Calendar No. 388

105th Congress
2d Session

SENATE

REPORT
105–196

TECHNOLOGY ADMINISTRATION AUTHORIZATION ACT FOR FISCAL YEARS 1998, 1999, AND 2000

R E P O R T

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ON

S. 1325

MAY 22, 1998.—Ordered to be printed

U.S. GOVERNMENT PRINTING OFFICE
59–010 WASHINGTON : 1998

SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED FIFTH CONGRESS

SECOND SESSION

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TECHNOLOGY ADMINISTRATION AUTHORIZATION ACT FOR FISCAL YEARS 1998, 1999, AND 2000

MAY 22, 1998.—Ordered to be printed

Mr. MCCAIN, from the Committee on Commerce, Science, and Transportation, submitted the following

REPORT

[To accompany S. 1325]

The Committee on Commerce, Science, and Transportation, to which was referred the bill (S. 1325) to authorize appropriations for the Technology Administration of the Department of Commerce for fiscal years 1998 and 1999, and for other purposes, having considered the same, reports favorably thereon with amendments and an amendment to the title and recommends that the bill, as amended, do pass.

PURPOSE OF THE BILL

The purpose of the bill, as reported, is to authorize appropriations to the Technology Administration (TA) of the Department of Commerce (DOC) for FY 1998, FY 1999, and FY 2000 as follows:

SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION TECHNOLOGY ADMINISTRATION BUDGET SPREADSHEET FOR FISCAL YEARS 1998 AND 1999

[IN MILLIONS OF DOLLARS]

Area of Consideration	FY 1998	FY 1999	FY 2000
Office of Under Secretary for Technology	8.500	10.807	11.132
Scientific and Technical Research and Services	271.900	287.658	296.287
Industrial Technology Services	306.000	318.371	324.491
Advanced Technology Program (ATP)	(192.500)	(204.000)	(210.120)

Area of Consideration	FY 1998	FY 1999	FY 2000
Manufacturing Extension Program (MEP)	(113.500)	(114.371)	(114.371)
Construction and Maintenance	95.000	67.000	56.700
Total	681.400	683.836	688.610

BACKGROUND AND NEEDS

Under the leadership of the Under Secretary of Commerce for Technology, the TA provides advice on technology policy, supports technology development programs, and disseminates technology information. The Under Secretary oversees the three major components of the TA: (1) the Office of Technology Policy, (2) the National Institute of Standards and Technology (NIST), and (3) the National Technical Information Service (NTIS). The mission of the Office of Technology Policy is to evaluate, develop, and promote policies and programs that facilitate private sector innovation and U.S. industrial competitiveness. NIST (formerly the Bureau of Standards) is, by far, the largest of the three TA activities. NIST conducts in-house research and development as well as standards activities in support of U.S. industry. In addition, through its Industrial Technology Services (ITS) account, NIST funds two external technology grant and assistance programs: the Advanced Technology Program (ATP), which provides grants to companies to undertake initial high risk high-tech research to develop promising technologies with economic potential (but does not support product development), and the Manufacturing Extension Partnership (MEP), which provides manufacturing assistance to small and medium-sized businesses through regional centers. NIST also manages the Malcolm Baldridge National Quality Award, which is given to U.S. companies that excel in quality achievement and total quality management. NTIS is a self-financed agency that collects and sells to the public technical information generated by the U.S. government and foreign sources.

In recent years, of all the TA activities, the greatest controversy has involved NIST's grant programs—ATP and MEP. Proponents of ATP argue that the program strengthens the U.S. economy by providing U.S. companies with a critical helping hand by funding peer reviewed, high risk, yet promising, commercially-relevant research ventures that private capital sources would be unlikely to finance because of the risk and unlikelihood of a quick return on investment. However, opponents of ATP view the program as "corporate welfare" and believe that the goal of increased U.S. competitiveness is better achieved through a combination of deregulation, tax reform, tort reform, and more vigorous enforcement of trade agreements.

MEP has been viewed by critics of NIST in a more favorable light. Through its 42 centers and smaller local activities, MEP provides assistance to the Nation's 381,000 small and medium-sized firms seeking to modernize their plants. Proponents assert that this is precisely the kind of assistance that these firms need because it is difficult for owners and managers of small companies to find high-quality, unbiased information, advice, and assistance. In

addition, many of these firms lag behind foreign competitors in technology and operations, leading larger firms to look increasingly for offshore suppliers. However, some believe that the MEP concept of using extension agents to visit industries to identify and to address their needs is not a cost-effective model and is particularly inefficient in rural states where the agents must travel great distances. Opponents also argue that the MEP makes insufficient use of advanced computer networking to deliver needed technical assistance to U.S. companies.

LEGISLATIVE HISTORY

On February 11, 1997, the Administration submitted its FY 1998 budget request for TA to the Congress. On February 2, 1998, the Administration submitted its FY 1999 budget request for TA to the Congress. On May 7, 1997, the Subcommittee on Science, Technology, and Space held an oversight hearing on TA's programs at which time testimony was heard from Dr. Mary Lowe Good, Under Secretary of Commerce for Technology. On May 14, 1997, the Full Committee held a hearing on the Program Efficiencies at DOC at which time testimony was heard from Raymond Kammer, Acting Chief Financial Officer and Assistant Secretary for Administration.

