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ACTION: INTRODUCED BY MR. GORTON, et al.

By Mr. GORTON (for himself, Mr. DANFORTH, Mr. RIEGLE, Mr. HEFLIN, Mr. GORE, Mr. ROCKEFELLER, Mr. DOLE, Mr. HOLLINGS, and Mr. INOUYE):

S. 1914. A bill to amend the Stevenson-Wydler Technology Innovation Act of 1980 to permit cooperative agreements between industry and laboratories owned and operated by the Federal Government, and for other purposes; to the Committee on Commerce, Science, and Transportation.

FEDERAL TECHNOLOGY TRANSFER ACT

Mr. GORTON. Mr. President, our country is the world leader in innovation. Our scientists and engineers work on the leading edge of almost every field of research. And yet, our Nation faces strong competition in the international marketplace in even the newest areas of technology, where we should enjoy the strongest advantage. How can we translate our successes in the laboratory into new products and processes in the marketplace? How can we accelerate the rate of technological innovation for the benefit of consumers here at home and for the benefit of American industry competing in the international marketplace?

One way, I believe, is to open up our Federal laboratories to industry and to universities for cooperative research. The Federal Government will invest $60 billion in research and development in 1986. Much of that money goes to our universities. Over $18 billion, however, goes to 380 Government laboratories, which employ 1 out of every 6 research scientists in this country. There are eight of these laboratories in my home State of Washington, conducting research in such diverse areas as agriculture, fisheries, mining, and energy.

A few years ago a White House panel chaired by David Packard was commissioned to see if we are getting our money's worth out of the Federal laboratories. It concluded that the Federal laboratories need to provide much more access to their facilities by universities and industry.

This year the President's Commission on Industrial Competitiveness concluded that the United States needs to support basic scientific research and make it more useful for

commercial purposes. There have been other reports, as well. The National Governors' Association published a report on State initiatives in technological innovation which concluded that the national laboratories are far from realizing their full potential as catalysts for joint research.

These reports are unanimous in their advocacy of allowing the Federal labs to enter into the kinds of joint research and licensing arrangements with which the universities have had to much success. The Commerce Committee held a series of three hearings on these subjects this year, which also led me to the same conclusions. Our job in Congress is to clear away unnecessary legal and institutional barriers to technology transfer, and that is the purpose of this bill.

The bill which I and my colleagues are introducing today gives explicit permission for the federally operated laboratores to enter into cooperative research arrangements with private industry, universities, and other persons. The authority is broad and permissive. It is designed to decentralize the decisionmaking about cooperative research, and about the licensing of inventions.

The bill also establishes a system to reward our scientists both for their work in areas with commercial potential and for outstanding work in noncommercial areas. It includes royalty sharing with the inventor of a minimum of 15 percent of the royalties of a given invention, and it directs agencies to use the existing cash award system to reward scientists and technicians for innovation. Our scientists, engineers, and technicians are the Government's most precious scientific resource, and must be rewarded accordingly.

The bill also makes official the status of the Federal Laboratory Consortium for Technology Transfer. This organization has been providing an effective networking function between the Federal laboratories for more than a decade. It deserves to be recognized and funded sufficiently to continue its work in transferring technology to the private sector.

Finally, the bill amends the Stevenson-Wydler Technology Innovation Act of 1980 to make it more acceptable, less confusing, and to bring it into conformity with existing practice.

Mr. President, this bill is the result of work by many people. Many of its provisions have their origin in S. 65, a bill introduced by Senators DOLE and DANFORTH. S. 65 was referred to the Judiciary Committee. Because of the similarities, I would not object to referring this legislation to Judiciary for a short period of time.

I am enthusiastic about the potential for technological innovation and development in our Federal laboratories. Some already have outstanding accomplishments that have found their way into our economy. I hope that this legislation, once enacted, will clear the way for many more.

I ask unanimous consent that a copy of the bill and a section-by-section analysis be printed in the RECORD.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

S. 1914

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Federal Technology Transfer Act of 1985".

