

–CITE–

15 USC CHAPTER 81 – HIGH–PERFORMANCE COMPUTING 01/06/03

–EXPCITE–

TITLE 15 – COMMERCE AND TRADE

CHAPTER 81 – HIGH–PERFORMANCE COMPUTING

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15 USC Sec. 5501 01/06/03

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Sec. 5501. Findings

–STATUTE–

The Congress finds the following:

- (1) Advances in computer science and technology are vital to the Nation's prosperity, national and economic security, industrial production, engineering, and scientific advancement.
- (2) The United States currently leads the world in the development and use of high-performance computing for national security, industrial productivity, science, and engineering, but that lead is being challenged by foreign competitors.
- (3) Further research and development, expanded educational programs, improved computer research networks, and more effective technology transfer from government to industry are necessary for the United States to reap fully the benefits of high-performance computing.
- (4) A high-capacity, flexible, high-speed national research and education computer network is needed to provide researchers and educators with access to computational and information resources, act as a test bed for further research and development for high-capacity and high-speed computer networks, and provide researchers the necessary vehicle for continued network technology improvement through research.
- (5) Several Federal agencies have ongoing high-performance computing programs, but improved long-term interagency coordination, cooperation, and planning would enhance the effectiveness of these programs.
- (6) A 1991 report entitled "Grand Challenges: High-Performance Computing and Communications" by the Office of Science and Technology Policy, outlining a research and development strategy

for high–performance computing, provides a framework for a multiagency high–performance computing program. Such a program would provide American researchers and educators with the computer and information resources they need, and demonstrate how advanced computers, high–capacity and high–speed networks, and electronic data bases can improve the national information infrastructure for use by all Americans.

(7) Additional research must be undertaken to lay the foundation for the development of new applications that can result in economic growth, improved health care, and improved educational opportunities.

(8) Research in new networking technologies holds the promise of easing the economic burdens of information access disproportionately borne by rural users of the Internet.

(9) Information security is an important part of computing, information, and communications systems and applications, and research into security architectures is a critical aspect of computing, information, and communications research programs.

–SOURCE–

(Pub. L. 102–194, Sec. 2, Dec. 9, 1991, 105 Stat. 1594; Pub. L. 105–305, Sec. 2(b), Oct. 28, 1998, 112 Stat. 2919.)

–MISC1–

AMENDMENTS

1998 – Par. (4). Pub. L. 105–305, Sec. 2(b)(1), added par. (4) and struck out former par. (4) which read as follows: "A high–capacity and high–speed national research and education

computer network would provide researchers and educators with access to computer and information resources and act as a test bed for further research and development of high-capacity and high-speed computer networks."

Pars. (7) to (9). Pub. L. 105-305, Sec. 2(b)(2), added pars. (7) to (9).

SHORT TITLE OF 1998 AMENDMENT

Pub. L. 105-305, Sec. 1, Oct. 28, 1998, 112 Stat. 2919, provided that: "This Act (enacting section 5513 of this title, amending this section and sections 5502, 5503, and 5511 of this title, and enacting provisions set out as notes under this section) may be cited as the 'Next Generation Internet Research Act of 1998'."

SHORT TITLE

Section 1 of Pub. L. 102-194 provided that: "This Act (enacting this chapter) may be cited as the 'High-Performance Computing Act of 1991'."

CONGRESSIONAL FINDINGS

Pub. L. 105-305, Sec. 2(a), Oct. 28, 1998, 112 Stat. 2919, provided that: "The Congress finds that –

"(1) United States leadership in science and technology has been vital to the Nation's prosperity, national and economic security, and international competitiveness, and there is every reason to believe that maintaining this tradition will lead to long-term continuation of United States strategic advantages in information technology;

"(2) the United States investment in science and technology

has yielded a scientific and engineering enterprise without peer,
and that Federal investment in research is critical to the
maintenance of United States leadership;

"(3) previous Federal investment in computer networking
technology and related fields has resulted in the creation of new
industries and new jobs in the United States;

"(4) the Internet is playing an increasingly important role in
keeping citizens informed of the actions of their government; and

"(5) continued inter-agency cooperation is necessary to avoid
wasteful duplication in Federal networking research and
development programs."