On October 28, 1997, Senator Frist, Chairman of the Subcommittee, introduced S. 1325, a bill to authorize appropriations for TA for FY 1998 and FY 1999. The bill was cosponsored by Senators Rockefeller, Burns and Hollings.

During March and April of 1998, the following sixteen Senators were added as co-sponsors to the bill: Senator Thurmond, Senator Santorum, Senator Kerry, Senator Levin, Senator Roberts, Senator Lieberman, Senator Kennedy, Senator Snowe, Senator Jeffords, Senator Bingaman, Senator Moynihan, Senator Collins, Senator Wellstone, Senator Dodd, Senator Specter, and Senator D'Amato.

On April 30, 1998, the Committee met in executive session and, on a roll call vote, ordered the bill, as amended, to be reported.

SUMMARY OF PROVISIONS

As reported, S. 1325 would authorize funding for TA through FY 2000 and make several changes to the programs of TA. Major provisions of S. 1325, as reported, include:

1. *Authorization of Appropriations.* A total of $681.4 million would be authorized for the TA for FY 1998, $683.8 million for FY 1999, and $688.6 million for FY 2000. The authorized funding level for TA is allocated among its activities as indicated in the chart under Purpose of the Bill.

2. *National Institute of Standards and Technology Act Amendments.* Substantial changes would be made to the manner in which ATP is administered. Specifically, the participation of large companies would be restricted to joint ventures or partnerships only; all competitions would be required to be general and open to all applicants; and a study by the National Academy of Science (NAS) of ATP also would be required.

3. *MEP Sunset Provision.* The current six year sunset provision of the MEP program would be lifted subject to a bi-annual review

and a limitation of Federal funding to one-third of the total program costs.

4. *Teacher Science and Small State Competitiveness.* The reported bill would establish two new programs within the TA: (1) the Teacher Science and Technology Enhancement Institute Program; and (2) the Experimental Program to Stimulate Competitive Technology (EPSCoT).

5. *Malcolm Baldridge Award.* The reported bill would extend the Malcolm Baldridge Award to include categories for health care and education.

6. *Office of Air and Space Commercialization.* To coordinate space-related issues, programs, and initiatives within the Department of Commerce (DOC), the reported bill would establish the Office of Air and Space Commercialization.

ESTIMATED COSTS

In accordance with paragraph 11(a) of rule XXVI of the Standing Rules of the Senate and section 403 of the Congressional Budget Act of 1974, the Committee provides the following cost estimate, prepared by the Congressional Budget Office:

U.S. CONGRESS,
CONGRESSIONAL BUDGET OFFICE,
Washington, DC, May 8, 1998.

Hon. JOHN MCCAIN,
Chairman, Committee on Commerce, Science, and Transportation, U.S. Senate, Washington, DC.

DEAR MR. CHAIRMAN: The Congressional Budget Office has prepared the enclosed cost estimate for S. 1325, the Technology Administration Authorization Act for Fiscal Years 1998, 1999, and 2000.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contacts are Kathleen Gramp (for federal costs), and Pepper Santalucia (for the state and local impact).

Sincerely,

PAUL VAN DE WATER
(For June E. O'Neill).

Enclosure.

CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

S.1325—Technology Administration Authorization Act for Fiscal Year 1998, 1999, and 2000

S. 1325 would authorize appropriations for fiscal years 1998 through 2000 for various technology programs in the Department of Commerce. Funds would be authorized for the National Institute of Standards and Technology (NIST), for the office of the Undersecretary for Technology, and for administrative support for the International Arctic Research Center. The bill would authorize several new initiatives at NIST, including a program for teacher enhancement in science and technology, and an experimental program to stimulate competitive technology. Other provisions would modify the terms of existing programs, including one that would authorize

NIST to transfer title to tangible personal property to recipients of Advanced Technology Program (ATP) funding under certain conditions. NIST also would be allowed to extend the duration of financial support provide to regional centers for the transfer of manufacturing technology.

Assuming appropriation of the authorized amounts, CBO estimates that implementing S. 1325 would result in additional discretionary spending totaling $1.3 billion over the 1999-2003 period. Provisions regarding the transfer of title to personal property could affect direct spending; therefore, pay-as-you-go procedures would apply to the bill. CBO estimates, however, that the impact on direct spending would not be significant in any one year. S. 1325 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act of 1995 (UMRA) and would impose no costs on state, local, or tribal governments.

Estimated cost to the Federal Government: The estimated budgetary impact of S. 1325 is shown in the following table. The costs of this legislation fall within budget function 370 (commerce and housing credit). For the purposes of this estimate, CBO assumes that all amounts authorized will be appropriated near the beginning of each fiscal year and that outlays will follow the historical spending patterns for the affected programs. This bill could affect direct spending if NIST chose to transfer title to some of the personal property acquired under ATP that otherwise would have been sold as surplus property under current law. Based on information provided by NIST, however, CBO estimates that the potential loss in sale receipts would not be significant in any one year. Other provisions of the bill would have no significant budgetary impact.

