

Public Law 100-418  
100th Congress

An Act

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[Renaming National Bureau of Standards to National Institute of Standards & Technology](#)  
[Regional Centers for the Transfer of Manufacturing Technology](#)  
[Establishing Advanced Technology Program](#)  
[Guidelines for setting fees for calibration services and standard reference materials](#)  
[User Fees for Research Associates](#)  
[Visiting Committee Establishment](#)  
[Authorization of Appropriations](#)

To enhance the competitiveness of American industry, and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled*

Omnibus Trade and Competitiveness Act of 1988

## SECTION 1. SHORT TITLE AND TABLE OF CONTENTS.

(a) SHoRT Title.-This Act may be cited as the "Omnibus Trade Exports and Competitiveness Act of 1988".

(b) TABLE of Contents.- International

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**Subpart A-National Institute of Standards and  
Technology**

**SEC\_ 6111. FINDINGS AND PURPOSES.**

Section 1 of the Act of March 3, 1901 (15 U.S.C. 271) is amended to read as follows:

**"FINDINGS AND PURPOSES**

1. (a) The Congress finds and declares the following

(1) The future well-being of the United States economy depends on a strong manufacturing base and requires continual improvements in manufacturing technology, quality control, and techniques for ensuring product reliability and cost effectiveness.

"(2) Precise measurements, calibrations, and standards help United States industry and manufacturing concerns compete strongly in world marketing

"Improvements in manufacturing and product technology depend on fundamental scientific and engineering research to develop (A) the Precise and accurate measurement methods and measurement standards needed to improve quality and reliability and (B) new technological processes by which such improved methods may be used in practice to improve manufacturing and to assist industry to transfer important laboratory discoveries into commercial products.

"(4) Scientific progress, public safety, and product compatibility and standardization also depend on the development of Precise measurement methods, standards, and related basic technologies.

"(5) The National Bureau of Standards since its establishment has served as the Federal focal point in developing basic measurement standards and related technologies, has taken a lead role in stimulating cooperative work among private industrial organizations in efforts to surmount technological hurdles, and otherwise has been responsible for assisting in the improvement of industrial technology.

"(6) The Federal Government should maintain a national science, engineering, and technology laboratory which provides measurement methods, standards, and associated technologies and which aids United States companies in using new technologies to improve products and manufacturing processes.

"(7) Such national laboratory also should serve industry, trade associations, State technology programs, labor organizations, Professional societies, and educational institutions by disseminating information on new basic technologies including automated manufacturing processes.

"(b) It is the purpose of this Act

"(1) to rename the National Bureau of Standards as the National Institute of Standards and Technology and to modernize and restructure that agency to augment its unique ability to enhance the competitiveness of American industry maintaining its traditional function as lead national laboratory for providing the measurements, calibrations, and quality assurance techniques which underpin United States commerce, technological progress, improved product reliability and manufacturing processes, and public safety.

"(2) to assist private sector initiatives to capitalize on advanced technology;

"(3) to advance, through cooperative efforts among industries, universities, and government laboratories, promising research and development projects, which can be optimized by the private sector for commercial and industrial applications; and

"(4) to promote shared risks, accelerated development, and pooling of skills which will be necessary to strengthen America's manufacturing industries.".

SEC. 5112. ESTABLISHMENT, FUNCTIONS, AND ACTIVITIES.(a) ESTABLISHMENT, FUNCTIONS, AND ACTIVITIES OF THE INSTITUTE.-Section 2 of the Act of March 3, 1901 (15 U.S.C. 272) is amended to read as follows:

ESTABLISHMENT, FUNCTIONS, AND ACTIVITIES"SEC. 2. (a) There is established within the Department of Commerce a science, engineering, technology, and measurement Laboratory to be known as the National Institute of Standards and Technology (hereafter in this Act referred to as the 'Institute').

"(1) The Secretary of Commerce (hereafter in this Act referred to as the 'Secretary') acting through the Director of the Institute (hereafter in this Act referred to as the 'Director') and, if appropriate, through other officials, is authorized to take all actions necessary and appropriate to accomplish the purposes of this Act, including the following functions of the Institute to assist industry in the development of technology and procedures needed to improve quality, to modernize manufacturing processes, to ensure product reliability, manufacturability, functionality, and cost-effectiveness, and to facilitate the more rapid commercialization, especially by small and medium-sized companies throughout the United States, of products based on new scientific discoveries. in fields such as automation, electronics, advanced materials, biotechnology, and optical technologies;

(2) to develop, maintain, and retain custody of the national standards of measurement, and provide the means and methods for making measurements consistent with those standards, including comparing standards used in scientific investigations, engineering, manufacturing, industry, and educational institutions with the standards adopted or recognized by the Federal Government;

(3) to enter into contracts, including cooperative research and development arrangements, in furtherance of the purposes of this Act;

(4) to provide United States industry, Government, and educational institutions with a national clearinghouse of current information, techniques, and advice for the achievement of higher quality and productivity based on current domestic and international scientific and technical development;

(5) to assist industry in the development of measurements, measurement methods, and basic measurement technology;

(6) to determine, compile, evaluate, and disseminate physical constants and the properties and performance of conventional and advanced materials when they are important to science, manufacturing, education, commerce, and industry with sufficient accuracy elsewhere;

(7) develop a fundamental basis and methods for testing materials, mechanisms, structures, equipment, and systems, including those used by the Federal Government;

(8) to assure the compatibility of United States national measurement standards with those of other nations;

(9) to cooperate with other departments and agencies of the Federal Government with industry, with State and local governments, with the governments of other nations and international organizations, and with private organizations in establishing standard practices, codes, specifications, and voluntary consensus standards;

(10) to advise government and industry on scientific and technical problems; and

(11) to invent, develop, and (when appropriate) promote transfer to the private sector of measurement devices to serve special national needs.

In carrying out the functions specified in subsection (b), the Secretary, acting through the Director and, if appropriate, through other appropriate officials, may, among other things- construct physical standards; test, calibrate, and certify standards and standard measuring apparatus; study and improve instruments, measurement methods, and industrial Process control and quality assurance techniques; cooperate with the States in securing uniformity in weights and measures laws and methods of inspection;

(12) cooperate with foreign scientific and technical institutions to understand technological developments in other countries better, certify, and sell standard reference materials for use in ensuring the accuracy of chemical analyses and measurements of physical and other properties of materials; in furtherance of the purposes of this Act, accept research associates, cash donations, and donated equipment from industry, and also engage with industry in research to develop new basic and generic technologies for traditional and new products and for improved production and manufacturing.