UTILIZATION OF FEDERAL TECHNOLOGY

SEC. 2. (a) Section 11(a) of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710(a)) is amended—

(1) by inserting "(1)" after "POLICY.—"; and

(2) by adding at the end thereof the following:

"(2) Each laboratory director shall ensure that efforts to transfer technology are considered positively in laboratory job descriptions, employee promotion policies, and evaluation of the job performance of scientists and engineers in the laboratory.".

(b)(1) Section 11(b) of such Act (15 U.S.C. 3710(b)) is amended—

(A) by striking "a total annual budget exceeding $20,000,000 shall provide at least one professional individual full-time" and inserting in lieu thereof "200 or more full-time scientific, engineering, and related technical positions shall provide one or more full-time equivalent positions";

(B) by striking "requirements set forth in (1) and/or (2) of this subsection" and inserting in lieu thereof "requirement set forth in clause (2) of the preceding sentence"; and

(C) by striking "either requirement (1) or (2)" in the last sentence and inserting in lieu thereof "such requirement".

(2) Section 11(c) of such Act (15 U.S.C. 3710(c)) is amended—

(A) by amending paragraph (1) to read as follows:

"(1) to prepare application assessments for selected research and development projects in which that laboratory is engaged and which in the opinion of the laboratory may have potential commercial applications;";

(B) by inserting "all" before "federally owned" in paragraph (2);

(C) by striking "the Center for the Utilization of Federal Technology" in paragraph (3) and inserting in lieu thereof "the National Technical Information Service, the Federal Laboratory Consortium for Technology Transfer,";

(D) by striking "in response to requests from State and local government officials." in paragraph (4) and inserting in lieu thereof "to State and local government officials; and"; and

(E) by adding at the end thereof the following:

"(5) to participate, where feasible, in regional, State, and local government programs designed to facilitate or stimulate the transfer of technology for the benefit of the region, State, or local jurisdiction in which the federal laboratory is located.".

(c) Section 11(d) of such Act (15 U.S.C. 3710(d)) is amended—

(1) by striking all from "(d)" through "shall—" and inserting in lieu thereof the following:

"(d) DISSEMINATION OF TECHNICAL INFORMATION.—The National Technical Information Service shall—";

(2) by striking paragraph (2);

(3) by striking "existing" in paragraph (3), and redeisgnating such paragraph as paragraph (2);

(4) by striking paragraph (4) and inserting in lieu thereof the following:

"(3) receive requests for technical assistance from State and local governments, respond to such requests with published information available to the Service, and refer such requests to the Federal Labortoary Consortium for Technology Transfer to the extent that such requests require a response involving more than the published information available to the Service;";

(5) by redesignating paragraphs (5) and (6) as paragraphs (4) and (5), respectively; and

(6) by striking "(c)(4)" in paragraph (4), as so redesignated, and inserting in lieu thereof "(c)(3)".

(d) Section 11(e) of such Act (15 U.S.C. 3710(e)) is amended by striking "Center for the Utilization of Federal Techology" and inserting in lieu thereof "Assistant Secretary for Productivity, Technology, and Innovation".

ESTABLISHMENT OF FEDERAL LABORATORY CONSORTIUM FOR TECHNOLOGY TRANSFER

SEC. 3. Section 11 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710), as amended by section 2 of this Act, is further amended—

(1) (1) redesignating subsection (e) as subsection (f); and

(2) by inserting after subsection (d) the following:

"(e) ESTABLISHMENT OF FEDERAL LABORATARY CONSORTIUM FOR TECHNOLOGY TRANSFER.—(1) There is established the Federal Laboratory Consortium for Technology Transfer (hereinafter referred to as the 'Consortium') which, in cooperation with Federal laboratories and the private sector, shall—

"(A) develop and, with the consent of the Federal laboratory concerned, administer techniques, training courses, and materials concerning technology transfer to increase the awareness of Federal laboratory employees regarding the commercial potential of laboratory technology and innovations;