SPENDING SUBJECT TO APPROPRIATION

[By fiscal year, in millions of dollars]

	1998	1998	2000	2001	2002	2003
Spending Under Current Law:						
Budget Authority [1]	681	0	0	0	0	0
Estimated Outlays	627	376	237	120	19	11
Proposed Changes:						
Authorization Level	0	689	694	0	0	0
Estimated Outlays	0	268	427	298	246	110
Spending Under S. 1325:						
Authorization Level [1]	681	689	694	0	0	0
Estimated Outlays	627	644	664	418	265	121

[1] The 1998 level is the amount appropriated for that year.

Pay-as-you-go considerations: Section 252 of the Balanced Budget and Emergency Deficit Control Act of 1985 sets up pay-as-you-go procedures for legislation affecting direct spending and receipts. Provisions in S. 1325 authorizing NIST to convey title to personal property could affect direct spending, but CBO estimates that the cost would not be significant in any single year.

Estimated impact on State, local, and tribal governments: S. 1325 contains no intergovernmental mandates as defined in UMRA, but several sections of the bill would affect grant programs that benefit state and local governments. The bill would authorize appropriations totaling about $229 million for the 1999–2000 period for the Manufacturing Extension Partnership (MEP), a program jointly financed by the federal government and state or local

agencies. The MEP is a program designed to enhance productivity and technological performance in the United States and is made up of the State Technology Extension Program (STEP) and the Manufacturing Extension Centers Program (MECP). STEP provides technical assistance and planning grants to states to develop or revitalize their technology programs. MECP involves cooperative agreements between the federal government and nonprofit institutions that are often funded by state or local development agencies or universities. The fiscal year 1998 funding for the entire MEP program was $114 million.

The bill would extend the length of time that the manufacturing extension centers are eligible to receive federal funding. Under current law, cooperative agreements last as long as six years. Such agreements provide up to 50 percent funding for the centers in the first three years and a declining percentage in subsequent years. The bill would allow a center to continue receiving federal funding after the sixth year as long as it passed periodic reviews.

S. 1325 would also authorize a new program to strengthen the technological competitiveness of states that have historically received less federal research and development funds than other states. Grants, which would require at least a 25 percent match, would be available to consortia including state and local governments. The Congress appropriated $1.6 million for this program for fiscal year 1998, and the bill would authorize appropriations of $3 million for fiscal year 1999.

Estimated impact on the private sector: This bill would impose no new private-sector mandates as defined in UMRA.

Previous CBO estimate: On April 19, 1997, CBO transmitted a cost estimate for H.R. 1274, the National Institute of Standards and Technology Authorization Act of 1997, as ordered reported by the House Committee on Science on April 16, 1997. Differences between the estimates are attributable to differences in the two bills.

Estimate prepared by: Federal costs: Kathleen Gramp. Impact on State, local, and tribal governments: Pepper Santalucia.

Estimate approved by: Paul N. Van de Water, Assistant Director for Budget Analysis.

REGULATORY IMPACT STATEMENT

In accordance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee provides the following evaluation of the regulatory impact of the legislation, as reported:

NUMBER OF PERSONS COVERED

S.1325, as reported, would reauthorize appropriations for DOC's TA for fiscal years 1998, 1999, and 2000. The TA conducts measurements and standards activities in support of U.S. industry and manages technology grant and assistance programs to increase U.S. competitiveness. The Committee believes that the bill will not subject any individuals or businesses affected by the bill to any additional regulation.

ECONOMIC IMPACT

Providing for continual funding would allow NIST to continue its support of U.S. industries by conducting its standards and measurements setting functions. NIST's grants and assistance programs would continue to assist U.S. businesses to be more competitive in international markets and would continue to benefit the general public through contributing to the economic growth of the country from investments in new science and technology ventures that otherwise would not have been undertaken.

PRIVACY

This legislation will not have an adverse impact on the privacy of individuals.

PAPERWORK

This legislation would not increase the paperwork requirement for private individuals or businesses. The legislation would require two reports: (1) the President would be required to submit to Congress a report of any educationally useful equipment that has been donated to schools; and (2) the Secretary of Commerce would be required to submit a report to the Senate Committee on Commerce, Science, and Transportation and the House Committee on Science concerning the status of the EPSCoT program.

SECTION-BY-SECTION ANALYSIS

Section 1. Short title

This section would permit the bill to be cited as "the Technology Administration Authorization Act for Fiscal Years 1998, 1999, and 2000."

Section 2. Definitions

This section would provide the definitions of several key terms used throughout the bill.

Section 3. Authorization of appropriations for scientific and technical research and development

Section (a) would authorize $272 million for Scientific and Technical Research Services for FY 1998, $288 million for FY 1999, and $296 million for FY 2000.

The Committee recognizes NIST's important and legitimate role in promoting U.S. industrial competitiveness by working with industry to develop and apply measurements, standards, and technology. The basic research and standards work at NIST is an important function. Increasingly, standards are being used by foreign governments to close their markets to U.S. industries. There is little question that standards will become an increasingly potent trade weapon to hinder market entry by U.S. firms or retaliate against the United States. In recognition of this, the bill would provide adequate funds for NIST's laboratory and standards programs for FY 1998, FY 1999, and FY 2000.

The Committee recognizes the role of quality as an integral part of today's business management practices. The Committee com-

mends NIST for its work in establishing the Malcolm Baldridge Quality Award criteria, which is used by thousands of organizations as a general performance and business excellence model. The award was established not only to recognize individual U.S. companies for their achievement, but also to promote quality performance and competitiveness strategies. Of the funds authorized by this subsection, $3 million would be authorized for the program for FY 1998 and $5.4 million for FY 1999 and FY 2000. The increase in funding would result from the program expanding to include categories for health care and education.

