

106TH CONGRESS
2D SESSION

S. 2046

To reauthorize the Next Generation Internet Act, and for other purposes.

IN THE SENATE OF THE UNITED STATES

FEBRUARY 9, 2000

Mr. FRIST (for himself, Mr. ROCKEFELLER, Mr. ROBERTS, Mr. BREAUX, and Mr. HOLLINGS) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

A BILL

To reauthorize the Next Generation Internet Act, 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 2000”.

6 **SEC. 2. FINDINGS.**

7 The Congress makes the following findings:

8 (1) The United States investment in science
9 and technology has yielded a scientific and engineer-
10 ing enterprise without peer. The Federal investment

1 in research is critical to the maintenance of our
2 international leadership.

3 (2) The Internet is at a pivotal point in its his-
4 tory. While promising new applications in medicine,
5 environmental science, and other disciplines are be-
6 coming a reality, they are still constrained by the
7 Internet's capacity and capabilities. The current
8 Internet cannot support an emerging set of activi-
9 ties, many of which are essential to mission-critical
10 applications in government, national laboratories,
11 academia and business.

12 (3) Government-sponsored network research
13 and development is critical to the success of the
14 Next Generation Internet. Previous Federal invest-
15 ment in computer networking technology and related
16 fields has resulted in the creation of new industries
17 and new jobs in the United States.

18 (4) Since its establishment in 1998, the Next
19 Generation Internet Program has successfully fund-
20 ed peer-reviewed research to address the critical
21 need for increased network performance and man-
22 agement.

23 **SEC. 3. PURPOSES.**

24 The purposes of this Act are—

1 (1) to authorize, through the Next Generation
2 Internet Program and Large Scale Networking Pro-
3 gram, research programs related to—

4 (A) high-end computing and computation;

5 (B) human-centered systems;

6 (C) high confidence systems; and

7 (D) education, training, and human re-
8 sources; and

9 (2) to provide, through the Next Generation
10 Internet Program and Large Scale Networking Pro-
11 gram, for the development and coordination of a
12 comprehensive and integrated United States re-
13 search program which will—

14 (A) focus on research and development to-
15 ward advancing network technologies to create
16 a network infrastructure that can support
17 greater speed, robustness, and flexibility;

18 (B) promote connectivity and interoper-
19 ability among advanced computer networks of
20 Federal agencies and departments;

21 (C) conduct research on the tools and serv-
22 ices that bear future agency networking re-
23 quirements demands, including application spe-
24 cific multicast, quality of service, and internet
25 video conferencing;

1 (D) focus on research and development of
2 the next generation network fabric, particularly
3 concerning the expansion of affordable band-
4 width for users that is both economically viable
5 and does not impose a geographic penalty (as
6 defined in section 7(a) of the Next Generation
7 Internet Research Act of 1998 (15 U.S.C. 5501
8 nt.); and

9 (E) encourage researchers to pursue ap-
10 proaches to networking technology that lead to
11 flexible and extensible solutions wherever fea-
12 sible.

13 **SEC. 4. AUTHORIZATION OF APPROPRIATIONS.**

14 Section 103(d) of the High-Performance Computing
15 Act of 1991 (15 U.S.C. 5513(d)) is amended to read as
16 follows:

17 “(d) AUTHORIZATION OF APPROPRIATIONS.—

18 “(1) IN GENERAL.—There are authorized to be
19 appropriated for the purpose of carrying out the
20 Next Generation Internet program and Large Scale
21 Networking program the following amounts:

“Agency	FY 2000	FY 2002	FY 2003
“Department of Defense	\$70,300,000	\$74,200,000	\$78,300,000
“Department of Energy	\$32,000,000	\$33,800,000	\$35,700,000
“National Aeronautics and Space Administration	\$19,500,000	\$20,600,000	\$21,700,000
“National Institutes of Health	\$96,000,000	\$101,300,000	\$106,300,000
“National Institute of Stand- ards and Technology	\$4,200,000	\$4,400,000	\$4,600,000
“National Science Foundation	\$111,200,000	\$117,300,000	\$123,800,000
“National Security Agency	\$1,900,000	\$2,000,000	\$2,100,000
“Agency for Healthcare Re- search and Quality	\$7,400,000	\$7,800,000	\$8,200,000

1 “(2) USE OF SUCH FUNDS.—Funds authorized by
2 paragraph (1)—

3 “(A) shall be used in a manner that con-
4 tributes to achieving the goals of the Next Gen-
5 eration Internet Program and the Large Scale
6 Networking program; and

7 “(B) may be used only for research that is
8 merit-based and peer-reviewed.”.

9 **SEC. 5. RURAL INFRASTRUCTURE.**

10 Section 103 of the High-Performance Computing Act
11 of 1991 (15 U.S.C. 5513) is amended by adding at the
12 end thereof the following:

13 “(e) RURAL INFRASTRUCTURE.—Out of appropriated
14 amounts authorized by subsection (d), not less than 10
15 percent of the total amounts made available to fund re-
16 search shall be used to fund research grants into the re-
17 duction of the cost of Internet access services available to
18 users in geographically-remote areas. The research shall
19 include investigation of wireless, hybrid, and satellite tech-

1 nologies. In awarding grants under this subsection, the ad-
2 ministering agency shall give priority to qualified, post-
3 secondary educational institutions that participate in the
4 Experimental Program to Stimulate Competitive Re-
5 search.”.

6 **SEC. 6. MINORITY AND SMALL COLLEGE INTERNET AC-**
7 **CESS.**

8 Section 103 of the High-Performance Computing Act
9 of 1991 (15 U.S.C. 5513), as amended by section 6, is
10 further amended by adding at the end thereof the fol-
11 lowing:

12 “(f) MINORITY AND SMALL COLLEGE INTERNET AC-
13 CESS.—Not less than 5 percent of the amounts made
14 available for research under subsection (e) shall be used
15 for grants to institutions of higher education that are His-
16 panic-serving, Native American, Historically Black, or
17 small colleges and universities.”.

18 **SEC. 7. DIGITAL DIVIDE STUDY.**

19 (a) IN GENERAL.—The National Academy of
20 Sciences shall conduct a study to determine the extent to
21 which the Internet backbone and network infrastructure
22 contribute to the uneven access to Internet-related tech-
23 nologies and services by rural and low-income Americans.
24 The study shall include—

1 (1) an assessment of the existing geographical
2 penalty (as defined in section 7(a)(1) of the Next
3 General Internet Research Act of 1998 (15 U.S.C.
4 5501 nt.)) and its impact on all users and their abil-
5 ity to obtain secure and reliable Internet access;

6 (2) a review of all current Federally-funded re-
7 search to decrease the inequity of Internet access to
8 rural and low-income users; and

9 (3) an estimate of the potential impact of Next
10 Generation Internet research institutions acting as
11 aggregators and mentors for nearby smaller or dis-
12 advantaged institutions.

13 (b) REPORT.—The National Academy of Sciences
14 shall transmit a report containing the results of the study
15 and recommendations required by subsection (a) to the
16 Senate Committee on Commerce, Science, and Transpor-
17 tation and the House of Representatives Committee on
18 Science within 1 year after the date of enactment of this
19 Act.

20 (c) AUTHORIZATION OF APPROPRIATIONS.—There
21 are authorized to be appropriated to the National Acad-
22 emy of Sciences such sums as may be necessary to carry
23 out this section.

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