"(B) furnish advice and assistance requested by Federal agencies and laboratories for use in their technology transfer programs (including the planning of seminars for small business and other industry);

"(C) provide a clearinghouse, at the laboratory level, for requets for technical assistance from States and units of local governments, businesses, industrial development organizations, not-for-profit organizations (including universities), Federal agencies and laboratories, and other persons, and—

"(i) to the extent that a response to such requests can be made with published information available to the National Technical Information Service, refer such requests to that Service; and

"(ii) otherwise refer such requests to the appropriate Federal laboratories and agencies;

"(D) facilitate communication and coordination between Offices of Research and Technology Applications of Federal laboratories;

"(E) utilize (with the consent of the agency involved) the expertise and services of the National Science Foundation, the Department of Commerce, the National Aeronautics and Space Administration, and other Federal agencies, as necessary;

"(F) with the consent of any Federal laboratory, facilitate the use by such laboratory of appropriate technology transfer mechanisms such as personnel exchanges and computer-based systems;

"(G) with the consent of any Federal laboratory, assist such laboratory to establish

technical volunteer service programs for the purpose of providing technical assistance to communities related to such laboratory; and

"(H) facilitate communication and cooperation between Offices of Research and Technology Applications of Federal laboratories and regional, State, and local technology transfer organizations.

"(2) The membership of the Consortium shall consist of the Federal laboratories described in clause (1) of subsection (b) and such other laboratories as may choose to join the Consortium. The representation to the Consortium shall include a senior staff member of each Federal laboratory which is a member of the Consortium and a representative appointed from each Federal agency with one or more laboratories.

"(3) The representatives to the Consortium shall elect a Chairman of the Consortium.

"(4) The Director of the National Bureau of Standards shall provide the Consortium, on a reimbursable basis, with administrative services, such as office space, personnel, and support services of the Bureau, as requested by the Consortium and approved by such Director.

"(5) Not later than one year after the date of the enactment of this subsection, and every year thereafter, the Chairman of the Consortium shall submit a report to the President, to the appropriate authorization and appropriation committees of both Houses of the Congress, and to each agency with respect to which a transfer of funding is made (for the fiscal year or years involved) under paragraph (6), concerning the activities of the Consortium and the expenditures made by it under this subsection during the year for which the report is made.

"(6)(A) Subject to subparagraph (B), an amount equal to 0.005 percent of that portion of the research and development budget of each Federal agency that is to be utilized by the laboratories of such agency for a fiscal year referred to in subparagraph (B)(ii) shall be transferred by such agency to the National Bureau of Standards at the beginning of the fiscal year involved. Amounts so transferred shall be provided by the Bureau of the Consortium for the purpose of carrying out activities of the Consortium under this subsection.

"(B) A transfer may be made by any Federal agency under subparagraph (A), for any fiscal year, only if—

"(i) the amount so transferred by that agency (as determined under such subparagraph) would exceed $10,000; and

"(ii) such transfer is made with respect to the fiscal year 1987, 1988, 1989, 1990, or 1991.

"(C) The heads of Federal agencies and their designees, and the directors of Federal laboratories, may provide such additional support for operations of the Consortium as they consider appropriate.".

FUNCTIONS OF THE SECRETARY OF COMMERCE

SEC. 4. Section 11 of such Act (15 U.S.C. 3710), as amended by this Act, is further amended by adding at the end thereof the following:

"(g) FUNCTIONS OF THE SECRETARY.—(1) The Secretary, in consultation with other Federal agencies, may—

"(A) make available to interested agencies the expertise of the Department of Commerce regarding the commercial potential of inventions and methods and options for commercialization which are available to Federal laboratories, including research and development limited partnerships;

"(B) develop and disseminate to appropriate agency and laboratory personnel model provisions for use on a voluntary basis in cooperative research and development arrangements; and

"(C) furnish advice and assistance, upon request, to Federal agencies concerning their cooperative research and development programs and projects.