In Subsection (b), NIST would be provided $95 million for FY 1998, $67 million for FY 1999, and $56.7 million for FY 2000 for the Construction and Maintenance account in order to fund needed new construction and renovations at NIST. As required in paragraph (2), the FY 1999 authorization level would be contingent upon the Secretary of Commerce submitting a plan for meeting the facility needs of NIST to the Senate Committee on Commerce, Science, and Transportation and the House Committee on Science. This plan should reflect the total needs of the laboratories at both the Gaithersburg, MD and Boulder, CO locations.

Section 4. Authorization for the office of the Under Secretary for Technology

Section 4 of the reported bill would authorize $8,500,000 for FY 1998, $10,807,000 for FY 1999, and $11,132,000 for FY 2000 for the activities of the Under Secretary for Technology and the Office of Technology Policy.

Section 5. Authorization of appropriation for industrial technology services

This section would authorize $306.00 million for ITS for FY 1998, $318.371 million for FY 1999, and $324.491 for FY 2000. The ITS account funds NIST's ATP and MEP.

There would be authorized to be appropriated for ATP, $192.5 million for FY 1998, $204 million for FY 1999, and $210.12 million for FY 2000. There would be authorized to be appropriated for the MEP program, $113.5 million for FY 1998, $114.37 million for FY 1999, and $114.37 million for FY 2000.

Section 6. National Institute of Standards and Technology Act amendments

Section 6 of the reported bill would make several amendments to the NIST Act.

Subsection (a) would amend the NIST Act, making changes to the process by which ATP operates.

Specifically under subsection (a), paragraph (1) would require the reviewers, as part of the current technical merit review process, to make a determination that the research projects in question would not go forward in a timely manner without federal assistance. In addition, each program applicant would be required to certify that an unsuccessful attempt has been made to secure private market funding for the research project involved. In providing the certification, each applicant would be required to include a written narrative description of the efforts made to secure the funding. Para-

graph (1) also would restrict a large business' participation to joint ventures only, and the joint ventures would have to include one or more small businesses.

In paragraph (2), the term "large business" would be defined as a business with gross annual revenues greater than $2.5 billion. A small business would be defined in accordance with section 3(a)(1) of the Small Business Act. A medium business would be a business that is neither a small business nor a large business.

Paragraph (3) would make a technical correction to the Act to redesignate subsection (j) of the existing code as subsection (m).

Paragraph (4) would authorize the Director to grant an extension beyond the 5 year deadline for completing a project provided that the extension would result in no additional costs to the federal government and is in the federal government's interest. Paragraph (4) also would allow the Secretary to vest title to tangible personal property in ATP grant recipients as long as (a) the property is purchased as part of the ATP grant, and (b) the Secretary determines that the vesting furthers the objectives of NIST. The vesting made under this subsection would be made only if subject to the limitations prescribed by the Secretary and only if made with no additional cost to the federal government.

Subsection (b) would amend the NIST Act provisions which govern ATP to allow non-industry joint venture participants such as universities and non-profits participating as ATP awardees and subawardees the option of retaining title to the intellectual property generated under ATP programs where the non-government parties to the ATP project agree it will serve the interests of the participants in the project. This change will provide a greater opportunity for industry to work together with universities and other nonprofit organizations. The amendment language removes any restriction requiring patent title be held by nonprofit companies and permit the participants to agree among themselves as to where patent title will vest. The amendment also provides a preemption of the requirements of chapter 18 of title 35 of the U.S. Code as required by that chapter. It furthers stipulates that these provisions are not retroactive.

Subsection (b) of the reported bill would eliminate all focus program competitions. Specifically, this subsection would require all awards to be based on general open competitions.

Furthermore, the Committee commends the Secretary and Director on the ATP Action Plan dated July 1997 which was issued after a 60 day public review of the ATP process. Specifically, the Committee encourages the Secretary to continue efforts to address the recommendations of the Inspector General's office relating to management improvements. They include:

(a) ATP projects should be multi-year funded projects with scopes of work containing clearly defined milestones which are severable into annual increments of meaningful work; and

(b) the value of contributions of equipment and other necessary resources counted toward cost sharing of projects should be costed as prescribed by the Office of Management and Budget (OMB) Circular A-110.

Section 7. Manufacturing extension partnership program center extension

This section of the reported bill would amend the NIST Act to extend the period in which MEP centers may receive federal funding. The period would be extended beyond six years if the MEP center receives a positive evaluation through a review of procedures and criteria established by NIST. The review would take place within two years after the sixth year of operation and every two years thereafter. The federal proportion of funding received by each center after the sixth year shall not exceed one-third of the total funding for capital and annual operating expenses and maintenance costs.

Section 8. Malcolm Baldridge quality award

This section of the reported bill would amend the Stevenson-Wydler Technology Innovation Act by adding two categories for the Malcolm Baldridge Quality Award, health care providers and education providers.

Section 9. Next generation internet

This section of the reported bill would ensure that, unless authorized elsewhere, no new funds may be used for work on the Next Generation Internet. The section would allow for the continuation of programs and activities that have been funded with FY 1997 funds.