(13) study and develop fundamental scientific understanding and Improved measurement analysis, synthesis, processing, and fabrication methods for chemical substances and compounds, ferrous and nonferrous metals, and all traditional and advanced materials, including processes of degradation;

(14) investigate ionizing and nonionizing radiation and radioactive substances, their uses, and ways to protect people, structures, and equipment from their harmful effects;

(15) determine the atomic and molecular structure of matter, through analysis of spectra and other methods, to provide a basis for predicting chemical and physical structures and reactions and for designing new materials and chemical substances, including biologically active macromolecules;

(16) Perform research on electromagnetic waves, including optical waves, and on properties and performance of electrical, electronic, and electromagnetic devices and systems and their essential materials, develop and maintain related standards, and disseminate standard signals through broadcast and other means;

(17) develop and test standard interfaces, communication protocols, and data structures for computer and related telecommunications systems;

(18) study computer systems (as that term is defined in section 20(d) of this Act) and their use to control machinery and processes;

(19) perform research to develop standards and test methods to advance the effective use of computers and related systems and to protect the information stored, processed, and transmitted by such systems and to provide advice in support of policies affecting Federal computer and related telecommunications systems;

(20) determine properties of building materials and structural elements, and encourage their standardization and most effective use, including investigation of fire-resisting properties of building materials and conditions under which they may be most efficiently used, and the standardization of types of appliances for fire prevention;

(21) undertake such research in engineering, pure and applied mathematics, statistics, computer science, materials science, and the physical sciences as may be necessary to carry out and support the functions specified in this section;

(22) compile, evaluate, publish, and otherwise disseminate general, specific and technical data resulting from the performance of the functions specified in this section or from other sources when such data are important to science, engineering, or industry, or to the general public, and are not available elsewhere;

(23) collect, create, analyze, and maintain specimens of scientific value;

(24) operate national user facilities;

(25) evaluate promising inventions and other novel technical concepts submitted by inventors and small companies and work with other Federal agencies, States, and localities to provide appropriate technical assistance and support for those inventions which are found in the evaluation process to have commercial promise;

(26) demonstrate the results of the Institute's activities by exhibits or other methods of technology transfer, including the use of scientific or technical personnel of the Institute for part time or intermittent teaching

and training activities at educational institutions of higher learning as part of and incidental to their official duties; and

(27) undertake such other activities similar to those specified in this subsection as the Director determines appropriate..

(b) OTHER FUNCTIONS OF SECRETARY.-The Secretary of Commerce is authorized to:

(1) conduct research on all of the telecommunications sciences, including wave propagation and reception, the conditions which affect electromagnetic wave propagation and reception, electromagnetic noise and interference, radio system characteristics, operating techniques affecting the use of the electromagnetic spectrum, and methods for improving the use of the electromagnetic spectrum for telecommunications purposes;

(2) prepare and issue predictions of electromagnetic wave propagation conditions and warnings of disturbances in such conditions;

(3) investigate conditions which affect the transmission of radio waves from their source to a receiver and the compilation and distribution of information on such transmission of radio waves as a basis for choice of frequencies to be used in radio operations;

(4) conduct research and analysis in the general field of telecommunications sciences in support of assigned functions and in support of other Government agencies;

(5) investigate nonionizing electromagnetic radiation and its uses, as well as methods and procedures for measuring and assessing electromagnetic environments, for the purpose of developing and coordinating policies and procedures affecting Federal Government use of the electromagnetic spectrum for telecommunications purposes;

(6) compile, evaluate, publish, and otherwise disseminate general scientific and technical data resulting from the performance of the functions specified in this section or from other sources when such data are important to science, engineering, or industry, or to the general public, and are not available elsewhere; and

(7) undertake such other activities similar to those specified in this subsection as the Secretary of Commerce determines appropriate.

(c) Section 5 of the Act of March 3, 1901 (15 U.S.C. 274) is amended to read as follows:

"SEC. 5. The Director shall be appointed by the President, by and with the advice and consent of the Senate. The Director shall have the general supervision ~ of the Institute, its equipment, and the exercise of its functions. The Director shall make an annual report Reports. to the Secretary of Commerce. The Director may issue, when necessary, bulletins for public distribution, containing such information as may be of value to the public or facilitate the exercise of the functions of the Institute. The Director shall be compensated at the rate in effect for level IV of the Executive Schedule under section 5315 of title 5, United States Code. Until such time as the Director assumes office under this section, the most recent Director of the National Bureau of Standards shall serve as Director."

(2) Section 5315 of title 5, United States Code, is amended by striking "National Bureau of Standards" and insert in lieu thereof "National Institute of Standards and Technology".

(d) ORGANIZATION PLAN.- (1) At least 60 days before its effective 15 USC 272 note. date and within 120 days after the date of the enactment of this Act, an initial organization plan for the National Institute of Standards and Technology (hereafter in this part referred to as the "Institute") shall be submitted by the Director of the Institute (hereafter in this part referred to as the "Director") after consultation with the Visiting Committee on Advanced Technology, to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate. Such plan shall-

(A) establish the major operating units of the Institute;

(B) assign each of the activities listed in section 2(c) of the Act of March 3, 1901, and all other functions and activities of the Institute, to at least one of the major operating units established under subparagraph (a);

(C) provide details of a 2-year program for the Institute, including the Advanced Technology Program;

(D) provide details regarding how the Institute will expand and fund the Inventions program in

accordance with section 27 of the Act of March 3, 1901; and

(E) make no changes in the Center for Building Technology or the Center for Fire Research.

(2) The Director may revise the organization plan. Any revision of the organization plan submitted under paragraph (1) shall be submitted to the appropriate committees of the House of Representatives and the Senate at least 60 days before the effective date of such revision. (3) Until the effective date of the organization plan, the major operating units of the Institute shall be the major operating units of the National Bureau of Standards that were in existence on the date of the enactment of this Act and the Advanced Technology Program.

#### SEC. 5113. REPEAL OF PROVISIONS.

The second paragraph of the material relating to the Bureau of Standards in the first section of the Act of July 16, 1914 (15 U.S.C.280), the last paragraph of the material relating to Contingent and Miscellaneous Expenses in the first section of the Act of March 4, 1913 (15 U.S.C. 281), and the first section of the Act of May 14,1930 (15 U.S.C. 282) are repealed.

SEC. 5114. REPORTS TO CONGRESS; STUDIES BY THE NATIONAL ACADEMIES OF ENGINEERING AND SCIENCES. The Act of March 3, 1901 (15 U.S.C. 271 et seq.) is amended 15 USC 271 note. (1) by redesignating section 23 as section 31; and (2) by adding after section 22 the following new sections:

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### REPORTS TO CONGRESS

15 USC 278i. "SEC. 23. (a) The Director shall keep the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives fully and currently informed with regard to all of the activities of the Institute.

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(b) The Director shall justify in writing all changes in policies regarding fees for standard reference materials and calibration services occurring after June 30, 1987, including a description of the anticipated impact of any proposed changes on demand for and anticipated revenues from the materials and services. Changes in policy and fees shall not be effective unless and until the Director has submitted the proposed schedule and justification to the Congress and 30 days on which both Houses of Congress are in session have elapsed since such submission, except that the requirement of this sentence shall not apply with respect to adjustments which are based solely on changes in the costs of raw materials or of producing and delivering standard reference materials or calibration services.

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15 USC 278j

"SEC. 24. The Director may periodically contract with the National Research Council for advice and studies to assist the Institute to serve United States industry and science. The subjects of such advice and studies may include-

- (1) the competitive position of the United States in key areas of manufacturing and emerging technologies and research activities which would enhance that competitiveness;
- (2) potential activities of the Institute, in cooperation with industry and the States, to assist in the transfer and dissemination of new technologies for manufacturing and quality assurance; and
- (3) identification and assessment of likely barriers to widespread use of advanced manufacturing technology by the United States workforce, including training and other initiatives which could lead to a higher

percentage of manufacturing jobs of United States companies being located within the borders of our country."

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#### SEC. 5115. TECHNICAL AMENDMENTS.

(a) Amendments to Organic Act.-

(b) Except as provided in 1901 paragraph (2), the Act of March 3, U.S.C. 271 et seq.) is amended by striking "National Bureau of Standards", "Bureau" and "bureau" wherever they appear and inserting in lieu thereof "Institute".