PURPOSES

Pub. L. 105–305, Sec. 3(a), Oct. 28, 1998, 112 Stat. 2920,
provided that: "The purposes of this Act (see Short Title of 1998
Amendment note above) are –

"(1) to authorize, through the High-Performance Computing Act
of 1991 (15 U.S.C. 5501 et seq.), research programs related to –

"(A) high-end computing and computation;

"(B) human-centered systems;

"(C) high confidence systems; and

"(D) education, training, and human resources; and

"(2) to provide, through the High-Performance Computing Act of
1991 (15 U.S.C. 5501 et seq.), for the development and
coordination of a comprehensive and integrated United States
research program which will –

"(A) focus on the research and development of a coordinated

set of technologies that seeks to create a network infrastructure that can support greater speed, robustness, and flexibility than is currently available and promote connectivity and interoperability among advanced computer networks of Federal agencies and departments;

"(B) focus on research in technology that may result in high-speed data access for users that is both economically viable and does not impose a geographic penalty; and

"(C) encourage researchers to pursue approaches to networking technology that lead to maximally flexible and extensible solutions wherever feasible."

–CROSS–

DEFINITIONS

Pub. L. 105–305, Sec. 7(a), Oct. 28, 1998, 112 Stat. 2924, provided that: "For purposes of this Act (see Short Title of 1998 Amendment note above) –

"(1) Geographic penalty. – The term 'geographic penalty' means the imposition of costs on users of the Internet in rural or other locations, attributable to the distance of the user from network facilities, the low population density of the area in which the user is located, or other factors, that are disproportionately greater than the costs imposed on users in locations closer to such facilities or on users in locations with significantly greater population density.

"(2) Internet. – The term 'Internet' means the international computer network of both Federal and non-Federal interoperable

packet switched data networks."

–CITE–

15 USC Sec. 5502 01/06/03

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Sec. 5502. Purposes

–STATUTE–

The purposes of this chapter are to help ensure the continued leadership of the United States in high–performance computing and its applications by –

- (1) expanding Federal support for research, development, and application of high–performance computing in order to –
 - (A) expand the number of researchers, educators, and students with training in high–performance computing and access to high–performance computing resources;
 - (B) promote the further development of an information infrastructure of data bases, services, access mechanisms, and research facilities available for use through the Internet;
 - (C) stimulate research on software technology;
 - (D) promote the more rapid development and wider distribution of computing software tools and applications software;
 - (E) accelerate the development of computing systems and subsystems;
 - (F) provide for the application of high–performance computing

to Grand Challenges;

(G) invest in basic research and education, and promote the inclusion of high–performance computing into educational institutions at all levels; and

(H) promote greater collaboration among government, Federal laboratories, industry, high–performance computing centers, and universities;

(2) improving the interagency planning and coordination of Federal research and development on high–performance computing and maximizing the effectiveness of the Federal Government's high–performance computing network research and development programs;

(3) promoting the more rapid development and wider distribution of networking management and development tools; and

(4) promoting the rapid adoption of open network standards.

–SOURCE–

(Pub. L. 102–194, Sec. 3, Dec. 9, 1991, 105 Stat. 1594; Pub. L. 105–305, Sec. 3(b), Oct. 28, 1998, 112 Stat. 2920.)

–MISC1–

AMENDMENTS

1998 – Pub. L. 105–305, Sec. 3(b)(1), substituted "Purposes" for "Purpose" as section catchline.

Pub. L. 105–305, Sec. 3(b)(2), substituted "purposes of this chapter are" for "purpose of this chapter is" in introductory provisions.

Par. (1)(A). Pub. L. 105–305, Sec. 3(b)(3), redesignated subpar.

(B) as (A) and struck out former subpar. (A) which read as follows:

"establish a high-capacity and high-speed National Research and Education Network;"

Par. (1)(B). Pub. L. 105-305, Sec. 3(b)(3), (4), redesignated subpar. (C) as (B) and substituted "Internet" for "Network".

Former subpar. (B) redesignated (A).

Par. (1)(C) to (I). Pub. L. 105-305, Sec. 3(b)(3), (5), redesignated subpars. (D) to (I) as (C) to (H), respectively, and struck out "and" at end of par. (H).

Par. (2). Pub. L. 105-305, Sec. 3(b)(6), substituted "network research and development programs;" for "efforts."

Pars. (3), (4). Pub. L. 105-305, Sec. 3(b)(7), added pars. (3) and (4).

—CITE—

15 USC Sec. 5503 01/06/03

—EXPCITE—

TITLE 15 – COMMERCE AND TRADE

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Sec. 5503. Definitions

—STATUTE—

As used in this chapter, the term –

(1) "Director" means the Director of the Office of Science and Technology Policy;

(2) "Grand Challenge" means a fundamental problem in science or engineering, with broad economic and scientific impact, whose

solution will require the application of high–performance computing resources;

(3) "high–performance computing" means advanced computing, communications, and information technologies, including scientific workstations, supercomputer systems (including vector supercomputers and large scale parallel systems), high–capacity and high–speed networks, special purpose and experimental systems, and applications and systems software;

(4) "Internet" means the international computer network of both Federal and non–Federal interoperable packet switched data networks;

(5) "Network" means a computer network referred to as the National Research and Education Network established under section 5512 of this title; and

(6) "Program" means the National High–Performance Computing Program described in section 5511 of this title.