Section 10. Notice

Subsection (a) would require that any notice of reprogramming which would be given to the Appropriations Committees of the House of Representatives and the Senate, also would be concurrently provided to the Senate Committee on Commerce, Science, and Transportation and the House Committee on Science. Subsection (b) also would require that the Director provide notice to the Senate Committee on Commerce, Science, and Transportation and the House Committee on Science of any major reorganization no later than 15 days prior to such reorganization.

Section 11. Sense of Congress on the year 2000 problem

This section expresses the sense of the Congress that NIST should give high priority to correcting the Year 2000 problem in all computer systems to ensure effective operation in the year 2000 and beyond. The Director of NIST should assess immediately the potential risk to NIST's systems by the problem and develop a plan and a budget to correct the problem for its mission-critical programs. The Director should also begin consideration of contingency plans in the event that certain systems are unable to be corrected in time.

Section 12. Enhancement of science and mathematics programs

This section expresses the sense of the Congress that the Director should donate educationally useful material to schools such that they may be used to enhance the science and mathematics programs at those schools. School is defined as a public or private educational institution that serves any of the grades from kindergarten

through grade 12. Furthermore, the Director would report to the President any donations of federal equipment made to schools. The President would be required to include this report as part of his annual budget request to Congress.

Section 13. Teacher Science and Technology Enhancement Institute program

This section of the reported bill would require the Director to establish a Teacher Science and Technology Enhancement Institute Program for NIST. The purpose of the program would be to provide for the professional development of elementary, middle, and secondary (K-12) mathematics and science teachers and their improvement in teaching strategies, self-confidence in teaching science, and understanding of science and its impact on commerce.

The Director would be required to focus the program on scientific measurements, test and standards development, industrial competitiveness, quality, manufacturing, technology transfer, and any other area of expertise of the Institute.

The Director would be required to develop the procedures and selection criteria of those teachers who are participating in the program. The Enhancement Institute would be conducted annually during the summer months while the elementary, middle, and secondary schools are not in session to allow for maximum participation of teachers. The program would be required to provide for the teachers participation which may include any stipends and/or travel costs.

The program would provide teachers with an opportunity to get "hands-on" experience in NIST's laboratory facilities. The Director should allow scientists and technologists from NIST to be available to participate in the enhancement program when possible. The Committee intents for this "hands-on" experience to assist teachers in more effectively explaining science topics to their students upon their return to the classroom.

Subsection (b) would require that $1.5 million for FY 1998 and $2.5 million for FY 1999 be made available for the enhancement program from the funds authorized for laboratory activities in section 3(a). No specific funding level has been specified for FY 2000.

Section 14. Joint study by the National Academy of Science and the National Academy of Engineering

This section would require the Secretary of Commerce to enter into a contract with the NAS and the National Academy of Engineering (NAE), within 90 days, to conduct a joint study of ATP. The NAS and NAE would be required to establish a study panel consisting of members who are: (1) industry and labor leaders; (2) entrepreneurs; (3) individuals who have previously served as government officials and have recognized expertise and experience in civilian research and technology; and (4) individuals with recognized expertise and experience with respect to science and technology, including individuals who have had experience working with or for a Federal laboratory.

The NAS and NAE would be required to include in the contents of the study: (1) a thorough review of the effectiveness of ATP; (2) a root cause analysis to determine which aspects of ATP have been

effective in stimulating the development of technology and what strategies, if any, have failed; and (3) an examination of alternative approaches, if any, that would accomplish the purposes of ATP. Subsection (d) would require that the study be completed within one year after the initiation of the contract between the Secretary of Commerce and NAS and NAE and that the Secretary then would forward the report to the President and the Congress.

Section 15. Office of Air and Space Commercialization

This section would establish the Office of Air and Space Commercialization within DOC. The office would serve as the principal unit for coordination of space-related issues, programs, and initiatives within the Department. Subsection (b) would require that the Office be headed by a Director, compensated at the Senior Executive Service level. The Director would be responsible for: (1) promoting commercial provider investment in space activities by collecting, analyzing, and disseminating information on space markets, and conducting workshops and seminars to increase awareness of commercial space opportunities; (2) assisting U.S. commercial providers in their efforts to conduct business with the government; (3) acting as an industry advocate within the executive branch of the Federal government to ensure that the Federal government meets its own space-related requirements, to the fullest extent feasible, with respect to commercially available space goods and services; (4) ensuring that the U.S. government does not compete with U.S. commercial providers in the provision of space hardware and services otherwise available from U.S. commercial providers; (5) promoting the export of space-related goods and services; (6) representing the DOC in the development of U.S. policies and in negotiations with foreign countries to ensure free and fair trade internationally in the area of space commerce; and (7) seeking the removal of legal, policy, and institutional impediments necessary to enhance reasonable space commerce.

Section 16. Experimental program to stimulate competitive technology

The goal of the EPSCoT program, which will include a merit review process, is to use the successful model of the National Science Foundation's (NSF) Experimental Program to Stimulate Competitive Research (EPSCoR) to promote technology transfer and the development of new technologies in an effort to encourage partnerships to advance technology transfer and development between the DOC's TA, EPSCoR state committees, State science and technology councils, small business representatives, and other appropriate technology-based businesses in eligible states. Governors traditionally play a key role in appointing members of state EPSCoR committees and State science and technology councils, and therefore, Governors and their economic development offices, and science and technology offices should be consulted as part of the EPSCoT program to ensure that the technology transfer initiatives support and promote the economic development strategy of eligible states.

