the program, administrators at the National Institute of Standards and Technology are to ensure that they do not fund research that would be conducted in the same period without ATP funding. Between 1990 and September 2004, ATP funded 768 projects at a cost of about \$2.3 billion. There is a continuing debate over whether the private sector has sufficient incentives to undertake research on high-risk, high-payoff emerging technologies without government support, such as ATP.

This testimony discusses the results of GAO's April 2000 report, *Advanced Technology Program: Inherent Factors in the Selection Process Could Limit Identification of Similar Research* (GAO/RCED-00-114) and provides updated information. GAO determined (1) whether ATP had funded projects with research goals that were similar to projects funded by the private sector and (2) if ATP did, whether its award selection process ensures that such research would not be funded in the future.

www.gao.gov/cgi-bin/getrpt?GAO-05-759T.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Robin M. Nazzaro at (202) 512-3841 or nazzaror@gao.gov.

ADVANCED TECHNOLOGY PROGRAM

Inherent Factors in Selection Process Are Likely to Limit Identification of Similar Research

What GAO Found

The three completed ATP-funded projects GAO reviewed, which were approved for funding in 1990 and 1992, addressed research goals that were similar to those already funded by the private sector. GAO chose these 3 projects from among the first 38 completed projects, each representing a different technology sector: computers, electronics, and biotechnology. These three technology sectors represent 26 of the 38 completed ATP projects, or 68 percent. The projects included an on-line handwriting recognition system, a system to increase the capacity of existing fiber optic cables for the telecommunications industry, and a process for turning collagen into fibers for human prostheses use. In the case of the handwriting recognition project, ATP provided \$1.2 million to develop a system to recognize cursive handwriting for pen-based (i.e., without a keyboard) computer input. GAO identified several private firms that were conducting similar research on handwriting recognition at approximately the same time the ATP project was funded. In fact, this line of research began in the late 1950s. In addition, GAO identified multiple patents, as early as 5 years prior to the start of the ATP project, in the field of handwriting recognition. GAO found similar results in the other two projects.

Two inherent factors in ATP's award selection process—the need to guard against conflicts of interest and the need to protect proprietary information—make it unlikely that ATP can avoid funding research already being pursued by the private sector in the same time period. These factors, which have not changed since 1990, make it difficult for ATP project reviewers to identify similar efforts in the private sector. For example, to guard against conflicts of interest, the program uses technical experts who are not directly involved with the proposed research. Their acquaintance with ongoing research is further limited by the private sector's practice of not disclosing its research efforts or results so as to guard proprietary information. As a result, it may be impossible for the program to ensure that it is consistently not funding existing or planned research that would be conducted in the same time period in the absence of ATP financial assistance.

GAO made no recommendations in its April 2000 report.