

Substitute Amendments Proposed by Hon. George E. Brown, Jr.
Chairman
Subcommittee on Science, Research and Technology
July 1, 1980

(Omit material struck through and insert material printed by typewriter.)

96TH CONGRESS
2D SESSION

S. 1250

IN THE HOUSE OF REPRESENTATIVES

MAY 30, 1980

Referred to the Committee on Science and Technology

AN ACT

To promote United States technological innovation for the achievement of national economic, environmental, and social goals, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*
3 That this Act may be cited as the "Stevenson Technology
4 Innovation Act of 1980".

5 SEC. 2. FINDINGS.

6 ~~The Congress finds and declares that:~~

7 (1) Technology and industrial innovation are cen-
8 tral to the economic, environmental, and social well-
9 being of citizens of the United States.

1 (2) Technology and industrial innovation offer an
2 improved standard of living, increased public and pri-
3 vate sector productivity, creation of new industries and
4 employment opportunities, improved public services
5 and enhanced competitiveness of United States prod-
6 ucts in world markets.

7 (3) Many new discoveries and advances in science
8 occur in universities and ^{Federal} ~~Government~~ laboratories,
9 while the application of this new knowledge to com-
10 mercial and useful public purposes depends largely
11 upon actions by business and labor. Cooperation among
12 academia, Federal laboratories, labor, and industry, in
13 such forms as technology transfer, personnel exchange,
14 joint research projects, and others, should be renewed,
15 expanded, and strengthened.

16 (4) Small businesses have performed an impor-
17 tant role in advancing industrial and technological
18 innovation.

19 (5) Industrial and technological innovation in the
20 United States may be lagging when compared to his-
21 torical patterns and other industrialized nations.

22 (6) Increased industrial and technological innova-
23 tion would reduce trade deficits, stabilize the dollar, in-
24 crease productivity gains, increase employment and
25 stabilize prices.

26 (7) Government antitrust, economic, trade, patent,
27 procurement, regulatory, research and development,
28 and tax policies have significant impacts upon indus-
29 trial innovation and development of technology, but

1. there is insufficient knowledge of their effects in partic-
2. ular sectors of the economy.

3. (8) No national policy exists to enhance techno-
4. logical innovation for commercial and public purposes.

5. There is a need for such policy, including a
6. strong national policy supporting domestic technology
7. transfer and utilization of the science and technology
8. resources of the Federal Government.

9. (9) It is in the national interest to promote the
10. adaptation of technological innovations to State and local
11. government uses. Technological innovations can improve
12. services, reduce their costs, and increase productivity
13. in State and local governments.

14. (10) The Federal laboratories and other federally
15. funded research and development performers frequently
16. provide scientific and technological developments of
17. potential use to State and local governments and private
18. industry. These developments should be made accessible
19. to those governments and industry. There is a need to
20. provide means of access and to give adequate personnel
21. and funding support to these means.

22. (11) The nation should give fuller recognition to
23. individuals and companies which have made outstanding
24. contributions to the promotion of technology or tech-
25. nological manpower for the improvement of the economic,
26. environmental, or social well-being of the United States.

1 **SEC. 3. PURPOSE.**

2 ~~It is the purpose of the Congress in this Act to enhance~~
3 ~~technological innovation for the improvement of the eco-~~
4 ~~nomic, environmental and social well-being of the United~~
5 ~~States.~~

6 It is the purpose of this Act to improve the economic,
7 environmental and social well-being of the United States by --

8 (1) establishing organizations in the Executive
9 branch to study and stimulate technology,

10 (2) promoting technology development through the
11 establishment of centers for industrial technology,

12 (3) stimulating improved utilization of federally
13 funded technology developments by State and local
14 governments and the private sector,

15 (4) providing encouragement for the development
16 of technology through the recognition of individuals
17 and companies which have made outstanding contributions
18 in technology, and

19 (5) encouraging the exchange of scientific and
20 technical personnel among academia, industry, and
21 Federal laboratories.