(2) Section 31 of such Act, as so redesignated by section 5114(l) of this part, is amended by striking "National Bureau of Standards" 15 USC 271 note. and inserting in lieu thereof "National Institute of Standards and Technology".

(b) Amendments to Stevenson-Wydler Technology Innovation Act of 1980.--(l) Section 8(b) of the Stevenson-Wydler Technology Innovation Act of 1980, as so redesignated by section 5122 of this part, is amended by striking "Director" and inserting in lieu thereof 15 USC 3706. "Assistant Secretary

(2) Sections 11(e) and 17(d) and (e) of the Stevenson-Wydler Technology Innovation Act of 1980, as so redesignated by section 5122(a) of this part, are amended- 15 USC 3710,

(A) by striking "National Bureau of Standards" wherever it 3711a. appears and inserting in lieu thereof "National Institute of Standards and Technology"; and

(B) by striking "Bureau" wherever it appears and inserting in 15 USC 3710. lieu thereof "Institute".

(c) Amendment to Other Laws.-References in any other Federal- 15 USC 271 note. law to the National Bureau of Standards shall be deemed to refer to the National Institute of Standards and Technology.

#### SEC 5121. TECHNOLOGY EXTENSION ACTIVITIES.

(a) TECHNOLOGY CENTERS AND TECHNICAL ASSISTANCE.-The Act of March 3, 1901, as amended by this part, is further amended by adding after section 24 the following new sections:

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#### REGIONAL CENTERS FOR THE TRANSFER OF MANUFACTURING TECHNOLOGY

"SEC. 25. (a) The Secretary, through the Director and, if appropriate, through other officials, shall provide assistance for the creation and support of Regional Centers for the Transfer of Manufacturing Technology (hereafter in this Act referred to as (the Centers). Such centers shall be affiliated with any United States-based nonprofit institution or organization, or group thereof, that applies for and is awarded financial assistance under this section in accordance with the description published by the Secretary in the Federal Register under subsection (cX2). Individual awards shall be decided on the basis of merit review. The objective of the Centers is to enhance productivity and technological performance in United States manufacturing through

"(1) the transfer of manufacturing technology and techniques developed at the Institute to Centers and, through them, to manufacturing companies throughout the United States; Schools and

(2) the participation of individuals from industry, universities, colleges, cities, State governments, other Federal agencies, and, when appropriate, the Institute in cooperative technology transfer activities; efforts to make new manufacturing technology and processes usable by United States-based small and medium-sized companies;

(3) the active dissemination of scientific, engineering, technical, and management information about manufacturing to industrial firms, including small and medium-sized manufacturing companies; and

(5) the utilization, when appropriate, of the expertise and capability that exists in Federal laboratories other than the Institute.

The activities of the Centers shall include:

- (1) the establishment of automated manufacturing systems and other advanced production technologies, based on research by the Institute, for the purpose of demonstrations and technology transfer,
- (2) the active transfer and dissemination of research findings and Center expertise to a wide range of companies and enterprises, particularly small- and medium-sized manufacturers;
- (3) loans, on a selective, short-term basis, of items of advanced manufacturing equipment to small manufacturing firms with less than 100 employees. The Secretary may provide financial support to any Center created under subsection (a) for a period not to exceed six years. The Secretary may not provide to a Center more than 50 percent of the capital and annual operating and maintenance required to create and maintain such Center.
- (4) The Secretary shall publish in the Federal Register, within 90 Register, days after the date of the enactment of this section, a draft descriptive publication of a program for establishing Centers, including
  - A) a description of the program;
  - B) procedures to be followed by applicants;
  - C) criteria for determining qualified applicants;
  - D) criteria, including those listed under paragraph (4), for choosing recipients of financial assistance under this section from among the qualified applicants; and
  - E) maximum support levels expected to be available to Centers under the program in the fourth through sixth years of assistance under this section. The Secretary shall publish a final description under this paragraph after the expiration of a 30-day comment period.

"Any nonprofit institution, or group thereof, or consortia of nonprofit institutions, including entities existing on the date of the enactment of this section, may submit to the Secretary an application for financial support under this subsection, in accordance with the procedures established by the Secretary and published in the Federal Register under paragraph (2). In order to receive assistance under this section, an applicant shall provide adequate assurances that it will contribute 50 percent or more of the proposed Center's capital and annual operating and maintenance costs for the first three years and an increasing share for each of the last three years. Each applicant shall also submit a proposal for the allocation of the legal rights associated with any invention which may result from the proposed Center's activities.

"(4) The Secretary shall subject each such application to merit review. In making a decision whether to approve such application and provide financial support under this subsection, the Secretary shall consider at a minimum (A) the merits of the application, particularly those portions of the application regarding technology transfer, training and education, and adaptation of manufacturing technologies to the needs of particular industrial sectors, (B) the quality of service to be provided, (C) geographical diversity and extent of service area, and (D) the percentage of funding and amount of in-kind commitment from other sources.

"(5) Each Center which receives financial assistance under this section shall be evaluated during its third year of operation by an evaluation panel appointed by the Secretary. Each such evaluation panel shall be composed of private experts, none of whom shall be connected with the involved Center, and Federal officials. An official of the Institute shall chair the panel. Each evaluation panel shall measure the involved Center's performance against the objectives specified in this section. The Secretary shall not provide funding for the fourth through the sixth years of such Center's operation unless the evaluation is positive. If the evaluation is positive, the Secretary may provide continued funding through the sixth year at declining levels, which are designed to ensure that the Center no longer needs financial support from the Institute by the seventh year. In no event shall funding for a Center be provided by the Department of Commerce after the sixth year of the operation of a Center.

"(6) The provisions of chapter 18 of title 35, United States Code, shall (to the extent not inconsistent with this section) apply to the promotion of technology from research by Centers under this section.

"(d) There are authorized to be appropriated for the purposes of Appropriation in this section, a combined total of not to exceed \$40,000,000 ; for fiscal years 1989 and 1990. Such sums shall remain available until expended.

## ASSISTANCE TO STATE TECHNOLOGY PROGRAMS

"Sec. 26. (a) In addition to the Centers program created under 15 USC 2781. section 25, the Secretary, through the Director and, if appropriate, through other officials, shall provide technical assistance to State technology programs throughout the United States, in order to help those programs help businesses, particularly small- and medium-sized businesses, to enhance their competitiveness through the application of science and technology.

"(b) Such assistance from the Institute to State technology programs shall include, but not be limited to (1) technical information and advice from Institute personnel; (2) workshops and seminars for State officials interested in transferring Federal technology to businesses; and Contracts (3) entering into cooperative agreements when authorized to do so under this or any other Act.

(b) Technology Services.-41) The Secretary shall conduct a study of current State technology extension services. The study shall include

(A) a thorough description of each State program, including its duration, its annual budget, and the number and types of businesses it has aided;

(B) a description of any anticipated expansion of each State program and its associated costs;

(C) an evaluation of the success of the services in transferring technology, modernizing manufacturing processes, and improving the productivity and profitability of businesses;

(D) an assessment of the degree to which State services make use of Federal programs, including the Small Business Innovative Research program and the programs of the Federal Laboratory Consortium, the National Technical Information Service, the National Science Foundation, the Office of Productivity, Technology, and Innovation, and the Small Business Administration;

(E) a survey of what additional Federal information and technical assistance the services could utilize; and

(F) an assessment of how the services could be more effective agents for the transfer of Federal scientific and technical information, including the results and application of Federal and federally funded research. The Secretary shall submit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee On Commerce, Science, and Transportation of the Senate, at the time of submission of the organization plan for the Institute under section 5112(dX1), the results of the study and an initial implementation plan for the programs under section 26 of the Act of March 3, 1901, and under this section. The implementation plan shall include methods of providing technical assistance to States and criteria for awarding financial assistance under this section. The Secretary may make use of contractors and experts for any or all of the studies and findings called for in this section.