"(2) Two years after the date of enactment of this subsection, and every two years thereafter, the Secretary shall submit a report to the President and the Congress on the use by the agencies and the Secretary of the authorities specified in this Act. Other Federal agencies shall, to the extent permitted by law, provide the Secretary with all information necessary to prepare such reports.".

COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS

SEC. 5. The Stevenson-Wydler Technology Innovation Act of 1980 is amended by redesignating sections 12 through 15 as sections 15 through 18, respectively, and by inserting after section 11 the following:

"SEC. 12. COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS.

"(a) GENERAL AUTHORITY.—(1) Each Federal agency may permit the director of any of its Government-operated Federal laboratories—

"(A) to enter into cooperative research and development arrangements (subject to such regulations or review procedures as the agency considers appropriate) with other Federal agencies, units of State or local government, industrial organizations (including corporations, partnerships and limited partnerships), public and private foundations, non-profit organizations (including universities), or other persons (including licensees of inventions owned by the Federal agency); and

"(B) to negotiate licensing agreements under section 207 of title 35, United States Code, or other authorities for Government-owned inventions made at the laboratory and other inventions of Federal employees that may be volunatrily assigned to the Government.

"(2) Under arrangements entered into pursuant to paragraph (1), a laboratory may—

"(A) accept funds, services, and property from collaborating parties and provide services and property to collaborating parties;

"(B) grant or agree to grant in advance to a collaborating party patent licenses, assignments, or options thereto, in any invention made by a Federal employee under the arrangement, retaining such rights as the Federal agency considers appropriate;

"(C) waive, in whole or in part, any right of ownership which the Government may have under any other statute to any inventions made by a collaborating party or employee of a collaborating party under the arrangement; and

"(D) to the extent consistent with any applicable agency requirements, permit employees or former employees of the laboratory to participate in efforts to commercialize inventions they made while in the service of the United States.

"(3) Each agency shall maintain a record of all agreements entered into under this section.

"(b) DEFINITION.—As used in this section, the term—

"(1) 'cooperative research and development agreement' means any agreement between one or more Federal laboratories and one or more non-Federal parties under which the Government provides personnel, services, facilities, equipment, or other resources (but not funds to non-Federal parties) and the non-Federal parties provide funds, personnel, services, facilities, equipment, or other resources toward the conduct of specified research or development efforts which are consistent with the missions of the agency, except that such term does not include a procurement contract or cooperative agreement as those terms are used in section 6303, 6304, and 6305 of title 31, United States Code; and

"(2) 'laboratory' means a facility or group of facilities owned, leased, or otherwise used by a Federal agency, a substantial purpose of which is the performance of research and development by employees of the Federal Government.".

"(c) RELATIONSHIP TO OTHER LAWS.—Nothing in this section is intended to limit or diminish existing authorities of any agency.".

REWARDS FOR SCIENTIFIC, ENGINEERING, AND TECHNICAL PERSONNEL OF FEDERAL AGENCIES

SEC. 6. The Stevenson-Wydler Technology Innovation Act of 1980, as amended by this Act, is further amended by inserting after section 12 the following:

"SEC. 13. REWARDS FOR SCIENTIFIC, ENGINEERING, AND TECHNICAL PERSONNEL OF FEDERAL AGENCIES

"(a) CASH AWARDS PROGRAM.—The head of each Federal agency that is making expenditures at a rate of more than $50,000,000 per fiscal year for research and development in its Goverment-operated laboratories shall use the appropriate statutory authority to develop and implement a cash awards program to reward its scientific, engineering, and technical personnel for—

"(1) inventions, innovations, or other outstanding scientific or technological contributions of value to the United States due to commercial applications or due to contributions to missions of the Federal agency or the Federal government; or

"(2) exemplary activities that promote the domestic transfer of science and technology developed within the Federal Government and result in utilization of such science and technology by American industry or business, universities, State or local governments, or other non-Federal parties.