22 **SEC. 4. DEFINITIONS.**

23 As used in this Act, unless the context otherwise re-
24 quires, the term—

 (1) "Office" means the Office of Industrial Tech-
 nology established under section 5 of this Act.

1 (2) "Secretary" means the Secretary of
2 Commerce.

3 (3) "Director" means the Director of the Office of
4 Industrial Technology, appointed pursuant to section 5
5 of this Act.

6 (4) "Centers" means the Centers for Industrial
7 Technology established under section 6 of this Act.
8

9 (5) "Nonprofit institution" means an organization
10 owned and operated exclusively for scientific or educa-
11 tional purposes, no part of the net earnings of which
12 inures to the benefit of any private shareholder or indi-
13 vidual.

14 (6) "Board" means the National Industrial Tech-
15 nology Board established pursuant to section 9. 10.

16 (7) "Federal laboratory" means any laboratory
17 or center owned and funded by the Federal Government,
18 operated either by the Federal Government or by a
19 contractor.

20 (8) "Supporting agency" means either the
21 Secretary of Commerce or the National Science
22 Foundation, as appropriate.

23 **SEC. 5. COMMERCE AND TECHNOLOGICAL INNOVATION.**

24 (a) IN GENERAL.—The Secretary shall establish and
25 maintain an Office of Industrial Technology in accordance
with the provisions, findings, and purposes of this Act.

(b) DIRECTOR.—The President shall appoint, by and
with the advice and consent of the Senate, a Director of the

1 Office, who shall be compensated at the rate provided for
2 level V of the Executive Schedule in section 5316 of title 5,
3 United States Code.

4 (c) DUTIES.—In addition to any other duty prescribed
5 by law or assigned by the Secretary, the Director, on a con-
6 tinuing basis, shall—

7 (1) determine the relationships of technological de-
8 velopments and international technology transfers to
9 the output, employment, productivity, and world trade
10 performance of United States and foreign industrial
11 sectors;

12 (2) determine the influence of economic, labor and
13 other conditions, industrial structure and management,
14 and government policies on technological developments
15 in particular industrial sectors worldwide;

16 (3) identify technological needs, problems, and op-
17 portunities within and across industrial sectors that, if
18 addressed, could make a significant contribution to the
19 economy of the United States;

20 (4) assess whether the capital, technical and other
21 resources being allocated to domestic industrial sectors
22 which are likely to generate new technologies are ade-
23 quate to meet private and social demands for goods
24 and services and to promote productivity and economic
25 growth;

26 (5) propose and support studies and policy experi-
27 ments, in cooperation with other Federal agencies, to

1 determine the effectiveness of measures with the poten-
2 tial of advancing United States technological innova-
3 tion;

4 (6) undertake cooperative efforts to stimulate indus-
5 trial innovation with other officials in the Depart-
6 ment of Commerce responsible for trade and economic
7 assistance;

8 (7) recommend to the Secretary for transmittal to
9 the President and Congress government measures with
10 the potential of advancing United States technological
11 innovation and exploiting innovations of foreign origin;
12 and

13 (8) assist in the preparation of the report required
14 under subsection (d) and publish the results of studies
15 and policy experiments.

16 (d) REPORT.—The Secretary shall prepare and submit
17 to the President and Congress, within 3 years after the date
18 of enactment of this Act, a report on the progress, findings,
19 and conclusions of activities conducted pursuant to sections 5,
20 6, 8, 11, 12, and 13
21 and [^]~~6~~ of this Act and recommendations for possible modifica-
tions thereof.