Specifically, subsection (a) would require the Secretary of Commerce to establish a program to be known as EPSCoT. The purpose of the program would be to strengthen the technological competi-

tiveness of those States that have historically received less Federal research and development funds than those received by a majority of the states.

The Secretary would be required to enter into such agreements as necessary to provide for coordination of the program with the NSF's EPSCoR and small businesses, as well as other technology-based businesses.

The Secretary would be authorized to make grants or enter into cooperative agreements to provide for technology research and development, technology transfer from university research, technology deployment and diffusion, and the strengthening of technological capabilities through consortia comprised of: (1) technology-based small business firms; (2) industries and emerging companies; (3) universities; and (4) state and local development agencies and entities.

The Secretary would be required to ensure that the awards to the program are given on a competitive basis including a review of the merits of the activities. The awards are required to be given on a cost-shared basis with the non-federal portion of the funding accounting for not less than 25 percent of the cost of the project's activities.

The Secretary would be required to establish criteria for achievement by each state that participates in the program. Upon achieving this criteria, states would be no longer eligible to participate in the program.

The Secretary would be required to coordinate the program with other existing programs within DOC.

Within 90 days after enactment of this legislation, the Under Secretary of Commerce would be required to prepare and submit to the Secretary a report on the program which then would be transmitted to the Senate Committee on Commerce, Science, and Transportation and the House Committee on Science. The report would include: (1) a description of the structure and procedures of the program; (2) a management plan for the program; (3) a description of the merit-based review process to be used in the program; (4) milestones for the evaluation of activities to be assisted under the program in each of fiscal years 1998 and 1999; (5) an assessment of the eligibility of each State that participates in the NSF's EPSCoR to participate in the program under this subsection; and (6) the evaluation criteria by which the overall management effectiveness of the program will be measured pursuant to an evaluation. The evaluation, required of the Secretary, would be due 4 years after the date the program is enacted and in accordance with the established criteria.

Subsection (b) would provide for $1.65 million in funding for FY 1998 and $3 million for FY 1999 out of the funds authorized in section 4 for the Office of the Under Secretary for Technology. No specific funding level has been authorized for FY 2000.

Section 17. Federal Aviation Administration as alternative authority

This section of the reported bill would certify that any fastener used on an aircraft of component, subassembly, or part of an aircraft that has been manufactured or altered by, or under the direc-

tion and control of, the holder of a Type Certificate, Production Certificate, parts Manufacturer Approval, or Technical Standard Order Authorization issued by the Federal Aviation Administration, or manufactured or altered subject to a quality assurance program approved by the Federal Aviation Administration, is considered to be in compliance with the Fastener Quality Act. This provision would prevent duplication by Federal agencies in product quality certification from the Federal Quality Assurances programs.

Section 18. International Arctic Research Center

This section of the reported bill would authorize to be appropriated $5 million for the International Arctic Research Center for fiscal years 1999 and 2000.

The International Arctic Research Center provides common facilities, administration, and logistical support used by the international scientific community to investigate and enhance our understanding of: (1) climate change; (2) the geophysical, natural sciences, and life sciences; (3) the environmental impacts of human activities in the northern hemisphere; and (4) other new horizons of scientific inquiry that are of critical importance to understanding the Arctic. The data gathered at the research center provides insight of critical importance to global health, economy, and policy formulation.

ROLLCALL VOTES IN COMMITTEE

In accordance with paragraph 7(c) of rule XXVI of the Standing Rules of the Senate, the Committee provides the following description of the record votes during its consideration of S. 1325:

After agreeing to amendments, the Committee voted to report the bill as amended, by rollcall vote of 14 yeas and 3 nays as follows:

YEAS—14—	NAYS—3
Mr. Stevens[1] –	Mr. McCain
Mr. Gorton—	Mr. Abraham
Mr. Lott[1]—	Mr. Brownback
Ms. Snowe —	
Mr. Frist—	
Mr. Hollings–	
Mr. Inouye—	
Mr. Ford	
Mr. Rockefeller	
Mr. Kerry	
Mr. Breaux	
Mr. Bryan	
Mr. Dorgan	
Mr. Wyden[1]	

[1]By proxy

CHANGES IN EXISTING LAW

In the opinion of the Committee, it is necessary to dispense with the requirements of paragraph 12 of rule XXVI of the Standing Rules of the Senate in order to expedite the business of the Senate.

MINORITY VIEWS OF SENATOR ABRAHAM AND SENATOR McCAIN

Now that the Commerce Committee has voted out S. 1325, the Technology Administration Authorization Act, we wanted to take this opportunity to discuss further our concerns regarding this legislation. While our opposition to the bill is widespread, we will focus these remarks on just one program within NIST, the Advanced Technology Program.

Over the past ten years, the ATP has given over $1 billion to some of America's largest corporations to research and develop new production technologies. We do not support taking money from hardworking American families, money they would otherwise save and invest, pay for an education, buy a better house, and giving it to the richest and largest businesses in America. Providing such unwarranted subsidies is simply not the proper role of the federal government. The ATP is flawed in concept, design and practice, and it should be abolished.