–SOURCE–

(Pub. L. 102–194, Sec. 4, Dec. 9, 1991, 105 Stat. 1595; Pub. L. 105–305, Sec. 7(b), Oct. 28, 1998, 112 Stat. 2924.)

–MISC1–

AMENDMENTS

1998 – Pars. (4) to (6). Pub. L. 105–305 added par. (4) and redesignated former pars. (4) and (5) as (5) and (6), respectively.

–CITE–

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SUBCHAPTER REFERRED TO IN OTHER SECTIONS

This subchapter is referred to in sections 5521, 5522, 5523,
5524, 5525, 5526 of this title.

–CITE–

15 USC Sec. 5511 01/06/03

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Sec. 5511. National High–Performance Computing Program

–STATUTE–

(a) National High–Performance Computing Program

(1) The President shall implement a National High–Performance
Computing Program, which shall –

(A) establish the goals and priorities for Federal high-performance computing research, development, networking, and other activities; and

(B) provide for interagency coordination of Federal high-performance computing research, development, networking, and other activities undertaken pursuant to the Program.

(2) The Program shall –

(A) provide for the development of technologies to advance the capacity and capabilities of the Internet;

(B) provide for high performance testbed networks to enable the research, development, and demonstration of advanced networking technologies and to develop and demonstrate advanced applications made possible by the existence of such testbed networks;

(C) promote connectivity among computer networks of Federal agencies and departments;

(D) provide for efforts to increase software availability, productivity, capability, portability, and reliability;

(E) provide for improved dissemination of Federal agency data and electronic information;

(F) provide for acceleration of the development of high-performance computing systems, subsystems, and associated software;

(G) provide for the technical support and research and development of high-performance computing software and hardware needed to address Grand Challenges;

(H) provide for educating and training additional undergraduate

and graduate students in software engineering, computer science, library and information science, and computational science; and

(I) provide –

(i) for the security requirements, policies, and standards necessary to protect Federal research computer networks and information resources accessible through Federal research computer networks, including research required to establish security standards for high–performance computing systems and networks; and

(ii) that agencies and departments identified in the annual report submitted under paragraph (3)(A) shall define and implement a security plan consistent with the Program and with applicable law.

(3) The Director shall –

(A) submit to the Congress an annual report, along with the President's annual budget request, describing the implementation of the Program;

(B) provide for interagency coordination of the Program; and

(C) consult with academic, State, industry, and other appropriate groups conducting research on and using high–performance computing.

(4) The annual report submitted under paragraph (3)(A) shall –

(A) include a detailed description of the goals and priorities established by the President for the Program;

(B) set forth the relevant programs and activities, for the fiscal year with respect to which the budget submission applies,

of each Federal agency and department, including –

- (i) the Department of Agriculture;
- (ii) the Department of Commerce;
- (iii) the Department of Defense;
- (iv) the Department of Education;
- (v) the Department of Energy;
- (vi) the Department of Health and Human Services;
- (vii) the Department of the Interior;
- (viii) the Environmental Protection Agency;
- (ix) the National Aeronautics and Space Administration;
- (x) the National Science Foundation; and
- (xi) such other agencies and departments as the President or the Director considers appropriate;

(C) describe the levels of Federal funding for the fiscal year during which such report is submitted, and the levels proposed for the fiscal year with respect to which the budget submission applies, for specific activities, including education, research, hardware and software development, and support for the establishment of the Network;

(D) describe the levels of Federal funding for each agency and department participating in the Program for the fiscal year during which such report is submitted, and the levels proposed for the fiscal year with respect to which the budget submission applies;

(E) include the report of the Secretary of Energy required by section 5523(d) of this title; and

(F) include an analysis of the progress made toward achieving the goals and priorities established for the Program.

(b) Advisory committee

The President shall establish an advisory committee on high-performance computing consisting of non-Federal members, including representatives of the research, education, and library communities, network providers, and industry, who are specially qualified to provide the Director with advice and information on high-performance computing. The recommendations of the advisory committee shall be considered in reviewing and revising the Program. The advisory committee shall provide the Director with an independent assessment of –

- (1) progress made in implementing the Program;
- (2) the need to revise the Program;
- (3) the balance between the components of the Program;
- (4) whether the research and development undertaken pursuant to the Program is helping to maintain United States leadership in computing technology; and
- (5) other issues identified by the Director.