22 **SEC. 6. CENTERS FOR INDUSTRIAL TECHNOLOGY.**

23 (a) ESTABLISHMENT.—The Director shall provide as-
24 sistance for the establishment of Centers for Industrial Tech-

1 nology. Such Centers shall be affiliated with any university,
2 or other nonprofit institution, or group thereof, that applies
3 for and is awarded a grant or enters into a cooperative agree-
4 ment under this section. The objective of the Centers is to
5 enhance technological innovation through—

6 (1) the participation of individuals from industry
7 and universities in cooperative technological innovation
8 activities;

9 (2) the development of the generic research base,
10 important for technological advance and innovative ac-
11 tivity, in which individual firms have little incentive to
12 invest, but which may have significant economic or
13 strategic importance, such as manufacturing
14 technology;

15 (3) the education and training of individuals in the
16 technological innovation process;

17 (4) the improvement of mechanisms for the dis-
18 semination of scientific, engineering, and technical in-
19 formation among universities and industry;

20 (5) the utilization of the capability and expertise,
21 where appropriate, that exists in Federal laboratories;
22 and

1 (6) the development of continuing financial sup-
2 port from other mission agencies, from State and local
3 government, and from industry and universities
4 through, among other means, fees, licenses, and
5 royalties.

6 (b) ACTIVITIES.—The activities of the Centers shall in-
7 clude, but need not be limited to—

8 (1) research supportive of technological and indus-
9 trial innovation including cooperative industry-univer-
10 sity basic and applied research;

11 (2) assistance to individuals and small businesses
12 in the generation, evaluation and development of tech-
13 nological ideas supportive of industrial innovation and
14 new business ventures;

15 (3) technical assistance and advisory services to
16 industry, particularly small businesses; and

17 (4) curriculum development, training and instruc-
18 tion in invention, entrepreneurship, and industrial
19 innovation.

20 Each Center need not undertake all of the activities under
21 this subsection.

22 (c) REQUIREMENTS.—Prior to establishing a Center,
23 the Director shall find that—

1 (1) consideration has been given to the potential
2 contribution of the activities proposed under the Center
3 to productivity, employment, and economic competitive-
4 ness of the United States;

5 (2) a high likelihood exists of continuing participa-
6 tion, advice, financial support, and other contributions
7 from the private sector;

8 (3) the host university or other nonprofit institu-
9 tion has a plan for the management and evaluation of
10 the activities proposed within the particular Center,
11 including:

12 (A) the agreement between the parties as to
13 the allocation of patent rights on a nonexclusive,
14 partially exclusive, or exclusive license basis to
15 ~~and~~ inventions conceived or made under the aus-
16 pices of the Center; and

17 (B) the consideration of means to place the
18 Center, to the maximum extent feasible, on a self-
19 sustaining basis;

20 (4) suitable consideration has been given to the
21 university's or other nonprofit institution's capabilities
22 and geographical location; and

23 (5) consideration has been given to any effects
24 upon competition of the activities proposed under the
25 Center.

1
2 (d) PLANNING GRANTS.—The Director is authorized to
3 make available nonrenewable planning grants to universities
4 or nonprofit institutions for the purpose of developing a plan
5 required under subsection (c)(3).

6 (e) RESEARCH AND DEVELOPMENT UTILIZATION.—

7 (1) To promote technological innovation and commercializa-
8 tion of research and development efforts, each Center has the
9 option of acquiring title to any invention conceived or made
10 under the auspices of the Center that was supported at least
11 in part by Federal funds: *Provided, That—*

12 (A) the Center reports the invention to the ^{supporting agency} ~~Director~~
13 ~~ter~~ together with a list of each country in which the
14 Center elects to file a patent application on the
15 invention;

16 (B) said option shall be exercised at the time of
17 disclosure of invention or within such time thereafter
18 as may be provided in the grant or cooperative
19 agreement;

20 (C) the Center intends to promote the commer-
21 cialization of the invention and file a United States
22 patent application;

23 (D) royalties be used for ^{compensation of the inventor or for} educational or research
24 activities of the Center;

(E) the Center make periodic reports to the ^{supporting agency} ~~Director~~ _{Director} and the ^{supporting agency} ~~Director~~ _{Director} may treat information contained in such reports as privileged and confidential technical, commercial, and financial information and not subject to disclosures under the Freedom of Information Act; and

(F) any Federal department or agency shall have the royalty-free right to practice, or have practiced on its behalf, the invention for governmental purposes.