Contracts. The Institute shall enter into cooperative agreements with State technology extension services to:

(i) demonstrate methods by which the States can, in cooperation with Federal agencies, increase the use of Federal technology by businesses within their States to improve industrial competitiveness; or

(ii) help businesses in their States take advantage of the services and information offered by the Regional Centers for the Transfer of Manufacturing Technology created under section 25 of the Act of March 3, 1901.

(B) Any State, for itself or for a consortium of States, may submit to the Secretary an application for a cooperative agreement under this subsection, in accordance with procedures established by the Secretary. To qualify for a cooperative agreement under this subsection a State shall provide adequate assurances that it will increase its spending on technology extension services by an amount at least equal to the amount Federal assistance.

(C) In evaluating each application, the Secretary shall consider-

- (i) the number and types of additional businesses that will be assisted under the cooperative agreement;
- (ii) the extent to which the State extension service will demonstrate new methods to increase the use of Federal technology;
- (iii) geographic diversity; and
- (iv) the ability of the State to maintain the extension service after the cooperative agreement has expired.

(D) States which are party to cooperative agreements under this subsection may provide services directly or may arrange for the provision of any or all of such services by institutions of higher education or other non-profit institutions or organizations.

(3) In carrying out section 26 of the Act of March 3, 1901, and this subsection, the Secretary shall coordinate the activities with the Federal Laboratory Consortium; the National Technical Information Service; the National Science Foundation; the Office of Productivity, Technology, and Innovation; the Small Business Administration; and other appropriate Federal agencies.

(4) There are authorized to be appropriated for the purposes Of Appropriation this subsection \$2,000,000 for each of the fiscal years 1989, 1990, and authorization. 1991.

(5) Cooperative agreements entered into under paragraph (2) shall terminate no later than September 30, 1991.

(c) FEDERAL TECHNOLOGY TRANSFER ACT OF 1986.- Nothing in 15 USC 2781 sections 25 or 26 of the Act of March 3, 1901, or in subsection (b) of note. this section shall be construed as limiting the authorities contained in the Federal Technology Transfer Act of 1986 (Public Law 99-502).

(d) NON-ENERGY INVENTION PROGRAM.-The Act of March 3,1901, as amended by this part, is further amended by adding after section 26 the following new section:

#### NON-ENERGY INVENTIONS PROGRAM

"Sec. 27. In conjunction with the initial organization of the In- 15 USC 278m. , the Director shall establish a program for the evaluation of inventions that are not energy-related to complement but not replace the Energy-Related Inventions Program established under section 14 of the Federal Nonnuclear Energy Research and Development Act of 1974 (Public Law 93-577). The Director shall submit an initial implementation plan for this program to accompany the organization plan for the Institute. The implementation plan shall include specific cost estimates, implementation schedules, and mechanisms to help finance the development of technologies the program has determined to have potential. In the preparation of the plan, the Director shall consult with appropriate Federal agencies, including the Small Business Administration and the Department of Energy, State and local government organizations, university officials, and private sector organizations in order to obtain advice on how those agencies and organizations might cooperate with the expansion of this program of the Institute."

- (1) by redesignating sections 6 through 19 as sections 7 through 20, respectively-, and
- (2) by inserting after section 5 the following new section:

.SEC. 6. CLEARINGHOUSE FOR STATE AND LOCAL INITIATIVES ON PRODUCTIVITY, TECHNOLOGY. AND INNOVATION."(a).-There is established within the Office of Productivity, Technology, and Innovation a Clearinghouse for State and local Initiatives on Productivity, Technology, and Innovation. The Clearinghouse shall serve as a central repository of information on initiatives by State and local governments to enhance the usefulness and stimulation of innovation and Federal efforts to enhance competitiveness. Clearinghouse may:

- (1) establish relationships with State and local governments, and regional and multistate organizations of such governments, which carry out such initiatives;

- (2) collect information on the nature, extent, and effects of such initiatives, particularly information useful to the Congress, Federal agencies, State and local governments, regional and multistate organizations of such governments, businesses, and the public throughout the United States;
- (3) disseminate information collected under paragraph through reports, directories, handbooks, conferences, and seminars
- (4) provide technical assistance and advice to such governments with respect to such initiatives, including assistance in determining sources of assistance from Federal agencies which is available to support such initiatives;
- (5) study ways in which Federal agencies, including Federal laboratories, are able to use their existing policies and programs to assist State and local governments, and regional and multistate organizations of such governments, to enhance the competitiveness of American business;
- (6) make periodic recommendations to the Secretary, and to other Federal agencies upon their request, concerning modifications in Federal policies and programs which would improve Federal assistance to State and local technology and business assistance programs;
- (7) develop methodologies to evaluate State and local programs, and, when requested, advise State and local governments, and regional and multi-state organizations of such governments, as to which programs are most effective in enhancing the competitiveness of American business through the stimulation of productivity, technology, and innovation; and
- (8) make use of, and disseminate, the nationwide study of State industrial extension program conducted by the Secretary.

"(c) CONTRACTS - In carrying out subsection (b), the Secretary may enter into contracts for the purpose of collecting information on the nature, extent, of initiatives

"(d).-The Secretary shall prepare and transmit to the Congress once each 3 years a report on initiatives by State and local governments to enhance the competitiveness of American businesses through the stimulation of productivity, technology, and innovation. The report shall include recommendations to the President competitiveness of American productivity, technology, and assist State and local governments,

(b) The President, the Congress, and to Federal agencies on the appropriate Federal role in stimulating State and local efforts in this area. The first of these reports shall be transmitted to the Congress before January 1, 1989. .

(b).-Section 4 of such Act is amended by adding at the 15 USC 3703. end thereof the following new paragraph:

"(13) 'Clearinghouse' means the Clearinghouse for State and Local Initiatives on Productivity, Technology, and Innovation established by section 6."

(c) CONFORMING AMENDMENT.-Section 10(d) of such Act, as so redesignated by section 5122(al) of this part, is amended by striking- 15 USC 3708. "6, 8, 10, 14, 16, or 17" and inserting in lieu thereof "7, 9, 11, 15, 17, or 18".

#### Subpart C-Advanced Technology Program

SEC. 5131.