(c) Office of Management and Budget

(1) Each Federal agency and department participating in the Program shall, as part of its annual request for appropriations to the Office of Management and Budget, submit a report to the Office of Management and Budget which –

- (A) identifies each element of its high-performance computing activities which contributes directly to the Program or benefits

from the Program; and

(B) states the portion of its request for appropriations that is allocated to each such element.

(2) The Office of Management and Budget shall review each such report in light of the goals, priorities, and agency and departmental responsibilities set forth in the annual report submitted under subsection (a)(3)(A) of this section, and shall include, in the President's annual budget estimate, a statement of the portion of each appropriate agency's or department's annual budget estimate relating to its activities undertaken pursuant to the Program.

–SOURCE–

(Pub. L. 102–194, title I, Sec. 101, Dec. 9, 1991, 105 Stat. 1595; Pub. L. 104–66, title I, Sec. 1052(k), Dec. 21, 1995, 109 Stat. 719; Pub. L. 105–305, Sec. 4, Oct. 28, 1998, 112 Stat. 2921.)

–MISC1–

AMENDMENTS

1998 – Subsec. (a)(2)(A), (B). Pub. L. 105–305, Sec. 4(a), amended subpars. (A) and (B) generally. Prior to amendment, subpars. read as follows:

"(A) provide for the establishment of policies for management and access to the Network;

"(B) provide for oversight of the operation and evolution of the Network;"

Subsec. (b). Pub. L. 105–305, Sec. 4(b), struck out

"High–performance computing" before "advisory committee" in

heading.

1995 – Subsec. (a)(4)(D) to (F). Pub. L. 104–66 struck out

"and" at end of subpar. (D), added subpar. (E), and redesignated former subpar. (E) as (F).

TERMINATION OF ADVISORY COMMITTEES

Advisory committees established after Jan. 5, 1973, to terminate not later than the expiration of the 2–year period beginning on the date of their establishment, unless, in the case of a committee established by the President or an officer of the Federal Government, such committee is renewed by appropriate action prior to the expiration of such 2–year period, or in the case of a committee established by the Congress, its duration is otherwise provided for by law. See section 14 of Pub. L. 92–463, Oct. 6, 1972, 86 Stat. 776, set out in the Appendix to Title 5, Government Organization and Employees.

–EXEC–

EX. ORD. NO. 13035. PRESIDENT'S INFORMATION TECHNOLOGY ADVISORY COMMITTEE

Ex. Ord. No. 13035, Feb. 11, 1997, 62 F.R. 7131, as amended by Ex. Ord. No. 13092, July 24, 1998, 63 F.R. 40167; Ex. Ord. No. 13113, Feb. 10, 1999, 64 F.R. 7489; Ex. Ord. No. 13200, Feb. 11, 2001, 66 F.R. 10183; Ex. Ord. No. 13215, May 31, 2001, 66 F.R. 30285, provided:

By the authority vested in me as President by the Constitution and the laws of the United States of America, including the High–Performance Computing Act of 1991 (Public Law 102–194)

("Act") (15 U.S.C. 5501 et seq.), as amended by the Next Generation Internet Research Act of 1998 (Public Law 105–305) ("Research Act") (see Short Title of 1998 Amendment note set out under section 5501 of this title), and in order to establish an advisory committee on high–performance computing and communications, Information Technology (sic), and the Next Generation Internet, it is hereby ordered as follows:

Section 1. Establishment. There is established the "President's Information Technology Advisory Committee" ("Committee"). The Committee shall consist of not more than 30 nonfederal members appointed by the President, including representatives of the research, education, and library communities, network providers, and representatives from critical industries. Members appointed prior to June 1, 2001, shall serve until December 1, 2001, unless reappointed by the President. Members appointed or reappointed on or after June 1, 2001, shall serve for no more than 2 years from the date of their appointment, unless their period of service is extended by the President. The President shall designate two co–chairs from among the members of the Committee. A co–chair may serve for a term of 2 years or until the end of his or her service as a member of the Committee, whichever is the shorter period.