The ^{supporting agency} ~~Secretary~~ _{Secretary} shall have the right to acquire title to any patent on an invention in any country in which the Center elects not to file a patent application or fails to file within a reasonable time.

(2) Where a Center has retained title to an invention under paragraph (1) of this subsection the ^{supporting agency} ~~Secretary~~ _{Secretary} shall have the right to require the Center or its licensee to grant a nonexclusive, partially exclusive, or exclusive license to a responsible applicant or applicants, upon terms that are reasonable under the circumstances, if the ^{supporting agency} ~~Secretary~~ _{Secretary} determines, after public notice and opportunity for hearing, that such action is necessary—

(A) because the Center or licensee has not taken and is not expected to take timely and effective action to achieve practical application of the invention;

1 (B) to meet health, safety, environmental, or na-
2 tional security needs which are not reasonably satisfied
3 by the contractor or licensee; or

4 (C) because the granting of exclusive rights in the
5 invention has tended substantially to lessen competition
6 or to result in undue market concentration in the
7 United States in any line of commerce to which the
8 technology relates.

9 (3) Any individual, partnership, corporation, association,
10 institution, or other entity adversely affected by a
11 supporting agency determination made under paragraph (2) of
12 this subsection may, at any time within sixty days after the
13 determination is issued, file a petition to the United States
14 Court of Claims which shall have jurisdiction to determine
15 that matter de novo and to affirm, reverse, or modify as
16 appropriate, the determination of the supporting agency.

17 (f) **ADDITIONAL CONSIDERATION.**—Before substantial
18 public and private funds are committed to a Center, the ^{supporting agency} ~~Secretary~~
19 shall submit a request to the Attorney General for an
20 opinion whether the joint research activities of the Center
21 would be in violation of any of the antitrust laws. The Attor-
22 ney General shall advise the ^{supporting agency} ~~Secretary~~ of his determination
23 and the reasons therefor within 120 days after receipt of such
24 request.

25 **SEC. 7. GRANTS AND COOPERATIVE AGREEMENTS.**

26 (a) **IN GENERAL.**—The Director may make grants and
27 enter into cooperative agreements according to the provisions

1 of this section in order to assist any activity consistent with
2 this Act, including activities performed by individuals. The
3 total amount of any such grant or cooperative agreement
4 may not exceed 75 percent of the total cost of the program.

5 (b) ELIGIBILITY AND PROCEDURE.—Any person or in-
6 stitution may apply to the Director for a grant or cooperative
7 agreement available under this section. Application shall be
8 made in such form and manner, and with such content and
9 other submissions, as the Director shall prescribe. The Direc-
10 tor shall act upon each such application within 90 days after
11 the date on which all required information is received.

12 (c) TERMS AND CONDITIONS.—

13 (1) Any grant made, or cooperative agreement en-
14 tered into, under this section shall be subject to the
15 limitations and provisions set forth in paragraph (2)
16 ~~and (3)~~ of this subsection, and to such other terms,
17 conditions, and requirements as the Director deems
18 necessary or appropriate.

19 (2) Any person who receives or utilizes any pro-
20 ceeds of any grant made or cooperative agreement en-
21 tered into under this section shall keep such records as
22 the Director shall by regulation prescribe as being nec-
23 essary and appropriate to facilitate effective audit and
24 evaluation, including records which fully disclose the
25 amount and disposition by such recipient of such pro-

1 ceeds, the total cost of the program or project in con-
2 nection with which such proceeds were used, and the
3 amount, if any, of such costs which was provided
4 through other sources.