"(b) PAYMENT OF ROYALTIES.—Any royalties or other income received by an agency from the licensing or assignment of inventions under this section or under section 207 of title 35, United States Code, or other authority shall be transferred to the agency's government-operated laboratories with a substantial percentage being returned to the laboratories whose inventions produced the royalties or income. Such royalties or income shall be disposed of as follows:

"(1) At least 15 percent of the royalties or other income received each year by the laboratory on account of any invention shall be paid to the inventor or coinventors if they were employees of the agency at the time the invention was made. Payments made under this paragraph are in addition to the regular pay of the employee and to any awards made to that employee, and such payments shall not affect the entitlement or limit the amount of the regular pay, annuity, or other awards to which the employee is otherwise entitled or for which the employee is otherwise eligible.

"(2) The balance of any royalties or related income earned during any fiscal year after paying the inventors' portions under paragraph (1) may be retained by the laboratory up to the limits specified in this paragraph, and used—

"(A) for mission-related research and development of the laboratory;

"(B) to support development and education programs for employees of the laboratory;

"(C) to reward employees of the laboratory for contributing to the development of new technologies and assisting in the trans-

fer of technology to the private sector, and for inventions of value to the Government that will not produce royalties;

"(D) to further scientific exchange to and from the laboratory; and

"(E) for payment of patenting costs and fees and other expenses incidental to promoting, administering, and licensing inventions, including the fees or costs for services of other agencies or other persons or organizations for invention management and licensing services.

If the balance for any laboratory after paying the inventors' shares under paragraph (1) exceeds 5 percent of the annual budget of the laboratory, 75 percent of the excess shall be paid to the Treasury of the United States and the remaining 25 percent shall be used for the purposes listed in subparagraphs (A) through (E), by the end of the fiscal year subsequent to the one in which they were received. Any funds not so used or obligated by the end of such fiscal year shall be paid to the Treasury of the United States.

"(c) ASSIGNED INVENTIONS.—If the invention was one assigned to the agency either (1) by a contractor, grantee, or the recipient of a cooperative agreement of the agency, or (2) by an employee of the agency that was not working in the laboratory at the time the invention was made, the agency unit that funded or employed or assigned the assignee shall, for purposes of this section, be considered to be a laboratory.

"(d) REPORTS.—In making their annual budget submissions, Federal agencies shall submit to the appropriate authorization and appropriation committees of both Houses of the Congress summaries of the amount of royalties or other income received and expenditures made (including inventor awards) under this section.".

EMPLOYEE ACTIVITIES

SEC. 7. The Stevenson-Wydler Technology Innovation Act of 1980, as amended by this Act, is further amended by inserting after section 13 the following:

"SEC. 14. EMPLOYEE ACTIVITIES.

"(a) IN GENERAL.—If a Federal agency which has the right of ownership to an invention under this Act does not intend to file for a patent application or otherwise to promote commercialization of such invention, the agency may allow the inventor, if the inventor is a Government employee or former employee who made the invention during the course of employment with the Government, to retain title to the invention (subject to reservation by the Government of a nonexclusive, nontransferrable, irrevocable, paid up license to practice or have practiced the invention throughout the world by or on behalf of the Government). In addition, the agency may condition the inventor's right to title on the timely filing of a patent application in cases when the Government determines that it has or may have a need to practice the invention.

"(b) DEFINITION.—For purposes of this section, Federal employees include 'special Government employees' as defined in section 202 of title 18, United States Code.

"(c) RELATIONSHIP TO OTHER LAWS.—Nothing in this section is intended to limit or diminish existing authorities of any agency.".

MISCELLANEOUS AND CONFORMING AMENDMENTS

SEC. 8. (a) Section 10 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3709) is repealed.

"(b)(1) Section 3(2) of such Act (15 U.S.C. 3702(2)) is amended by striking "centers for industrial technology" and inserting in lieu thereof "cooperative research centers".