(a) ADVANCED TECHNOLOGY PROGRAM.-The Act of March 3, 190 1, as amended by this part, is further amended by adding after section 27 the following new section:

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### ADVANCED TECHNOLOGY PROGRAM

SEC. 28. (a) There is established in the Institute an Advanced 15 USC 278n. Technology Program (hereafter in this Act referred to as the Program) for the purpose of assisting United States businesses in creating and applying the generic technology and research results necessary to (1) commercialize significant new scientific discoveries and technologies rapidly; and (2) refine manufacturing technologies. The Secretary, acting through the Director, shall assure that the Program focuses on improving the competitive position of the United States and its businesses, gives preference to discoveries and to technologies that have great economic potential, and avoids providing undue advantage to specific companies. Under the Program established in subsection (a), and consistent with the mission and policies of the Institute, the Secretary, acting through the Director, and subject to subsections (c) and (d), may-

(1) aid United States joint research and development ventures (hereafter in this section referred to as 'joint ventures (which may also include universities and independent research organizations), including those involving collaborative technology demonstration projects which develop and test prototype equipment and processes, through

(A) provision of organizational and technical advice; and

(B) participation in such joint ventures, if the Secretary, acting through the Director, determines participation to be appropriate, which may include (i) partial start-up funding, (ii) provision of a minority share of the cost of such joint ventures for up to 5 years, and (iii) making available equipment, facilities, and personnel, provided that emphasis is placed on areas where the Institute has scientific or technological expertise, on solving generic problems of specific industries, and on making those industries more competitive in world markets;

Contracts.

(2) enter into contracts and cooperative agreements with United States businesses, especially small businesses, and with independent research organizations, provided that emphasis is placed on applying the Institute's research, research techniques, and expertise to those organizations' research programs;

(3) involve the Federal laboratories in the Program, where appropriate, using among other authorities the cooperative research and development agreements provided for under section 12 of the Stevenson-Wydler Technology Innovation Act of 1980; and carry out in a manner consistent with the provisions of this section, such other cooperative research activities with joint ventures as may be authorized by law or assigned to the Program by the Secretary.

(c) The Secretary, acting through the Director, is authorized to take all actions necessary and appropriate to establish and operate the Program, including Federal

(1) publishing in the Federal Register draft criteria and, no later than six months after the date of the enactment of this publication. section, following a public comment period, final criteria, for the selection of recipients of assistance under subsection (b) (1) and

Reports. (2) monitoring how technologies developed in its research program are used, and reporting annually to the Congress on the extent of any overseas transfer of these technologies;

Contracts. (3) establishing procedures regarding financial reporting and auditing to ensure that contracts and awards are used for the purposes specified in this section, are in accordance with sound accounting practices, and are not funding existing or planned research programs that would be conducted in the same time period in the absence of financial assistance under the Program; assuring that the advice of the Committee established under section 10 is considered routinely in carrying out the possibilities of the Institute; and

(4) providing for appropriate dissemination of Program research results.

Contracts. When entering into contracts or making awards under subsection (b), the following shall apply:

(1) No contract or award may be made until the research project in question has been subject to a merit review, and has,

in the opinion of the reviewers appointed by the Director and the Secretary, acting through the Director, been shown to have scientific and technical merit.

(2) In the case of joint ventures, the Program shall not make an award unless, in the judgment of the Secretary, acting through the Director, Federal aid is needed if the industry in question is to form a joint venture quickly.

No Federal contract or cooperative agreement under subsection (b2) shall exceed \$2,000,000 over 3 years, or be for more than 3 years unless a full and complete explanation of such award, including reasons for exceeding these limits, is submitted in writing by the Secretary to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives. The proposed contract or cooperative agreement may be executed only after 30 calendar days on which both Houses of Congress are in session have elapsed since such submission.

(3) shall be used only for direct costs and not for indirect costs, profits, or management fees of the contractor.

b) COMMITTEE ON ADVANCED TECHNOLOGY.-Section 10 of the Act of March 3,1901, is amended to read as follows:

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#### Visiting Committee on Advanced Technology

"SEC. 10. (a) There is established within the Institute a Visiting Committee on Advanced Technology (hereafter in this Act referred to as the 'Committee'. The Committee shall consist of nine members appointed by the Director at least five of whom shall be from United States industry. The Director shall appoint original members of the Committee any final members of the National Bureau of Standards Visiting Committee who wish to serve in such capacity. In addition to any powers and functions otherwise granted to it by this Act, the Committee shall review and make recommendations regarding general policy for the Institute, its organization, budget, and its programs, within the framework of applicable national policies as set forth by the President and the Congress.

Persons appointed as members of the Committee-

(1) shall be eminent in fields such as business, research, new product development, engineering, labor, education, management consulting, environment, and international relations;

(2) shall be selected solely on the basis of established records of distinguished service;

(3) shall not be employees of the Federal Government; and

(4) shall be so selected as to provide representation of a cross-section of the traditional and emerging United States industries.

The Director is requested, in making appointments of persons as members of the Committee, to give due consideration to any recommendations which may be submitted to the Director by the National Academies, professional societies, business associations, labor associations, and other appropriate organizations.

The term of office of each member of the Committee, other than the original members, shall be 3 years; except that any member appointed to fill a vacancy occurring prior to the expiration of the term for which his predecessor was appointed shall be appointed for the remainder of such term. Any person who has completed two consecutive full terms of service on the Committee shall thereafter be ineligible for appointment during the one-year period following the expiration of the second such term.

(2) The original members of the Committee shall be elected to three classes of three members each; one class shall have a term of one year, one a term of two years, and the other a term of three

(b) The Committee shall meet at least quarterly at the call of the Chairman or whenever one-third of the members so request in writing. A majority of the members of the Committee not having a conflict of interest in the matter being considered by the Committee shall constitute a quorum. Each member shall be given appropriate notice, whenever possible, not less than 15 days prior to any meeting of the call of such meeting.

(c) The Committee shall have an executive committee, and may delegate to it or to the Secretary such of the powers and functions granted to the Committee by this Act as it deems appropriate. The Committee is authorized to appoint from among its members such other committees as it deems necessary, and to assign to committees so appointed such survey and advisory functions as the Committee deems appropriate to assist it in exercising its powers and functions under this Act.

(d) The election of the Chairman and Vice Chairman of the Committee shall take place at each annual meeting occurring in an even-numbered year. The Vice Chairman shall perform the duties of the Chairman in his absence. In case a vacancy occurs in the chairmanship or vice chairmanship, the Committee shall elect a member to fill such vacancy.

(e) The Committee may, with the concurrence of a majority of its members, permit the appointment of a staff consisting of not more than four professional staff members and such clerical staff members as may be necessary. Such staff shall be appointed by the Director, after consultation with the Chairman of the Committee, and assigned at the direction of the Committee. The professional members of such staff may be appointed without regard to the provisions of title 5, United States Code, governing appointments in the competitive service and the provisions of chapter 51 of title 5 of such Code relating to classification, and compensated at a rate not exceeding the appropriate rate provided for individuals in grade GS18 of the General Schedule under section 5332 of title 5 of such Code, as may be necessary to provide for the performance of such duties as may be prescribed by the Committee in connection with the exercise of its powers and functions under this Act.

(f) The Committee shall render an annual report to the Secretary. Reports for submission to the Congress on or before January 31 in each year. Such report shall deal essentially, though not necessarily exclusively, with policy issues or matters which affect the Institute, including the Program established under section 28, or with which the Committee in its official role as the private sector policy advisor of the Institute is concerned. Each such report shall identify areas of research and research techniques of the Institute of potential importance to the long-term competitiveness of United States industry, in which the Institute possesses special competence, which could be used to assist United States enterprises and United States industrial joint research and development ventures.

(g) The Committee shall render to the Secretary and the Congress such additional reports on specific policy matters as it deems appropriate."

(c) NATIONAL ACADEMIES OF SCIENCES AND ENGINEERING STUDY OF Contracts.  
GOVERNMENT-INDUSTRY COOPERATION IN CIVILIAN TECHNOLOGY.