Sec. 2. Functions. (a) The Committee shall provide the National Science and Technology Council (NSTC), through the Director of the Office of Science and Technology Policy ("Director"), with advice and information on high–performance computing and communications, information technology, and the Next Generation Internet. The

Committee shall provide an independent assessment of:

- (1) progress made in implementing the High-Performance Computing and Communications (HPCC) Program;
- (2) progress in designing and implementing the Next Generation Internet initiative;
- (3) the need to revise the HPCC Program;
- (4) balance among components of the HPCC Program;
- (5) whether the research and development undertaken pursuant to the HPCC Program is helping to maintain United States leadership in advanced computing and communications technologies and their applications; and
- (6) other issues as specified by the Director.

(b) The Committee shall carry out its responsibilities under the Research Act in the manner described in the Research Act.

Sec. 3. Administration. To the extent permitted by law and subject to the availability of appropriations, the Department of Defense shall provide the financial and administrative support for the Committee. Further, the Director of the National Coordination Office for Computing Information, and Communications ("Director of the NCO") shall provide such coordination and technical assistance to the Committee as the co-chairs of the Committee may request.

(a) The heads of executive agencies shall, to the extent permitted by law, provide to the Committee such information as it may require for the purpose of carrying out its functions.

(b) The co-chairs may, from time to time, invite experts to submit information to the Committee and may form subcommittees or

working groups within the Committee to review specific issues.

(c) Members of the Committee shall serve without compensation but shall be allowed travel expenses, including per diem in lieu of subsistence, as authorized by law for persons serving intermittently in the Government service (5 U.S.C. 5701–5707).

Sec. 4. General. (a) Notwithstanding any other Executive order, the functions of the President under the Federal Advisory Committee Act, as amended (5 App. U.S.C.), except that of reporting to the Congress, that are applicable to the Committee shall be performed by the Director of the NCO in accordance with guidelines that have been issued by the Administrator of General Services.

(b) The Committee shall terminate June 1, 2003., (sic) unless extended by the President prior to such date.

–SECRET–

SECTION REFERRED TO IN OTHER SECTIONS

This section is referred to in sections 5503, 5513, 5523, 5528 of this title.

–CITE–

15 USC Sec. 5512 01/06/03

–EXPCITE–

TITLE 15 – COMMERCE AND TRADE

CHAPTER 81 – HIGH-PERFORMANCE COMPUTING

SUBCHAPTER I – HIGH-PERFORMANCE COMPUTING AND THE NATIONAL RESEARCH AND EDUCATION NETWORK

–HEAD–

Sec. 5512. National Research and Education Network

–STATUTE–

(a) Establishment

As part of the Program, the National Science Foundation, the Department of Defense, the Department of Energy, the Department of Commerce, the National Aeronautics and Space Administration, and other agencies participating in the Program shall support the establishment of the National Research and Education Network, portions of which shall, to the extent technically feasible, be capable of transmitting data at one gigabit per second or greater by 1996. The Network shall provide for the linkage of research institutions and educational institutions, government, and industry in every State.

(b) Access

Federal agencies and departments shall work with private network service providers, State and local agencies, libraries, educational institutions and organizations, and others, as appropriate, in order to ensure that the researchers, educators, and students have access, as appropriate, to the Network. The Network is to provide users with appropriate access to high-performance computing systems, electronic information resources, other research facilities, and libraries. The Network shall provide access, to the extent practicable, to electronic information resources maintained by libraries, research facilities, publishers, and affiliated organizations.

(c) Network characteristics

The Network shall –

- (1) be developed and deployed with the computer, telecommunications, and information industries;
- (2) be designed, developed, and operated in collaboration with potential users in government, industry, and research institutions and educational institutions;
- (3) be designed, developed, and operated in a manner which fosters and maintains competition and private sector investment in high-speed data networking within the telecommunications industry;
- (4) be designed, developed, and operated in a manner which promotes research and development leading to development of commercial data communications and telecommunications standards, whose development will encourage the establishment of privately operated high-speed commercial networks;
- (5) be designed and operated so as to ensure the continued application of laws that provide network and information resources security measures, including those that protect copyright and other intellectual property rights, and those that control access to data bases and protect national security;
- (6) have accounting mechanisms which allow users or groups of users to be charged for their usage of copyrighted materials available over the Network and, where appropriate and technically feasible, for their usage of the Network;
- (7) ensure the interoperability of Federal and non-Federal computer networks, to the extent appropriate, in a way that allows autonomy for each component network;

(8) be developed by purchasing standard commercial transmission and network services from vendors whenever feasible, and by contracting for customized services when not feasible, in order to minimize Federal investment in network hardware;

(9) support research and development of networking software and hardware; and

(10) serve as a test bed for further research and development of high-capacity and high-speed computing networks and demonstrate how advanced computers, high-capacity and high-speed computing networks, and data bases can improve the national information infrastructure.