5 SEC. 8. NATIONAL SCIENCE FOUNDATION CENTERS FOR INDUSTRIAL TECHNOLOGY

6 (a) ESTABLISHMENT AND PROVISIONS -- The National Science
7 Foundation shall provide assistance for the establishment of
8 Centers for Industrial Technology. Such Centers shall be
9 affiliated with a university, or other nonprofit institution,
10 or a group thereof. The objective of the Centers is to enhance
11 technological innovation as provided in subsection 6(a). The
12 activities of the Centers shall be as provided in subsection
13 6(b). Prior to establishing a Center, the National Science
14 Foundation shall find that requirements (1) through (5) of subsection
15 6(c) have been met. The provisions of subsections 6(e) and
16 (f) shall apply to Centers established under this section.

17 (b) PLANNING GRANTS -- The National Science Foundation is
18 authorized to make available nonrenewable planning grants to
19 universities or nonprofit institutions for the purpose of
20 developing a plan, as required under subsection 6(c)(3).

21 (c) TERMS AND CONDITIONS -- Grants, contracts, and
22 cooperative agreements entered into by the National Science
23 Foundation in execution of the powers and duties of the
24 National Science Foundation under this Act shall be governed
25 by the National Science Foundation Act of 1950 and other
26 pertinent Acts.

9
 1 SEC. 8. ADMINISTRATIVE ARRANGEMENTS.

2 Secretary and the National Science Foundation
 3 (a) COORDINATION.—The ^{Director} shall, on a continu-
 4 ing basis, obtain the advice and cooperation of departments
 5 and agencies whose missions contribute to or are affected by
 6 the programs established under this Act, including the devel-
 7 opment of an agenda for research and policy experimentation.
 8 These departments and agencies shall include but not be lim-
 9 ited to the Departments of Defense, Energy, ~~Health~~, Educa-
 10 tion, ^{Health and Human Services} ~~and Welfare~~, Housing and Urban Development, the En-
 11 vironmental Protection Agency, National Aeronautics and
 12 Space Administration, ~~National Science Foundation~~, Small
 13 Business Administration, Council of Economic Advisers,
 14 Council on Environmental Quality, and Office of Science and
 15 Technology Policy.

16 (b) COOPERATION -- It is the sense of the Congress
 17 that department and agencies, including the Federal labo-
 18 ratories, whose missions are affected by, or could contribute
 19 to, the programs established under this Act, should, within
 20 the limits of budgetary authorizations and appropriations,
 21 support or participate in activities or projects
 authorized by this Act.

1 (c) ADMINISTRATIVE AUTHORIZATION --

2 (1) Departments and agencies described in
3 subsection (b) are authorized to participate in,
4 contribute to, and serve as resources for the
5 Centers and for any other activities authorized under
6 this Act.

7 (2) The Secretary and the National Science Foundation
8 are authorized to receive moneys and to receive other forms
9 of assistance from other departments or agencies to
10 support activities of the Centers and any other activities
11 authorized under this Act.

12 ¹⁰SEC. 8. NATIONAL INDUSTRIAL TECHNOLOGY BOARD.

13 (a) ESTABLISHMENT.—There shall be established a
14 committee to be known as the National Industrial Technol-
15 ogy Board.

16 (b) DUTIES.—The Board shall take such steps as may
17 be necessary to review annually the activities of the Office
18 and advise the Secretary and the Director with respect to—

19 (1) the formulation and conduct of activities under
20 section 5 of this title;

21 (2) the designation and operation of Centers and
22 their programs under section 6 of this Act including
23 assistance in establishing priorities;

1 (3) the preparation of the report required under
2 section 5(d); and

3 (4) such other matters as the Secretary or Direc-
4 tor refers to the Board for review and advice.

5 The Director shall make available to the Board such informa-
6 tion, personnel, and administrative services and assistance as
it may reasonably require to carry out its duties.