(1) 15 USC 278n, Within 90 days after the date of enactment of this Act, the Secretary of Commerce shall enter into contracts with the National Academies of Sciences and Engineering for a thorough review of the various types of arrangements under which the private sector in the United States and the Federal Government cooperate in civilian research and technology transfer, including activities to create or apply generic, nonproprietary technologies. The purpose of the review is to provide the Secretary and Congress with objective information regarding the uses, strengths, and limitations of the various types of cooperative technology arrangements that have been used in the United States. The review is to provide both an analysis of the ways in which these arrangements can help improve the

technological performance and international competitiveness of United States industry, and also to provide the Academies' recommendations regarding ways to improve the effectiveness and efficiency of these types of cooperative arrangements. A special emphasis shall be placed on discussions of these subjects among industry leaders, labor leaders, and officials of the executive branch and Congress. The Secretary is authorized to seek and accept funding for this study from both Federal agencies and private industry.

(2) The members of the review panel shall be drawn from among industry and labor leaders, entrepreneurs, former government officials with great experience in civilian research and technology, and scientific and technical experts, including experts with experience with Federal laboratories.

(3) The review shall analyze the strengths and weaknesses of different types of Federal-industry cooperative arrangements in civilian technology, including but not limited to-

(A) Federal programs which provide technical services and information to United States companies;

(B) cooperation between Federal laboratories and United States companies, including activities under the Technology Share Program created by Executive Order 12591;

(C) Federal research and technology transfer arrangements with selected business sectors;

(D) Federal encouragement of, and assistance to, private joint research and development ventures; and

(E) such other mechanisms of Federal-industry cooperation as may be identified by the Secretary.

Reports. (4) A report based on the findings and recommendations of the review panel shall be submitted to the Secretary, the President, and Congress within 18 months after the Secretary signs the contracts with the National Academies of Sciences and Engineering.

#### Subpart D-Technology Reviews

##### SEC. 5141. REPORT OF PRESIDENT.

The President shall, at the time of submission of the budget request for fiscal year 1990 to Congress, also submit to the Congress a report on-

(1) the President's policies and budget proposals regarding Federal research in semiconductors and semiconductor manufacturing technology, including a discussion of the respective roles of the various Federal departments and agencies in such research;

(2) the President's policies and budget proposals regarding Federal research and acquisition policies for fiber optics and optical-electronic technologies generally;

(3) the President's policies and budget proposals, identified by agency, regarding superconducting materials, including descriptions of research priorities, the scientific and technical barriers to commercialization which such research is designed to overcome, steps taken to ensure coordination among Federal agencies conducting research on superconducting materials, and steps taken to consult with private United States industry and to ensure that no unnecessary duplication of research exists and that all important scientific and technical barriers to the commercialization of superconducting materials will be addressed; and

(4) the President's policies and budget proposals, identified by agency, regarding Federal research to assist United States industry to develop and apply advanced manufacturing technologies for the production of durable and nondurable goods.

## SEMICONDUCTOR RESEARCH AND DEVELOPMENT.

### Advisory Committee

(a) **SHORT TITLE.**-This section may be cited as the "National Semiconductor Advisory Committee on Semiconductor Research and Development Research and Act of 1988".

(b) **FINDINGS AND PURPOSES.**-41) The Congress finds and declares 15 USC 4632. that

(A) semiconductor technology is playing an ever-increasing role in United States industrial and commercial products and processes, making secure domestic sources of state-of-the-art semiconductors highly desirable;

(B) modern weapons systems are highly dependent on leading edge semiconductor devices, and it is counter to the national security interest to be heavily dependent upon foreign sources for this technology-;

(C) governmental responsibilities related to the semiconductor industry are divided among many Federal departments and agencies; and

(D) joint industry-government, consideration of semiconductor industry problems is needed at this time.

(2) The purpose of this section is:

(A) to establish the National Advisory Committee on Semiconductors; and

(B) to assign to such Committee the responsibility for devising and promulgating a national semiconductor strategy, including research and development the implementation of which will assure the continued leadership of the United States in semiconductor technology.

(c) There is hereby created in the executive branch of the Government an independent advisory body to be known as the National Advisory Committee on Semiconductors (hereafter in this section referred to as the "Committee").

(d) The Committee shall-

(A) collect and analyze information on the needs and capabilities of industry, the Federal Government, and the scientific and research communities related to semiconductor technology,

(B) identify the components of a successful national semiconductor in accordance with subsection (b)(20);

(C) analyze options, establish priorities, and recommend roles for participants in the national strategy-;

(D) assess the roles for government and national laboratories and other laboratories supported largely for government purposes in contributing to the semiconductor technology base of the Nation, as well as to access the effective use of the resources of United States private industry, United States universities, and private-public research and development efforts; and

(E) provide results and recommendations to agencies of the Federal Government involved in legislative, policymaking, administrative, management, planning, and technology activities that affect or are part of a national semiconductor strategy, and to the industry and other nongovernmental groups or organizations affected by or contributing to that strategy.

(3) In fulfilling this responsibility, the Committee shall-

(A) monitor the competitiveness of the United States semiconductor technology base;

(B) determine technical areas where United States semiconductor technology is deficient relative to international competition;

(C) identify new or emerging semiconductor technologies that will impact the national defense or United States competitiveness or both,

(D) develop research and development strategies, tactics, and plans whose execution will assure United States semiconductor competitiveness; and

(E) recommend appropriate actions that support the national semiconductor strategy.

(F) The Committee shall be composed of 13 members, 7 of whom shall constitute a quorum. The Secretary of Defense, the Secretary of Commerce, the Secretary of Energy, the Director of the Science and

Technology Policy, and the Director of the National Science Foundation, or their designees, shall serve as members of the Committee. President of U.S. The President, acting through the Director of the Office of Science and Technology Policy, shall appoint, as additional members of the Committee, 4 members from outside the Federal Government who are eminent in the semiconductor industry, and 4 members from outside the Federal Government who are eminent in the fields of technology, defense, and economic development.

(G) One of the members appointed under subparagraph (C), as designated by the President at the time of appointment, shall be chairman of the Committee.

(2) Funding and administrative support for the Committee shall be provided to the Office of Science and Technology Policy through an arrangement with an appropriate agency or organization designated by the Committee, in accordance with a memorandum of understanding entered into between them.

(3) Members of the Committee, other than full-time employees of the Federal Government, while attending meetings of the Committee or otherwise performing duties at the request of the Chairman while away from their homes or regular places of business, shall be allowed travel expenses in accordance with subchapter I of chapter 57 of title 5, United States Code.

(4) The Chairman shall call the first meeting of the Committee not later than 90 days after the date of the enactment of this Act.

Reports.

(5) At the close of each fiscal year the Committee shall submit to the President and the Congress a report on its activities conducted during such year and its planned activities for the coming year, including specific findings and recommendations with respect to the national semiconductor strategy devised and promulgated under subsection (b2B). The first report shall include an analysis of those technical areas, including manufacturing, which are of importance to the United States semiconductor industry, and shall make specific recommendations regarding the appropriate Federal role in correcting any deficiencies identified by the analysis. Each report shall include an estimate of the length of time the Committee must continue before the achievement of its purposes and the issuance of its final report.

#### AUTHORIZATION OF APPROPRIATIONS

There are authorized to be appropriated to carry out the purposes of this section such sums as may be necessary for the fiscal years 1988, 1989, and 1990.