(d) Defense Advanced Research Projects Agency responsibility

As part of the Program, the Department of Defense, through the Defense Advanced Research Projects Agency, shall support research and development of advanced fiber optics technology, switches, and protocols needed to develop the Network.

(e) Information services

The Director shall assist the President in coordinating the activities of appropriate agencies and departments to promote the development of information services that could be provided over the Network. These services may include the provision of directories of the users and services on computer networks, data bases of unclassified Federal scientific data, training of users of data bases and computer networks, access to commercial information services for users of the Network, and technology to support computer-based collaboration that allows researchers and educators

around the Nation to share information and instrumentation.

(f) Use of grant funds

All Federal agencies and departments are authorized to allow recipients of Federal research grants to use grant moneys to pay for computer networking expenses.

(g) Report to Congress

Within one year after December 9, 1991, the Director shall report to the Congress on –

- (1) effective mechanisms for providing operating funds for the maintenance and use of the Network, including user fees, industry support, and continued Federal investment;
- (2) the future operation and evolution of the Network;
- (3) how commercial information service providers could be charged for access to the Network, and how Network users could be charged for such commercial information services;
- (4) the technological feasibility of allowing commercial information service providers to use the Network and other federally funded research networks;
- (5) how to protect the copyrights of material distributed over the Network; and
- (6) appropriate policies to ensure the security of resources available on the Network and to protect the privacy of users of networks.

–SOURCE–

(Pub. L. 102–194, title I, Sec. 102, Dec. 9, 1991, 105 Stat. 1598.)

–SECREf–

SECTION REFERRED TO IN OTHER SECTIONS

This section is referred to in section 5503 of this title.

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15 USC Sec. 5513 01/06/03

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TITLE 15 – COMMERCE AND TRADE

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SUBCHAPTER I – HIGH-PERFORMANCE COMPUTING AND THE NATIONAL RESEARCH AND EDUCATION NETWORK

–HEAD–

Sec. 5513. Next Generation Internet

–STATUTE–

(a) Establishment

The National Science Foundation, the Department of Energy, the National Institutes of Health, the National Aeronautics and Space Administration, and the National Institute of Standards and Technology may support the Next Generation Internet program. The objectives of the Next Generation Internet program shall be to –

(1) support research, development, and demonstration of advanced networking technologies to increase the capabilities and improve the performance of the Internet;

(2) develop an advanced testbed network connecting a significant number of research sites, including universities, Federal research institutions, and other appropriate research partner institutions, to support networking research and to demonstrate new networking technologies; and

(3) develop and demonstrate advanced Internet applications that meet important national goals or agency mission needs, and that are supported by the activities described in paragraphs (1) and (2).

(b) Duties of Advisory Committee

The President's Information Technology Advisory Committee (established pursuant to section 5511(b) of this title by Executive Order No. 13035 of February 11, 1997 (62 F.R. 7131), as amended by Executive Order No. 13092 of July 24, 1998), in addition to its functions under section 5511(b) of this title, shall –

(1) assess the extent to which the Next Generation Internet program –

(A) carries out the purposes of this chapter; and

(B) addresses concerns relating to, among other matters –

(i) geographic penalties (as defined in section 7(1) of the Next Generation Internet Research Act of 1998); (FOOTNOTE 1)

(FOOTNOTE 1) See References in Text note below.

(ii) the adequacy of access to the Internet by Historically

Black Colleges and Universities, Hispanic Serving

Institutions, and small colleges and universities (whose

enrollment is less than 5,000) and the degree of

participation of those institutions in activities described

in subsection (a) of this section; and

(iii) technology transfer to and from the private sector;

(2) review the extent to which the role of each Federal agency and department involved in implementing the Next Generation

Internet program is clear and complementary to, and non–duplicative of, the roles of other participating agencies and departments;

(3) assess the extent to which Federal support of fundamental research in computing is sufficient to maintain the Nation's critical leadership in this field; and

(4) make recommendations relating to its findings under paragraphs (1), (2), and (3).

(c) Reports

The Advisory Committee shall review implementation of the Next Generation Internet program and shall report, not less frequently than annually, to the President, the Committee on Commerce, Science, and Transportation, the Committee on Appropriations, and the Committee on Armed Services of the Senate, and the Committee on Science, the Committee on Appropriations, and the Committee on Armed Services of the House of Representatives on its findings and recommendations for the preceding fiscal year. The first such report shall be submitted 6 months after October 28, 1998, and the last report shall be submitted by September 30, 2000.

