

Editorial Notes

REFERENCES IN TEXT

This chapter, referred to in subsec. (a), was in the original “this Act”, meaning Pub. L. 107–231, Oct. 1, 2002, 116 Stat. 1471, known as the National Construction Safety Team Act, which is classified principally to this chapter. For complete classification of this Act to the Code, see Short Title note set out under section 7301 of this title and Tables.

AMENDMENTS

2022—Subsec. (c). Pub. L. 117–286 substituted “Section 1013 of title 5” for “Section 14 of the Federal Advisory Committee Act”.

Statutory Notes and Related Subsidiaries

CHANGE OF NAME

Committee on Science of House of Representatives changed to Committee on Science and Technology of House of Representatives by House Resolution No. 6, One Hundred Tenth Congress, Jan. 5, 2007. Committee on Science and Technology of House of Representatives changed to Committee on Science, Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

§ 7311. Additional applicability

The authorities and restrictions applicable under this chapter to the Director and to Teams shall apply to the activities of the National Institute of Standards and Technology in response to the attacks of September 11, 2001.

(Pub. L. 107–231, § 12, Oct. 1, 2002, 116 Stat. 1476.)

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§ 7312. Construction

Nothing in this chapter shall be construed to confer any authority on the National Institute of Standards and Technology to require the adoption of building standards, codes, or practices.

(Pub. L. 107–231, § 14, Oct. 1, 2002, 116 Stat. 1477.)

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§ 7313. Authorization of appropriations

The National Institute of Standards and Technology is authorized to use funds otherwise authorized by law to carry out this chapter.

(Pub. L. 107–231, § 15, Oct. 1, 2002, 116 Stat. 1477.)

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CHAPTER 100—CYBER SECURITY RESEARCH AND DEVELOPMENT

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§ 7401. Findings

The Congress finds the following:

(1) Revolutionary advancements in computing and communications technology have interconnected government, commercial, scientific, and educational infrastructures—including critical infrastructures for electric power, natural gas and petroleum production and distribution, telecommunications, transportation, water supply, banking and finance, and emergency and government services—in a vast, interdependent physical and electronic network.

(2) Exponential increases in interconnectivity have facilitated enhanced communications, economic growth, and the delivery of services critical to the public welfare, but have also increased the consequences of temporary or prolonged failure.

(3) A Department of Defense Joint Task Force concluded after a 1997 United States information warfare exercise that the results “clearly demonstrated our lack of preparation for a coordinated cyber and physical attack on our critical military and civilian infrastructure”.

(4) Computer security technology and systems implementation lack—

(A) sufficient long term research funding;

(B) adequate coordination across Federal and State government agencies and among government, academia, and industry; and

(C) sufficient numbers of outstanding researchers in the field.

(5) Accordingly, Federal investment in computer and network security research and development must be significantly increased to—

(A) improve vulnerability assessment and technological and systems solutions;

(B) expand and improve the pool of information security professionals, including re-

searchers, in the United States workforce; and

(C) better coordinate information sharing and collaboration among industry, government, and academic research projects.

(6) While African-Americans, Hispanics, and Native Americans constitute 25 percent of the total United States workforce and 30 percent of the college-age population, members of these minorities comprise less than 7 percent of the United States computer and information science workforce.

(Pub. L. 107-305, §2, Nov. 27, 2002, 116 Stat. 2367.)

Statutory Notes and Related Subsidiaries

SHORT TITLE

Pub. L. 107-305, §1, Nov. 27, 2002, 116 Stat. 2367, provided that: “This Act [enacting this chapter and section 278h of this title, amending sections 278g-3, 1511e, and 7301 of this title and section 1862 of Title 42, The Public Health and Welfare, and redesignating section 278h of this title as 278q of this title] may be cited as the ‘Cyber Security Research and Development Act’.”

§ 7402. Definitions

In this chapter:

(1) Director

The term “Director” means the Director of the National Science Foundation.

(2) Institution of higher education

The term “institution of higher education” has the meaning given that term in section 1001(a) of title 20.

(Pub. L. 107-305, §3, Nov. 27, 2002, 116 Stat. 2368.)

Editorial Notes

REFERENCES IN TEXT

This chapter, referred to in text, was in the original “this Act”, meaning Pub. L. 107-305, Nov. 27, 2002, 116 Stat. 2367, known as the Cyber Security Research and Development Act, which is classified principally to this chapter. For complete classification of this Act to the Code, see Short Title note set out under section 7401 of this title and Tables.

§ 7403. National Science Foundation research

(a) Computer and network security research grants

(1) In general

The Director shall award grants for basic research on innovative approaches to the structure of computer and network hardware and software that are aimed at enhancing computer security. Research areas may include—

(A) authentication, cryptography, and other secure data communications technology;

(B) computer forensics and intrusion detection;

(C) reliability of computer and network applications, middleware, operating systems, control systems, and communications infrastructure;

(D) privacy and confidentiality;

(E) network security architecture, including tools for security administration and analysis;

(F) emerging threats;

(G) vulnerability assessments and techniques for quantifying risk;

(H) remote access and wireless security;

(I) enhancement of law enforcement ability to detect, investigate, and prosecute cyber-crimes, including those that involve piracy of intellectual property;

(J) secure fundamental protocols that are integral to inter-network communications and data exchange;

(K) secure software engineering and software assurance, including—

(i) programming languages and systems that include fundamental security features;

(ii) portable or reusable code that remains secure when deployed in various environments;

(iii) verification and validation technologies to ensure that requirements and specifications have been implemented; and

(iv) models for comparison and metrics to assure that required standards have been met;

(L) holistic system security that—

(i) addresses the building of secure systems from trusted and untrusted components;

(ii) proactively reduces vulnerabilities;

(iii) addresses insider threats; and

(iv) supports privacy in conjunction with improved security;

(M) monitoring and detection;

(N) mitigation and rapid recovery methods;

(O) security of wireless networks and mobile devices;

(P) security of cloud infrastructure and services;

(Q) security of election-dedicated voting system software and hardware; and

(R) role of the human factor in cybersecurity and the interplay of computers and humans and the physical world.

(2) Merit review; competition

Grants shall be awarded under this section on a merit-reviewed competitive basis.

(3) Authorization of appropriations

There are authorized to be appropriated to the National Science Foundation to carry out this subsection—

(A) \$35,000,000 for fiscal year 2003;

(B) \$40,000,000 for fiscal year 2004;

(C) \$46,000,000 for fiscal year 2005;

(D) \$52,000,000 for fiscal year 2006; and

(E) \$60,000,000 for fiscal year 2007.

(b) Computer and network security research centers

(1) In general

The Director shall award multiyear grants, subject to the availability of appropriations, to institutions of higher education, nonprofit research institutions, or consortia thereof to establish multidisciplinary Centers for Computer and Network Security Research. Institutions of higher education, nonprofit research institutions, or consortia thereof receiving