(2) Section 4 of such Act (15 U.S.C. 3703) is amended—

(A) by striking "Industrial Technology" in paragraph (1) and inserting in lieu thereof "Productivity, Technology, and Innovation";

(B) by striking "'Director' means the Director of the Office of Industrial Technology" in paragraph (3) and inserting in lieu thereof "'Assistant Secretary' means the Assistant Secretary for Productivity, Technology, and Innovation";

(C) by striking "Centers for Industrial Technology" in paragraph (4) and inserting in lieu thereof "Cooperative Research Centers";

(D) by striking paragraph (6), and redesignating paragraphs (7) and (8) as paragraphs (6) and (7), respectively; and

(E) by striking "owned and funded" in paragraph (6), as so redesignated, and inserting in lieu thereof "owned, leased, or otherwise used by a Federal agency and funded".

(3) Section 5(a) of such Act (15 U.S.C. 3704(a)) is amended by striking "Industrial Technology" and inserting in lieu thereof "Productivity, Technology, and Innovation".

(4) Section 5(b) of such Act (15 U.S.C. 3704(b)) is amended by striking "DIRECTOR" and inserting in lieu thereof "ASSISTANT SECRETARY", and by striking all from "a Director of the Office" and inserting in lieu thereof "an Assistant Secretary for Productivity, Technology, and Innovation.".

(5) Section 5(c) of such Act (15 U.S.C. 3704(c)) is amended by striking "the Director" each place it appears and inserting in lieu thereof "the Assistant Secretary".

(6) The heading of section 6 of such Act is amended to read as follows:

"SEC. 6. COOPERATIVE RESEARCH CENTERS.".

(7) Section 6(a) of such Act (15 U.S.C. 3705(a)) is amended by striking "Centers for Industrial Technology" and inserting in lieu thereof "Cooperative Research Centers".

(8) Section 6(b)(1) of such Act (15 U.S.C. 3705(b)(1)) is amended by striking "basic and applied".

(9) Section 6(e) of such Act (15 U.S.C. 3705(e)) is amended to read as follows:

"(e) RESEARCH AND DEVELOPMENT UTILIZATION.—In the promotion of technological innovation and commercialization of research and development efforts by Centers under this section, chapter 18 of title 35, United States. Code, shall apply.".

(10) Section 6(f) of such Act (15 U.S.C. 3705(f)) is repealed.

(11) The heading of section 8 of such Act is amended by striking "centers for industrial technology" and inserting in lieu thereof "cooperative research centers".

(12) Section 8(a) of such Act (15 U.S.C. 3707(a)) is amended by striking "Centers for Industrial Technology" and inserting in lieu thereof "Cooperative Research Centers".

(c) Section 4 of such Act (15 U.S.C. 3703), as amended by subsection (b)(2) of this section, is further amended by adding at the end thereof the following:

"(8) 'Federal agency' means any executive agency as defined in section 105 of title 5, United States Code, and the military departments, as defined in section 102 of such title.

"(9) 'Invention' means any invention or discovery which is or may be patentable or otherwise protected under title 35, United States Code, or any novel variety of plant which is or may be protectable under the Plant Variety Protection Act (7 U.S.C. 2321 et seq.).

"(10) 'Made", when used in conjuction with any invention, means the conception or first actual reduction to practice of such invention.".

(d)(1) Such Act (as amended by this Act) is further amended by redesignating sections 11 through 18 as sections 10 through 17, respectively.

(2)(A) Section 5(d) of such Act (15 U.S.C. 3704(d)) is amended by inserting "(as then in effect)" after "Act" the second time it appears.

(B) Section 8(a) of such Act (15 U.S.C. 3707(a)) is amended by striking the last sentence.

(C) Section 9(d) of such Act (15 U.S.C. 3708(d)) is amended by striking "or 13" and inserting in lieu thereof "10, or 14".