8 (c) MEMBERSHIP, TERMS, AND POWERS.—

9 (1) The Board shall consist of 15 voting members
10 who shall be appointed by the Secretary. The Director
11 shall serve as a nonvoting member of the Board. The
12 members of the Board shall be individuals who, by
13 reason of knowledge, experience, or training are espe-
14 cially qualified in one or more of the disciplines and
15 fields dealing with technology, labor, and industrial in-
16 novation or who are affected by technological innova-
17 tion. The majority of the members of the Board shall
18 be individuals from industry and business.

19 (2) The term of office of a voting member of the
20 Board shall be 3 years, except that of the original ap-
21 pointees, five shall be appointed for a term of 1 year,
22 five shall be appointed for a term of 2 years, and five
23 shall be appointed for a term of 3 years.

1 (3) Any individual appointed to fill a vacancy oc-
2 ccurring before the expiration of the term for which his
3 or her predecessor was appointed shall be appointed
4 only for the remainder of such term. No individual may
5 be appointed as a voting member after serving more
6 than two full terms as such a member.

7 (4) The Board shall select a voting member to
8 serve as the Chairperson and another voting member
9 to serve as the Vice Chairperson. The Vice Chairper-
10 son shall perform the functions of the Chairperson in
11 the absence or incapacity of the Chairperson.

12 (5) Voting members of the Board may receive
13 compensation at a daily rate for GS-18 of the General
14 Schedule under section 5332 of title 5, United States
15 Code, when actually engaged in the performance of
16 duties for such Board, and may be reimbursed for
17 actual and reasonable expenses incurred in the per-
18 formance of such duties.

19 SEC. 11. UTILIZATION OF FEDERAL TECHNOLOGY

20 (a) POLICY.--It is the continuing responsibility
21 of the Federal government to ensure the full use
22 of the results of the nation's Federal investment
23 in research and development. To this end the Federal
24 government shall strive to transfer Federally owned
25 or originated technology to State and local govern-
26 ments and to the private sector.

1 (b) ESTABLISHMENT OF RESEARCH AND TECHNOLOGY APPLICATIONS OFFICES.--
2 each Federal laboratory shall establish an Office of Research and
3 Technology applications. Laboratories having existing organizational
4 structures which perform the functions of this section may elect to
5 combine the Office of Research and Technology Applications within
6 the existing organization. The staffing and funding levels for
7 these offices shall be determined between each Federal laboratory
8 and the Federal agency operating or directing the laboratory;
9 provided that (i) each laboratory having a total annual budget
10 exceeding \$20,000,000 shall provide at least one professional
11 individual full-time as staff for its Office of Research and
12 Technology Applications, and (ii) after September 30, 1981 each
13 Federal agency which operates or directs one or more Federal lab-
14 oratories shall make available not less than 0.5 percent of the agency's
15 research and development budget to support the technology
16 transfer function at the agency and at its laboratories,
17 including support of the Research and Technology
18 Applications Offices.

19 (c) FUNCTIONS OF RESEARCH AND TECHNOLOGY APPLICATIONS
20 OFFICES. -- It shall be the function of each Office of
21 Research and Technology Applications --

22 (1) to prepare an application assessment of each
23 research and development project in which that lab-
24 oratory is engaged which has potential for successful
25 application in State or local government or in
25 private industry.

1 (2) to provide and disseminate information on
2 federally owned or originated products, processes,
3 and services having potential application to State
4 and local governments and to private industry;
5 (3) to cooperate with and assist the Center for
6 the Utilization of Federal Technology and other
7 organizations which link the research and develop-
8 ment resources of that laboratory and the Federal
9 government as a whole to potential users in State
10 and local government and private industry; and
11 (4) to provide technical assistance in response
12 to requests from State and local government offi-
13 cials.

14 Research and Technology Applications Offices shall not
15 substantially compete with similar services available in the
16 private sector.