Flawed in Concept. Supporters of ATP claim that without the government's guidance and assistance, America's businesses would fail to prepare properly for tomorrow's challenges. They claim American businesses are too short-sighted and too focused on the bottom line to invest properly for the future. This argument may have carried some weight ten years ago when ATP was created, largely in response to concerns that the so-called "Asian Tiger" was threatening US economic supremacy. Today, however, it is a tough sell.

A more current view is that American corporations, unlike many of their foreign counterparts, do an excellent job of balancing the need to invest in the future with the demands of stockholders. In fact, there is much research to suggest that stockholders are more far-sighted than many here in Washington would like to believe. As the GAO recently reported:

> If investors are motivated only by short-term returns, announcements of longer-term R&D projects would lead to a decrease in stock prices. Various authors have used these studies as an indication of investors' interest in stacks that make additional R&D expenditures.... Results from these studies have typically shown that firms that announce increases in R&D spending experience an increase in stock prices, suggesting that the investors value these long-term investments.

The market provides evidence to the contrary as well. The ATP was conceived, at least in part, in reaction to the "managed trade" model of Japan. In the past ten years, however, the Japanese stock market has lost 60 percent of its value. At the same time, the "unmanaged" US stock market has grown over 300 percent.

Still further support is provided by the McCain amendment. This amendment strikes at the very heart of the ATP program by ensur-

ing that future ATP grants are not "focused" on particular technologies, but competitively offered to the broad spectrum of possible projects instead. The ATP was created to provide both subsidy and direction to US production development. The McCain amendment leaves the subsidy but it takes away the direction. In that respect, it represents an improvement and we supported it. Even with this modest improvement, however, the ATP is still flawed in its design.

Flawed in Design. The ATP's goal is to fund projects that would not be funded by private capital but that would still provide positive social benefits. Neither NIST nor the participating companies, however, have any incentive to target unfunded projects. Instead, they have just the opposite incentive, that is, to fund projects that would have proceeded without ATP grants.

As the American Enterprise Institute observed, "To meet the ATP's goals, program managers need to succeed at two things: selecting projects with large returns to the nation and funding only those projects that would not otherwise find private financing." AEI goes on to conclude, "Unfortunately, there is no reason to believe that firms will propose only projects with low profits and large social benefits to the ATP."

For businesses, a NIST grant carries fewer strings and less oversight than an equity investment from the capital markets. For NIST, picking projects that would have been funded anyway increases the chance that the project will be successful. These successful projects, in turn, can be used to sell the program to Congress and future taxpayers.

Either way, hardworking families unnecessarily subsidize big business. This is perhaps the reason the GAO found that over half the ATP grant applicants in its survey did not look elsewhere for funding before applying to ATP. Worse, some firms even turned down offers of private funding prior to applying for ATP grants.

During the markup, Senator Brownback discussed the need to strengthen the requirement that applicants first seek private funding options. While Senator Frist has added some improved language regarding this issue, we are concerned that the protections are not strong enough and we intend to support the Brownback amendment on the Senate floor.

Flawed in Practice. Finally, the ATP does a poor job of executing its mission. Most ATP projects are multi-year affairs. Many ATP grants, however, are awarded on a year-to-year basis, apparently in violation of existing rules.

To be eligible for year-to-year funding, a project must be severable into annual segments that have defined work products that represent tangible accomplishments. An IG analysis of 1995 awards found that NIST "inappropriately used incremental funding for research awards that were not severable." According to the IG:

The OIG conducted an audit to assess NIST's use of multi-year funding for ATP projects, and the adequacy of management controls over NIST's FY 1995 ATP final award process. Our audit disclosed that NIST inappropriately use incremental funding for research awards that were not severable. NIST also failed to comply with departmental requirements for multi-year funding because the grants officer did not certify that project activities for FY 1995 awards were severable.

For supporters and opponents of the ATP alike, the use of incremental funding by the ATP poses two major concerns. First, it makes existing projects dependent on new appropriations to be completed if future ATP funding is cut, then projects already approved by the ATP may fail to receive their total grants. Second, it opens the door for micro-management of projects by ATP officials. Since grantee must come back for each year's funding, ATP officials have an increased say in how grants are used.

In other words, multi-year funding allows the ATP to stretch its funds farther, but only at the cost of increased micromanagement and increased risk to the potential success of existing projects.

Senator Abraham's proposed reform would address these concerns by writing into statute the recommendations of the Inspector General with respect to funding of ATP grants. Specifically, the amendment requires the Secretary of Commerce to:(1) review all prior year ATP awards not funded for the entire project period and ensure that required certifications of severability are prepared for awards that are severable; (2) fully fund the remaining awards that are not severable prior to obligating funds for new ATP awards; and (3) require that future ATP projects approved by the Commerce Department receive full funding at the time of their approval and not in year-to-year increments unless they are accompanied by a certification by the grants officer that the particular award is severable and what the defined work-products should be for the funded segment.

While we hope this reform and others are adopted, they do not change our opposition to the ATP. There is little value to improving something that shouldn't be done in the first place. The ATP should be abolished, not reauthorized, and we intend to continue working to see that happen. We thank Senator Frist for his hard work.

