

**CHAPTER 81—HIGH-PERFORMANCE
COMPUTING**

- Sec.
5501. Findings.
5502. Purposes.
5503. Definitions.
- SUBCHAPTER I—HIGH-PERFORMANCE COMPUTING AND THE NATIONAL RESEARCH AND EDUCATION NETWORK
5511. National High-Performance Computing Program.
 (a) National High-Performance Computing Program.
 (b) Advisory committee.
 (c) Office of Management and Budget.
5512. National Research and Education Network.
 (a) Establishment.
 (b) Access.
 (c) Network characteristics.
 (d) Defense Advanced Research Projects Agency responsibility.
 (e) Information services.
 (f) Use of grant funds.
 (g) Report to Congress.
5513. Next Generation Internet.
 (a) Establishment.
 (b) Duties of Advisory Committee.
 (c) Reports.
 (d) Authorization of appropriations.
- SUBCHAPTER II—AGENCY ACTIVITIES
5521. National Science Foundation activities.
 (a) General responsibilities.
 (b) Authorization of appropriations.
5522. National Aeronautics and Space Administration activities.
 (a) General responsibilities.
 (b) Authorization of appropriations.
5523. Department of Energy activities.
 (a) General responsibilities.
 (b) Collaborative Consortia.
 (c) Technology transfer.
 (d) Reports.
 (e) Authorization of appropriations.
5524. Department of Commerce activities.
 (a) General responsibilities.
 (b) High-performance computing and network security.
 (c) Study of impact of Federal procurement regulations.
 (d) Authorization of appropriations.
5525. Environmental Protection Agency activities.
 (a) General responsibilities.
 (b) Authorization of appropriations.
5526. Role of Department of Education.
 (a) General responsibilities.
 (b) Authorization of appropriations.
5527. Miscellaneous provisions.
 (a) Nonapplicability.
 (b) Acquisition of prototype and early production models.
5528. Fostering United States competitiveness in high-performance computing and related activities.
 (a) Findings.
 (b) Annual report.
 (c) Review of Supercomputer Agreement.
 (d) Application of Buy American Act.

§ 5501. Findings

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 multi-agency 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.

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

AMENDMENTS

1998—Par. (4). Pub. L. 105-305, §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, §2(b)(2), added pars. (7) to (9).