SECTION-BY-SECTION ANALYSIS

Section 2 contains amendments to the Stevenson-Wydler Technology Innovation Act of 1980. It amends the policy statement to provide that technology transfer efforts should be treated positively in evaluations and promotions of federal employees. It changes the size of a laboratory which must have one full-time staffer in its office of research and technology applications from a laboratory with $20,000,000 annual budget to one with 200 or more scientists and technicians. And it eliminates the waiver of this requirement.

Section 2 changes the name of the Center for the Utilization of Federal Technology to the National Technical Information Service, and clarifies its duties. It also changes the reporting requirement for the technology transfer functions in Stevenson-Wydler from the Center for the Utilization of Federal Technology to the Assistant Secretary of Commerce for Productivity, Technology, and Innovation.

Section 3 adds a new section to Stevenson-Wydler to establish the Federal Laboratory Consortium for Technology Transfer. The section establishes the Consortiums's duties and membership, provide it with administrative services, and provides that each agency shall provide the Consortium with an amount equal to .005 percent of its laboratory's research and development budget for 1978 through 1991.

Section 4 amends Stevens-Wydler to clarify the duties of the Secretary of Commerce and to require a biannual report to Congress on how federal agencies are using the authorities established under this Act.

Section 5 adds a new section to Stevenson-Wydler authorizing agencies to permit their government-operated laboratories to enter into cooperative research and development arrangements with private industry, other units of government, universities, or other persons. The section also authorizes the agencies to permit their laboratory directors to negotiate patent licensing agreements.

To effectuate cooperative research agreements, the section gives federal laboratories the authority to accept funds, services, and property from the collaborating parties; to agree to grant in advance licenses to patents and inventions made by federal employees; to waive the government's right of ownership to inventions made by an employee of a collaborating party; and to permit employees to help commercialize their inventions, to the extent this is consistent with agency requirements.

The section defines cooperative agreements as those in which the federal government provides resources, but not funds, along with a collaborating party, toward the conduct of specific research or development which is consistent with the missions of the agency.

Section 6 requires federal agencies which do a substantial amount of research and development to set up a cash award system for rewarding scientific and technical personnel for inventions, innovations, or other outstanding scientific and technological contributions. It also requires federal agencies to

transfer royalties from inventions to its laboratories, with a substantial percentage going to the laboratory which produced the invention. At least 15% of the royalties from a given invention must be paid to the inventor, and the balance may be retained by the laboratory, up to 5% of its annual budget. At that point the laboratory must return 75% of its royalty income to the Treasury, and may keep the remaining 25%. The laboratory may use the income for mission-related research and development, for education programs for laboratory employees, for employee awards, for scientific exchange, and to pay the costs of commercializing inventions.

Section 7 authorizes federal agencies to transfer rights of ownership in an invention to the inventor if the agency does not intend to commercialize or file for a patent license on the invention.

Section 8 contains miscellaneous and conforming amendments to Stevenson-Wydler which generally bring the Act into conformity with existing practice.

Mr. DOLE. Mr. President, I am pleased to join Senator GORTON in introducing this bill which would amend the Stevenson-Wydler Technology Innovation Act so that it authorizes agencies to allow their Government-operated labs to enter into cooperative research agreements with universities and private business.

Specifically, this bill contains the key provisions of the "Federal Laboratory Utilization Act of 1985", S. 64, which I introduced at the beginning of this legislative session. Thanks to the hard work of Senator GORTON and his staff, certain revisions have been made to the bill which have broadened its base of support.

Like S. 64, the bill we are introducing today would provide legal authority for Federal labs to enter into collaborative research agreements and to license inventions resulting from those agreements. It would also permit the labs to pay a share of the royalties so generated to the inventors. Most of the remainder of the royalties could be used to reward other employees, as well as to support employee development programs, further technology transfer, pay for patenting costs, and mission related research. The bill also authorizes the Department of Commerce to assist agencies and their labs prepare for and implement these new authorities.