#### SEC. 5143. REVIEW OF RESEARCH AND DEVELOPMENT PRIORITIES IN SUPERCONDUCTORS.

(a) NATIONAL COMMISSION ON SUPERCONDUCTIVITY.-The President shall appoint a National Commission on Superconductivity to review all major policy issues regarding United States applications of recent research advances in superconductors in order to assist the Congress in devising a national strategy, including research and development priorities, the development of which will assure United States leadership in the development and application of superconducting technologies.

(b) MEMBERSHIP.-The membership of the National Commission on Superconductivity shall include representatives of

(1) the National Critical Materials Council, the National Academy of Sciences, the National Academy of Engineering, the National Science Foundation, the National Aeronautics and Space Administration, the Department of Energy, the Department of Justice, the Department of Commerce (including the National Institute of Standards and Technology), the Department of Transportation, the Department of the Treasury, and the Department of Defense;

(2) organizations whose membership is comprised of physicists, engineers, chemical scientists, or material scientists; and

(3) industries, universities, and national laboratories engaged in superconductivity research.

CHAIRMAN.- A representative of the private sector shall be designated as chairman of the Commission.

(c) COORDINATION.-The National Critical Materials Council shall be the coordinating body of the National Commission on Superconductivity and shall provide staff support for the Commission.

(d) REPORT.-Within 6 months after the date of the enactment of this Act, the National Commission on Superconductivity shall submit a report to the President and the Congress with recommendations regarding methods of enhancing the research, development, and implementation of improved superconductor technologies in all major applications.

SCOPE OF REVIEW.-In preparing the report required by subsection (e), the Commission shall consider addressing, but need not limit, its review to-

- (1) the state of United States competitiveness in the development of improved superconductors;
- (2) methods to improve and coordinate the collection and dissemination of research data relating to superconductivity;
- (3) methods to improve and coordinate funding of research and development of improved superconductors;
- (4) methods to improve and coordinate the development of viable commercial and military applications of improved superconductors;
- (5) foreign government activities designed to promote research, development, and commercial application of improved superconductors;
- (6) the need to provide increased Federal funding of research and development of improved superconductors;
- (7) the impact on the United States national security if the United States must rely on foreign producers of superconductors;
- (8) the benefit, if any, of granting private companies partial exemptions from United States antitrust laws to allow them to coordinate research, development, and products containing improved superconductors;
- (9) options for providing income tax incentives for encouraging research, development, and production in the United States of products containing improved superconductors; and
- (10) methods to strengthen domestic patent and trademark laws to ensure that qualified superconductivity discoveries receive the fullest protection from infringement.

(e) SUNSET.-The Commission shall disband within a year of its establishment. Thereafter the National Critical Materials Council may review and update the report required by subsection (e) and make further recommendations as it deems appropriate.

#### Subpart E-Authorization of Appropriations

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#### SEC. 5151. AUTHORIZATION OF APPROPRIATIONS FOR TECHNOLOGY ACTIVITIES.

(a) AUTHORIZATION OF APPROPRIATIONS.- There are authorized to be appropriated for fiscal year 1988 to the Secretary of Commerce to carry out activities performed by the Institute the sums set forth in the following line items:

- (1) Measurement Research and Technology: \$41,939,000.
  - (2) Engineering Measurements and Manufacturing: \$40,287,000.
  - (3) Materials Science and Engineering: \$23,521,000.
  - (4) Computer Science and Technology: \$7,941,000.
  - (5) Research Support Activities: \$19,595,000.
  - (6) Cold Neutron Source Facility: \$6,500,000 (for a total authorization of \$13,000,000).
  - (7) Programs established under sections 25, 26, and 27 of the Act of March 3, 1901 and section 5121 of this part: \$5,000,000.
- (b) Limitations -Notwithstanding any other provision of this or any other Act-
- (1) of the total of the amounts authorized under subsection (a), \$2,000,000 is authorized only for steel technology;
  - (2) of the amount authorized under paragraph (1) of subsection (a) of this section, \$3,550,000 is authorized only for the purpose of research in process and quality control;

(3) of the amount authorized under paragraph (2) of subsection (a) of this section, \$3,710,000 is authorized only for the Center for Building Technology, \$5,662,000 is authorized only for the Center for Fire Research, and the two Centers shall not be merged;

(4) of the amount authorized under paragraph (3) of subsection (a) of this section, \$1,500,000 is authorized only for the purpose of research to improve high-performance composites-, and

(5) of the amount authorized under paragraph (5) of subsection (a) of this section, \$7,371,000 is authorized only for technical competence fund projects in new areas of high technical importance, and \$1,091,000 is authorized only for the Postdoctoral Research Associates Program and related new personnel.

(c) TRANSFERS Funds may be transferred among the line items listed in subsection (a) of this section so long as the net funds transferred to or from any line item do not exceed 10 percent of the amount authorized for that line item in such subsection and the Committee on Science, and Transportation of the Senate and the Committee on Science, Space Commerce,, and Technology of the House of Representatives are notified in advance of any such transfer.

In addition, the Secretary of Commerce may propose transfers to or from any line item exceeding 10 percent of the amount authorized for the line item in subsection (a) of this section, but a full and complete explanation of any such proposed transfer and the reason for such transfer must be transmitted in writing to the President of the Senate, the Speaker of the House of Representatives, and the appropriate authorizing committees of the Senate and House of Representatives. The proposed transfer may be made only when 30 calendar days have passed after the transmission of such written explanation.

(d) COLD NEUTRON SOURCE FACILITY.-In addition to any sums otherwise authorized by this part, there are authorized to be appropriated to the Secretary of Commerce for fiscal years 1988, 1989, and 1990 such sums as were authorized but not appropriated for the Cold Neutron Source Facility for fiscal year 1987. Furthermore, the Gifts and Secretary may accept contributions for funds, to remain available property. until expended, for the design, construction, and equipment of the Cold Neutron Source Facility, notwithstanding the limitations of section 14 of the Act of March 3, 1901 (15 U.S.C. 278d).

(e) EMPLOYEE BENEFIT ADJUSTMENTS - In addition to any sums otherwise authorized by this part, there are authorized to be appropriated to the Secretary of Commerce for fiscal year 1988 such additional sums as may be necessary to make any adjustments in salary, pay, retirement, and other employee benefits which may be provided for by law.

(f) AVAILABILITY - Appropriations made under the authority provided in this section shall remain available for obligation, for expenditure, or for obligations and expenditure for periods specified in the Acts making such appropriations.

#### **SEQ 515L STEVENSON-WYDLER ACT AUTHORIZATIONS.15 USC 3713.**

Section 19 (a) and (b) of the Stevenson-Wydler Technology Innovation Act of 1980, as so redesignated by section 5122(aXI) of this part, is amended to read as follows:

"(a) There is authorized to be appropriated to the Secretary for the Purposes of carrying out sections 5, 11(g), and 16 of this Act not to exceed \$3,400,000 for the fiscal year ending September 30, 1988.

"Of the amount authorized under paragraph (1) of this subsection, \$2,400,000 is authorized only for the Office of Productivity, Technology, and Innovation; \$50,000 is authorized only for the of carrying out the requirements of the Japanese technical literature program established under section 5(d) of this Act; and \$50,000 is authorized only for the patent licensing activities of the National Technical Information Service.

(b) In addition to the authorization of appropriations provided under subsection (a) of this section, there is authorized to be appropriated to the Secretary for the purposes of carrying out section 6 of this Act not to

exceed \$500,000 for the fiscal year ending September 30, 1988, \$1,000,000 for the fiscal year ending September 30, 1989, and \$1,500,000 for the fiscal year ending September 30, 1990."