ADDITIONAL VIEWS OF SENATOR HOLLINGS

The ATP is an important investment in American economic competitiveness. It supports American industry's own efforts to develop new cutting-edge, next-generation technologies, technologies that will create the new industries and jobs of the 21st century. The ATP does not fund the development of commercial products. Instead, it provides matching funds to both individual companies and joint ventures for "pre-product" research on these high-risk, potentially high-payoff technologies. These technologies include promising new ideas in manufacturing, advanced electronics, and new materials.

Why do we need the ATP? The answer is simple: to keep America competitive and create jobs. Long-term technology has become the key to future U.S. prosperity at precisely the time that global competition, downsizing, and shareholder pressures now force American companies to focus scarce research dollars on short-term projects. The Commerce Department estimates that these market pressures now push companies to spend up to 90 percent of their research funding on projects that will pay off in one to five years. As a result, U.S. companies, small and large, now have serious trouble funding long-term, next-generation technologies that will build new industries but will not pay for 10-15 years. Moreover, historically the U.S. Government has supported long-term research in only a few key sectors, an approach very different from our foreign competitors.

The ATP's sole aim is to develop new basic technologies that would not be pursued ever, or pursued soon, because of technical risks and other obstacles that discourage private-sector investment. The ATP does not support product development, and is modeled on similar Federal research programs which have long helped a few sectors such as agriculture, the aircraft industry, and energy technology. The program particularly helps small technology companies. To date, the ATP has made 352 cost-sharing awards, involving 842 companies and research partners in 40 States.

Although ATP competitions have been in existence for only seven years, already a real difference can be seen from the early awards that have been completed. The November 1997 Case Study on Printed Wire Board Research Joint Venture is just one example of the successes we are seeing. The case study indicated that 62 tasks were completed in the joint venture in which half would not have been undertaken in the absence of ATP funding. In addition, sharing in the joint venture saved over $35 million for industry by preventing duplication of work, testing materials, and machine time. Most importantly, the ATP sponsored project saved over 200,000 U.S. jobs.

The Secretary of Commerce also released another study in February 1998, the Development, Commercialization, and Diffusion

Study, which showed that so far: (1) there have been 210 projects with more than 1000 applications; (2) over 100 new patents have been filed; (3) 35% of the applications are considered to be "new-to-the-world;" and (4) commercialization plans have been provided by companies for nearly 800 applications.

These studies show that ATP does not benefit one company over another. Rather, this program benefits industry in general, the American public, and the U.S. economy.

I want to mention three other points about the ATP. First, the ATP is part of a long American tradition of supporting industry efforts to develop new technologies. To date, most of those efforts have been in defense or a few key civilian areas. But those older U.S. investments have been substantial and effective. The Department of Agriculture helped create modern agriculture; the government has supported aeronautical research since 1915; and the National Institutes of Health helped create biotechnology. The ATP simply extends this proven model of long-term investments in technology to the rest of U.S. industry.

Second, this is not interfering with the marketplace or having the government pick winners and losers. The ATP is without doubt the most market-driven technology program supported by the government. Industry, not government, proposes the specific projects to focus on. Industry, not government, runs the projects and contributes the majority of the funds. As mentioned, the ATP supports only long-term pre-product research, never product development, and awards are made by peer-review panels of technical experts and retired business executives, not by the White House, not by the Secretary of Commerce, and not by Congress.

Third, the ATP has enjoyed strong bipartisan support. The Bush Administration wrote the regulations for the ATP, and in his FY 1993 budget President Bush requested substantial increases for the program. In addition, on June 25, 1992, Senate Republicans, through the Senate Republican Task Force on Adjusting the Defense Base, endorsed both the ATP and the NIST manufacturing extension program.

This program has had strong bipartisan support in the past, and Senators Frist, Rockefeller, and others should be commended for their bipartisan efforts to continue and strengthen the program. First, this bill will prohibit large companies from participating as single applicants. I do not agree necessarily with this approach, but I understand the Senators' efforts to move this debate past partisan politics and arguments about "corporate welfare" for large companies. Attempts by certain members to exclude large companies from participating at all in the program are counterintuitive in that such an approach would potentially prevent the best technology proposals from being considered and would in fact turn the program into a small business assistance program that "picks winners and losers" as opposed to a program that picks the best technology proposal. This provision is a good balanced approach in that it allows large companies to continue to participate, but it requires them to include small companies in their efforts.

To address concerns that applicants are not seeking funding from the venture capitalists, the bill contains a provision that the applicants must certify that private market funding for the project was

sought. The provision in the bill does not require them to list proprietary information about why they were denied private funding nor does it require them to produce large amounts of additional paperwork as part of the application.

Finally, the bill would require the National Academy of Sciences to conduct a thorough review of the program to determine which aspects of the program have been successful and which have not been successful. This program was established as a result of an Academy study, and such a review is healthy in keeping the program on target.

For the past two years, projects that received funding at the beginning of the program have reached completion, and the studies of these completed projects are showing that this program is a huge success. Whether it is the 200,000 jobs saved in the wire print board industry or the hundred plus new patent applications, this program has already made a significant impact on the U.S. economy and in the lives of many Americans. As more projects are completed, and studies are conducted, the facts will show that this program not only works, but it works well. Hopefully, this bill will help Congress move past partisanship and provide support for sound national policy that is saving hundreds of thousands of American jobs and contributing hundreds of millions of dollars to the national economy.

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