

105TH CONGRESS
2D SESSION

S. 1609

To amend the High-Performance Computing Act of 1991 to authorize appropriations for fiscal years 1999 and 2000 for the Next Generation Internet program, to require the Advisory Committee on High-Performance Computing and Communications, Information Technology, and the Next Generation Internet to monitor and give advice concerning the development and implementation of the Next Generation Internet program and report to the President and the Congress on its activities, and for other purposes.

IN THE SENATE OF THE UNITED STATES

FEBRUARY 4, 1998

Mr. FRIST (for himself, Mr. ROCKFELLER, Mr. MCCAIN, Mr. HOLLINGS, Mr. BURNS, and Mr. KERRY) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

A BILL

To amend the High-Performance Computing Act of 1991 to authorize appropriations for fiscal years 1999 and 2000 for the Next Generation Internet program, to require the Advisory Committee on High-Performance Computing and Communications, Information Technology, and the Next Generation Internet to monitor and give advice concerning the development and implementation of the Next Generation Internet program and report to the President and the Congress on its activities, 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 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Next Generation Inter-
5 net Research Act of 1998”.

6 **SEC. 2. DEFINITIONS.**

7 (a) **TERMS USED IN THIS ACT.**—For purposes of
8 this Act—

9 (1) **INTERNET.**—The term “Internet” has the
10 meaning given such term by section 230(e)(1) of the
11 Communications Act of 1934 (47 U.S.C. 230(e)(1)).

12 (2) **GEOGRAPHIC PENALTY.**—The term “geo-
13 graphic penalty” means the imposition of costs on
14 users of the Internet in rural or other locations at-
15 tributable to the distance of the user from network
16 facilities, the low population density of the area in
17 which the user is located, or other factors, that are
18 disproportionately greater than the costs imposed on
19 users in locations closer to such facilities or on users
20 in locations with significantly greater population
21 density.

22 (b) **DEFINITION OF NETWORK IN HIGH-PERFORM-**
23 **ANCE COMPUTING ACT OF 1991.**—Paragraph (4) of sec-
24 tion 4 of the High-Performance Computing Act of 1991
25 (15 U.S.C. 5503) is amended by striking “network re-

1 ferred to as the National Research and Education Net-
2 work established under section 102; and” and inserting
3 “network, including advanced computer networks of Fed-
4 eral agencies and departments; and”.

5 **SEC. 3. FINDINGS.**

6 (a) IN GENERAL.—The Congress finds that—

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

14 (2) the United States’ investment in science
15 and technology has yielded a scientific and engineer-
16 ing enterprise without peer, and that Federal invest-
17 ment in research is critical to the maintenance of
18 United States leadership;

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

23 (4) the Internet is playing an increasingly im-
24 portant role in keeping citizens informed of the ac-
25 tions of their government; and

1 (5) continued inter-agency cooperation is nec-
2 essary to avoid wasteful duplication in Federal net-
3 working research and development programs.

4 (b) ADDITIONAL FINDINGS FOR THE 1991 ACT.—
5 Section 2 of the High-Performance Computing Act of
6 1991 (15 U.S.C. 5501) is amended by—

7 (1) striking paragraph (4) and inserting the fol-
8 lowing:

9 “(4) A high-capacity, flexible, high-speed na-
10 tional research and education computer network is
11 needed to provide researchers and educators with ac-
12 cess to computational and information resources, act
13 as a test bed for further research and development
14 for high-capacity and high-speed computer networks,
15 and provide researchers the necessary vehicle for
16 continued network technology improvement through
17 research.”; and

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

19 “(7) Additional research must be undertaken to
20 lay the foundation for the development of new appli-
21 cations that can result in economic growth, improved
22 health care, and improved educational opportunities.

23 “(8) Research in new networking technologies
24 holds the promise of easing the economic burdens of

1 information access disproportionately borne by rural
2 users of the Internet.

3 “(9) Information security is an important part
4 of computing, information, and communications sys-
5 tems and applications, and research into security ar-
6 chitectures is a critical aspect of computing, infor-
7 mation, and communications research programs.”.