### **Subpart F-Miscellaneous Technology and Commerce Provisions**

#### **SEC\_ 6161. SAVINGS PROVISION AND USER FEES,**

The Act of March 3, 1901 (15 U.S.C. 271 et seq.), as amended by this part, is further amended by adding after section 28 the following new sections:

"SEC 29. All rules and regulations, determinations, standards, Contracts. contracts, certifications, authorizations, delegations, results and 15 USC 271 note. findings of investigations, or other actions duly issued, made, or taken by or pursuant to this Act, or under the authority of any other statutes which resulted in the assignment of functions or activities to the Secretary, the Department, the Director, or the Institute, as are in effect immediately before the date of enactment of this section, and not suspended by the Secretary, the Director, the Institute or the courts, shall continue in full force and effect after the date of enactment of this section until modified or rescinded.

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#### **USER FEES**

15 USC 278o. SEC. 30. The Institute shall not implement a policy of charging fees with respect to the use of Institute research facilities by research associates in the absence of express statutory authority to charge such fees..

#### **SEC. 5162. MISCELLANEOUS AMENDMENTS TO THE STEVENSON-WYDLER ACT.**

(a) INVENTION MANAGEMENT SERVICES.-The first sentence of section 14(aX4) of the Stevenson-Wydler Technology Innovation Act of 1980, as so redesignated by section 5122(aX1) of this part (15 U.S.C.3710c) is amended by striking out "shall" and inserting in lieu thereof "may", and by striking out "such invention performed at the request of the other agency or laboratory" and inserting in lieu thereof "any invention of the other agency'.

(b) FEDERAL LABORATORY Consortium-Section 11(e7A) of the Stevenson-Wydler Technology Innovation Act of 1980, as so redesignated by section 5122(aX1) of this part (15 U.S.C. 3710) is amended by striking out "0.005 percent of that portion of the research and development budget of each Federal agency that is to be utilized by" and inserting in lieu thereof "0.008 percent of the budget of each Federal agency from any Federal source, including related overhead, that is to be utilized by or on behalf of".

#### **SEC. 5163. MISCELLANEOUS TECHNOLOGY AND COMMERCE PROVISIONS.**

15 USC 282a.

(a) ASSESSMENT OF EMERGING TECHNOLOGIES.-The Board of Assessment of the National Institute of Standards and Technology shall include, as part of its annual review, an assessment of emerging technologies which are expected to require research in metrology to keep the Institute abreast of its mission, including process and quality control, engineering databases, advanced materials, electronics and fiber optics, bioprocess engineering, and advanced computing concepts. Such review shall include estimates of the cost of the required effort, required staffing levels, appropriate interaction with industry, including technology transfer, and the period over which the research will be required.

(b) SMALL BUSINESS PLAN.-The Director of the National Institute of Standards and Technology shall prepare a plan detailing the manner in which the Institute Will make small businesses more aware of the Institute's activities and research, and the manner in which the Institute will seek to increase the application by small businesses of the Institute's research, particularly in manufacturing.The plan shall be submitted to the

Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives not later than 120 days after the date of the enactment of this Act (c) NATIONAL TECHNICAL INFORMATION SERVICE.-41) Section 11 of the Stevenson-Wydler Technology Innovation Act of 1980, as so redesignated by section 5122(a1) of this part, is amended by inserting at the end the following new subsection:

"None of the activities or functions of the National Technical Information Service which are not performed by contractors as of September 30, 1987, shall be contracted out or otherwise transferred from the Federal Government unless such transfer is expressly authorized by statute, or unless the value of all work performed under the contract and related contracts in each fiscal year does not exceed \$250,000."

(2) The Secretary of Commerce shall report the Secretary's recommendations for improvements in the National Technical Information Service (including methods for automating document distribution and inventory control), and any statutory changes required to make such improvements, to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives by January 31, 1989.

(3) Section 11(d) of the Stevenson-Wydler Technology Innovation Act of 1980, as so redesignated by section 5122(a)(1) of this part, is 15 USC 3710 amended

(A) by striking "and" at the end of paragraph (4);

(B) by striking the period at the end of paragraph (5) and inserting in lieu thereof "; and"; and

(C) by adding at the end thereof the following new paragraph: "(6) maintain a permanent archival repository and clearinghouse for the collection and dissemination of nonclassified scientific, technical, and engineering information."

(D) Fellowship Program.-There is established within the 15 USC 1533. Department of Commerce a Commerce, Science, and Technology Fellowship Program with the stated purpose of providing a select group of employees of the executive branch of the Government with the opportunity of learning how the legislative branch and other parts of the executive branch function through work experiences of up to one year. The Secretary of Commerce shall report to the Reports. Congress within six months after the date of enactment of this Act on the Department of Commerce's plans for implementing such Program by March 31, 1989.

#### SEC. 5164 METRIC USAGE

15 USC 205o (a) FINDINGS.--Section 2 of the Metric Conversion Act of 1975 is amended by adding at the end thereof the following new paragraphs:

(1) World trade is increasingly geared towards the metric system of measurement.

(2) Industry in the United States is often at a competitive disadvantage when dealing in international markets because of its nonstandard measurement system, and is sometimes excluded when it is unable to deliver goods which are measured in 4 metric terms.

(3) The inherent simplicity of the metric system of measurement and standardization of weights and measures has led to major cost savings in certain industries which have converted to that system.

(4) The Federal Government has a responsibility to develop procedures and techniques to assist industry, especially small business, as it voluntarily converts to the metric system of measurement.

(5) The metric system of measurement can provide substantial advantages to the Federal Government in its own operations.

(b) Policy.-Section 3 of the Metric Conversion Act of 1975 is amended to read as follows:

SEC. 3. It is therefore the declared policy of the United States

(1) to designate the metric system of measurement as the preferred system of weights and measures for United States trade and commerce;

"(2) to require that each Federal agency, by a date certain and to the extent economically feasible by the end of the fiscal year 1992, use the metric system of measurement in its procurements, grants, and other business-related activities, except to the extent that such use is impractical or is likely to cause significant inefficiencies or loss of markets to United States firms, such as when foreign competitors are producing competing products in non-metric units;

"(3) to seek out ways to increase understanding of the metric system of measurement through educational information and guidance and in Government publications; and

"(4) to permit the continued use of traditional systems of weights and measures in nonbusiness activities."

(c) IMPLEMENTATION.-The Metric Conversion Act of 1975 is further amended by redesignating section 12 as section 13, and by, inserting after section 11 the following new section:

"SEC. 12. (a) As soon as possible after the date of the enactment of this section, each agency of the Federal Government shall establish guidelines to carry out the policy set forth in section 3 (with particular emphasis upon the policy set forth in paragraph (2) of that section), and as part of its annual budget submission for each fiscal year beginning after such date shall report to the Congress on the actions which it has taken during the previous fiscal year, as well as the actions which it plans for the fiscal year involved, to implement fully the metric system of measurement in accordance with that policy. Such reporting shall cease for an agency in the fiscal year after it has fully implemented its efforts under section 3(2). As used in this section, the term 'agency of the Federal Government' means an Executive agency or military department as those terms as defined in chapter 1 of title 5, United States Code.

(b) At the end of the fiscal year 1992, the Comptroller General shall review the implementation of this Act, and upon completion of such review shall report his findings to the Congress along with any legislative recommendations he may have."

END