(d) Authorization of appropriations

There are authorized to be appropriated for the purposes of this section –

(1) for the Department of Energy, \$22,000,000 for fiscal year 1999 and \$25,000,000 for fiscal year 2000;

(2) for the National Science Foundation, \$25,000,000 for fiscal year 1999 and \$25,000,000 for fiscal year 2000, as authorized in

the National Science Foundation Authorization Act of 1998;

(3) for the National Institutes of Health, \$5,000,000 for

fiscal year 1999 and \$7,500,000 for fiscal year 2000;

(4) for the National Aeronautics and Space Administration,

\$10,000,000 for fiscal year 1999 and \$10,000,000 for fiscal year

2000; and

(5) for the National Institute of Standards and Technology,

\$5,000,000 for fiscal year 1999 and \$7,500,000 for fiscal year

2000.

Such funds may not be used for routine upgrades to existing

federally funded communication networks.

–SOURCE–

(Pub. L. 102–194, title I, Sec. 103, as added Pub. L. 105–305, Sec.

5, Oct. 28, 1998, 112 Stat. 2921; amended Pub. L. 106–65, div. A,

title X, Sec. 1067(20), Oct. 5, 1999, 113 Stat. 775.)

–REFTEXT–

REFERENCES IN TEXT

Executive Order No. 13035, referred to in subsec. (b), is set out

as a note under section 5511 of this title.

Section 7(1) of the Next Generation Internet Research Act of

1998, referred to in subsec. (b)(1)(B)(i), probably means section

7(a)(1) of Pub. L. 105–305, which is set out as a note under

section 5501 of this title.

The National Science Foundation Authorization Act of 1998,

referred to in subsec. (d)(2), is Pub. L. 105–207, July 29, 1998,

112 Stat. 869. For complete classification of this Act to the Code,

see Short Title of 1998 Amendment note set out under section 1861

of Title 42, The Public Health and Welfare, and Tables.

–MISC2–

AMENDMENTS

1999 – Subsec. (c). Pub. L. 106–65 substituted "Committee on Armed Services of the House" for "Committee on National Security of the House".

–CITE–

15 USC SUBCHAPTER II – AGENCY ACTIVITIES 01/06/03

–EXPCITE–

TITLE 15 – COMMERCE AND TRADE

CHAPTER 81 – HIGH-PERFORMANCE COMPUTING

SUBCHAPTER II – AGENCY ACTIVITIES

.

–HEAD–

SUBCHAPTER II – AGENCY ACTIVITIES

–CITE–

15 USC Sec. 5521 01/06/03

–EXPCITE–

TITLE 15 – COMMERCE AND TRADE

CHAPTER 81 – HIGH-PERFORMANCE COMPUTING

SUBCHAPTER II – AGENCY ACTIVITIES

–HEAD–

Sec. 5521. National Science Foundation activities

–STATUTE–

(a) General responsibilities

As part of the Program described in subchapter I of this chapter

—

(1) the National Science Foundation shall provide computing and networking infrastructure support for all science and engineering disciplines, and support basic research and human resource development in all aspects of high–performance computing and advanced high–speed computer networking;

(2) to the extent that colleges, universities, and libraries cannot connect to the Network with the assistance of the private sector, the National Science Foundation shall have primary responsibility for assisting colleges, universities, and libraries to connect to the Network;

(3) the National Science Foundation shall serve as the primary source of information on access to and use of the Network; and

(4) the National Science Foundation shall upgrade the National Science Foundation funded network, assist regional networks to upgrade their capabilities, and provide other Federal departments and agencies the opportunity to connect to the National Science Foundation funded network.

(b) Authorization of appropriations

From sums otherwise authorized to be appropriated, there are authorized to be appropriated to the National Science Foundation for the purposes of the Program \$213,000,000 for fiscal year 1992; \$262,000,000 for fiscal year 1993; \$305,000,000 for fiscal year 1994; \$354,000,000 for fiscal year 1995; and \$413,000,000 for fiscal year 1996.

–SOURCE–

(Pub. L. 102–194, title II, Sec. 201, Dec. 9, 1991, 105 Stat. 1599.)

–CITE–

15 USC Sec. 5522 01/06/03

–EXPCITE–

TITLE 15 – COMMERCE AND TRADE

CHAPTER 81 – HIGH–PERFORMANCE COMPUTING

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–HEAD–

Sec. 5522. National Aeronautics and Space Administration activities

–STATUTE–

(a) General responsibilities

As part of the Program described in subchapter I of this chapter, the National Aeronautics and Space Administration shall conduct basic and applied research in high–performance computing, particularly in the field of computational science, with emphasis on aerospace sciences, earth and space sciences, and remote exploration and experimentation.