Unlike S. 64, this bill contains a provision recognizing the Federal laboratory consortium—a presently informal network of laboratory technology transfer officials who steer people with technological problems to the labs best able to solve them. Though I believe the idea of providing statutory recognition for the consortium has merit, I do have some concerns about the requirement for agencies to transfer to the National Science Foundation an amount equal to 0.005 percent of their laboratory research budgets for operation of the consortium. I would like to receive more input from the research community, affected agencies and others before making a final decision on whether to support this particular provision.

Mr. President, let me thank and congratulate Senator GORTON for all the work he and his staff have put into this bill. I look forward to working with him in seeing to it that these important new authorities for agencies and their labs are enacted into law.

Mr. HOLLINGS. Mr. President, I am pleased to cosponsor this important legislation. By allowing Government-operated laboratories to enter into cooperative agreements with industry, and by strengthening the organization that transfer Federal expertise to the business community and the States, this bill will improve the contribution that Federal labs make to the Nation's industrial modernization, economic development, and overall competitiveness. And it will do without spending any new Federal dollars.

The Federal Government's laboratories are a tremendous national resource, employing one-sixth of the Nation's scientists and engineers. Of course, their primary function is to perform research in support of essential Federal misisons, from defense and energy to health, food, and natural resources. At the same time, however, hearings and research by the Commerce Committee's Science Subcommittee show that these labs also have unique facilities, expertise, and inventions which could help the private sector, if they only had legal authority to cooperate with private industry, universities, and the States. For example, we now have over 25,000 federally funded inventions, many of which could lead to valuable commercial products if only Government labs and industry were allowed to work together more closely. Moreover, Federal scientists and engineers could provide advice and technical assistance to State and local governments on a wide range of issues.

A few Federal laboratories have the necessary legal authority now, particularly several of the Energy Department facilities run by contractors. Already we are seeing beneficial results. For example, scientists at Los Alamos National Laboratory have invented a process that identifies viruses and bacteria in minutes, rather than the days of weeks now needed. A private company is now working with Los Alamos to develop the product commercially. In addition, the National Bureau of Standards and Oak Ridge National Laboratory are working with the steel industry to modernize steelmaking. The bill that we introduce today would extend this legal authority to over 300 Federal laboratories operated by the Government itself rather than by contractors.

The legislation would allow agencies with Government-operated laboratories to allow these labs to enter into cooperative agreements with corporations, universities, and State and local governments—at the partner's expense—for the purpose of developing new technologies, products, and companies. The labs could waive patent rights to resulting invention, if that seemed the best way to encourage commercialization of a product, or they could negotiate royalty requirements and reserve such rights as they deem appropriate.

In addition, the new bill also would strengthen the laboratory organizations that provide information and assistance to industry and to State and local officials. These organizations include the small Federal Laboratory Consortium, the one nationwide group that links laboratory technical information specialists to each other.

I want to put to rest one particular concern about cooperative agreements. Some people fear that allowing Government labs to work with private industry may lead the labs to neglect their fundamental Government responsibilities. Believe me, if I thought for a moment that this bill would compromise Federal programs, I would oppose it. But this bill provides the proper safeguards. No agency is required to work with industry—the bill simply permits agency heads, at their discretion, to allow some cooperation with industry. The agency head determines the level of cooperation, the kinds of projects, and what royalties to collect. At the same time, Federal labs would continue to perform their Government responsibilities.

Mr. President, this bill will not magically solve the Nation's economic problems or instantly rejuvenate all industries. It is not a panacea. Many other steps can and should be taken to help American industry regain its technological lead and international competitiveness. This legislation, however, is a concrete and valuable step toward better utilization of the tremendous technology and expertise present in our national laboratories. It will not cost the taxpayers a dime, and it may actually make some money for the Government.

This is an important, innovative bill. I am pleased to join colleagues from both parties in sponsoring it, and I look forward to working with my other Senate colleagues to enact it.

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