17 (d) CENTER FOR THE UTILIZATION OF FEDERAL TECHNOLOGY--
18 There is hereby established in the Department of Commerce
19 a Center for the Utilization of Federal Technology. The
20 Center for the Utilization of Federal Technology shall--

21 (1) serve as a central clearinghouse for Federally
22 owned or originated technical information having
23 potential application in State or local government
24 or industry including at least (i) all application
25 assessments prepared pursuant to subsection c(1)
26 and (ii) federally owned patents;

1 (2) coordinate the activities of the Research and
2 Technology Applications Offices of the Federal labora-
3 tories;

4 (3) utilize the expertise and services of the National
5 Science Foundation and the existing Federal Laboratory
6 Consortium for Technology Transfer, particularly in
7 dealing with State and local governments;

8 (4) receive requests for technical assistance from State
9 and local governments and refer these requests to the
10 appropriate Federal laboratory;

11 (5) provide funding, where necessary, for Federal labora-
12 tories to provide the assistance specified in subsection
13 c(4); and

14 (6) utilize such technology transfer mechanisms as are
15 appropriate, including but not limited to, personnel
16 exchanges and computer-based systems.

17 (e) AGENCY REPORTING--Each Federal agency which operates or
18 directs one or more Federal laboratories shall prepare annually
19 a report summarizing the activities performed by that agency
20 and its Federal laboratories pursuant to the provisions of this
21 Act. The report shall be transmitted to the Center for the
22 Utilization of Federal Technology by November 1 of each year.

23 SEC. 12. NATIONAL TECHNOLOGY MEDAL

24 (a) There is hereby established National Technology Medal,
25 which shall be of such design and materials and bear such
26 inscriptions as the President, on the basis of recommendations
27 submitted by the Office of Science and Technology Policy, may
28 prescribe.

1 (b) The President shall periodically award the
2 medal, on the basis of recommendations received
3 from the Secretary or on the basis of such other
4 information and evidence as he deems appropriate,
5 to individuals or companies, which in his judg-
6 ment are deserving of special recognition by
7 reason of their outstanding contributions to
8 the promotion of technology or technological man-
9 power for the improvement of the economic, environ-
10 mental, or social well-being of the United States.

11 (c) The presentation of the award shall be made
12 by the President with such ceremonies as he may
13 deem proper.

14 SEC. 13. PERSONNEL EXCHANGES

15 The Director and the National Science Foundation,
16 jointly, shall establish a program to foster the exchange
17 of scientific and technical personnel among academia, in-
18 dustry, and Federal laboratories. Such programs shall
19 include both (i) federally supported exchanges and (ii)
20 efforts to stimulate exchanges without Federal funding.

1 **SEC. 10. AUTHORIZATION OF APPROPRIATIONS.**

2 (a) There is authorized to be appropriated to the Secre-
 3 tary for purposes of carrying out section 6, not to exceed
 4 \$19,000,000 for the fiscal year ending September 30, 1981,
 5 \$40,000,000 for the fiscal year ending September 30, 1982,
 6 \$50,000,000 for the fiscal year ending September 30, 1983,
 7 and \$60,000,000 for each of the fiscal years ending Septem-
 8 ber 30, 1984, and 1985.

9 (b) In addition to authorizations of appropriations under
 10 subsection (a), there is authorized to be appropriated for pur-
 11 poses of carrying out the provisions of this Act, not to exceed
 12 ~~\$5,000,000~~ ^{\$5,000,000} for the fiscal year ending September 30, 1981,
 13 ~~\$3,000,000~~ ^{\$9,000,000} ~~\$5,000,000~~ ^{\$14,000,000} for the fiscal year ending September 30, 1982,
 14 and ~~\$10,000,000~~ ^{\$14,000,000} for each of the fiscal years ending Septem-
 15 ber 30, 1983, 1984, and 1985.

16 (c) Such sums as may be appropriated under subsections
 17 (a) and (b) shall remain available until expended.

18 (d) To enable the National Science Foundation
 19 to carry out its powers and duties under this Act
 20 only such sums may be appropriated as the Congress
 21 may authorize by law.