(b) Authorization of appropriations

From sums otherwise authorized to be appropriated, there are authorized to be appropriated to the National Aeronautics and Space Administration for the purposes of the Program \$72,000,000 for fiscal year 1992; \$107,000,000 for fiscal year 1993; \$134,000,000 for fiscal year 1994; \$151,000,000 for fiscal year 1995; and \$145,000,000 for fiscal year 1996.

–SOURCE–

(Pub. L. 102–194, title II, Sec. 202, Dec. 9, 1991, 105 Stat. 1600.)

–CITE–

15 USC Sec. 5523 01/06/03

–EXPCITE–

TITLE 15 – COMMERCE AND TRADE

CHAPTER 81 – HIGH–PERFORMANCE COMPUTING

SUBCHAPTER II – AGENCY ACTIVITIES

–HEAD–

Sec. 5523. Department of Energy activities

–STATUTE–

(a) General responsibilities

As part of the Program described in subchapter I of this chapter, the Secretary of Energy shall –

(1) perform research and development on, and systems evaluations of, high–performance computing and communications systems;

(2) conduct computational research with emphasis on energy applications;

(3) support basic research, education, and human resources in computational science; and

(4) provide for networking infrastructure support for energy–related mission activities.

(b) Collaborative Consortia

In accordance with the Program, the Secretary of Energy shall

establish High-Performance Computing Research and Development

Collaborative Consortia by soliciting and selecting proposals.

Each Collaborative Consortium shall –

- (1) conduct research directed at scientific and technical problems whose solutions require the application of high-performance computing and communications resources;
- (2) promote the testing and uses of new types of high-performance computing and related software and equipment;
- (3) serve as a vehicle for participating vendors of high-performance computing systems to test new ideas and technology in a sophisticated computing environment; and
- (4) be led by a Department of Energy national laboratory, and include participants from Federal agencies and departments, researchers, private industry, educational institutions, and others as the Secretary of Energy may deem appropriate.

(c) Technology transfer

The results of research and development carried out under this section shall be transferred to the private sector and others in accordance with applicable law.

(d) Reports

Not later than 1 year after December 21, 1995, and thereafter as part of the report required under section 5511(a)(3)(A) of this title, the Secretary of Energy shall report on activities taken to carry out this chapter.

(e) Authorization of appropriations

- (1) There are authorized to be appropriated to the Secretary of

Energy for the purposes of the Program \$93,000,000 for fiscal year 1992; \$110,000,000 for fiscal year 1993; \$138,000,000 for fiscal year 1994: (FOOTNOTE 1) \$157,000,000 for fiscal year 1995; and \$169,000,000 for fiscal year 1996.

(FOOTNOTE 1) So in original. Probably should be a semicolon.

(2) There are authorized to be appropriated to the Secretary of Energy for fiscal years 1992, 1993, 1994, 1995, and 1996, such funds as may be necessary to carry out the activities that are not part of the Program but are authorized by this section.

–SOURCE–

(Pub. L. 102–194, title II, Sec. 203, Dec. 9, 1991, 105 Stat. 1600; Pub. L. 104–66, title I, Sec. 1052(j), Dec. 21, 1995, 109 Stat. 719.)

–COD–

CODIFICATION

December 21, 1995, referred to in subsec. (d), was in the original "the date of enactment of this subsection", which was translated as meaning the date of enactment of Pub. L. 104–66, which amended subsec. (d) generally, to reflect the probable intent of Congress.

–MISC3–

AMENDMENTS

1995 – Subsec. (d). Pub. L. 104–66 amended heading and text of subsec. (d) generally. Prior to amendment, text read as follows:

"Within one year after December 9, 1991, and every year thereafter, the Secretary of Energy shall transmit to the Congress

a report on activities taken to carry out this chapter."

~~–SECRET–~~

SECTION REFERRED TO IN OTHER SECTIONS

This section is referred to in section 5511 of this title.

~~–CITE–~~

15 USC Sec. 5524 01/06/03

~~–EXPCITE–~~

TITLE 15 – COMMERCE AND TRADE

CHAPTER 81 – HIGH–PERFORMANCE COMPUTING

SUBCHAPTER II – AGENCY ACTIVITIES

~~–HEAD–~~

Sec. 5524. Department of Commerce activities

~~–STATUTE–~~

(a) General responsibilities

As part of the Program described in subchapter I of this chapter

–

(1) the National Institute of Standards and Technology shall –

(A) conduct basic and applied measurement research needed to support various high–performance computing systems and