8 **SEC. 4. PURPOSES.**

9 (a) IN GENERAL.—The purposes of this Act are—

10 (1) to serve as the first authorization in a series
11 of computing, information, and communication tech-
12 nology initiatives outlines in the High-Performance
13 Computing Act of 1991 (15 U.S.C. 5501 et seq.)
14 that will include research programs related to—

15 (A) high-end computing and computation;

16 (B) human-centered systems;

17 (C) high confidence systems; and

18 (D) education, training, and human re-
19 sources; and

20 (2) to provide for the development and coordi-
21 nation of a comprehensive and integrated United
22 States research program which will—

23 (A) focus on the research and development
24 of a coordinated set of technologies that seeks
25 to create a network infrastructure that can sup-

1 port greater speed, robustness, and flexibility
2 than is currently available and promote
3 connectivity and interoperability among ad-
4 vanced computer networks of Federal agencies
5 and departments;

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

10 (C) encourage researchers to pursue ap-
11 proaches to networking technology that lead to
12 maximally flexible and extensible solutions
13 wherever feasible.

14 (b) MODIFICATION OF PURPOSES OF THE 1991
15 ACT.—Section 3 of the High-Performance Computing Act
16 of 1991 (15 U.S.C. 5502) is amended by—

17 (1) striking the section caption and inserting
18 the following:

19 **“SEC. 3. PURPOSES.”;**

20 (2) striking “purpose of this Act is” and insert-
21 ing “purposes of this Act are”;

22 (3) striking “universities; and” in paragraph
23 (1)(I) and inserting “universities;”;

1 (4) striking “efforts.” in paragraph (2) and in-
2 serting “network research and development pro-
3 grams;”; and

4 (5) adding at the end thereof the following:

5 “(3) promoting the further development of an
6 information infrastructure of information stores,
7 services, access mechanisms, and research facilities
8 available for use through the Internet;

9 “(4) promoting the more rapid development and
10 wider distribution of networking management and
11 development tools; and

12 “(5) promoting the rapid adoption of open net-
13 work standards.”.

14 **SEC. 5. DUTIES OF ADVISORY COMMITTEE.**

15 Title I of the High-Performance Computing Act of
16 1991 (15 U.S.C 5511 et seq.) is amended by adding at
17 the end thereof the following:

18 **“SEC. 103. ADVISORY COMMITTEE.**

19 “(a) IN GENERAL.—In addition to its functions
20 under Executive Order 13035 (62 F.R. 7231), the Advi-
21 sory Committee on High-Performance Computing and
22 Communications, Information Technology, and the Next
23 Generation Internet, established by Executive Order No.
24 13035 of February 11, 1997 (62 F.R. 7231) shall—

1 “(1) assess the extent to which the Next Gen-
2 eration Internet program—

3 “(A) carries out the purposes of this Act;

4 “(B) addresses concerns relating to, among
5 other matters—

6 “(i) geographic penalties (as defined
7 in section 2(2) of the Next Generation
8 Internet Research Act of 1998); and

9 “(ii) technology transfer to and from
10 the private sector; and

11 “(2) assess the extent to which—

12 “(A) the role of each Federal agency and
13 department involved in implementing the Next
14 Generation Internet program is clear, com-
15 plementary to and non-duplicative of the roles
16 of other participating agencies and depart-
17 ments; and

18 “(B) each such agency and department
19 concur with the rule of each other participat-
20 ing agency or department.

21 “(b) REPORTS.—The Advisory Committee shall as-
22 sess implementation of the Next Generation Internet ini-
23 tiative and report, not less frequently than annually, to
24 the President, the United States Senate Committee on
25 Commerce, Science, and Transportation, and the United

1 States House of Representatives Committee on Science on
 2 its findings for the preceding fiscal year. The first such
 3 report shall be submitted 6 months after the date of enact-
 4 ment of the Next Generation Internet Research Act of
 5 1998 the last report shall be submitted by September 30,
 6 2000.”.

7 **SEC. 6. AUTHORIZATION OF APPROPRIATIONS.**

8 Title I of the High-Performance Computing Act of
 9 1991 (15 U.S.C 5511 et seq.), as amended by section 5
 10 of this Act, is amended by adding at the end thereof the
 11 following:

12 **SEC. 104. AUTHORIZATION OF APPROPRIATIONS.**

13 “There are authorized to be appropriated for the pur-
 14 pose of carrying out the Next Generation Internet pro-
 15 gram the following amounts:

“Agency	FY 1999	FY 2000
“Department of Defense	\$42,500,000	\$45,000,000
“Department of Energy	\$20,000,000	\$25,000,000
“National Science Foundation	\$25,000,000	\$25,000,000
“National Institutes of Health	\$5,000,000	\$7,500,000
“National Aeronautics and Space Administra- tion	\$5,000,000	\$5,000,000
“National Institute of Standards and Tech- nology	\$5,000,000	\$7,500,000”.

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