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Citation: 5 Bernard D. Reams Jr. Law of E-SIGN A Legislative of the Electronic Signatures in Global and National Act Public Law No. 106-229 2000 1 2002

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## 105TH CONGRESS 1ST SESSION H.R. 1903

To amend the National Institute of Standards and Technology Act to enhance the ability of the National Institute of Standards and Technology to improve computer security, and for other purposes.

#### IN THE HOUSE OF REPRESENTATIVES

JUNE 17, 1997

Mr. SENSENBRENNER (for himself, Mr. BROWN of California, Mrs. MORELLA, Mr. GORDON, Mr. DAVIS of Virginia, Ms. STABENOW, Mr. EHLERS, Ms. JACKSON-LEE of Texas, Mr. SESSIONS, Mr. PICKERING, Mr. TRAFICANT, Mr. COOK, and Mr. CANNON) introduced the following bill; which was referred to the Committee on Science

## A BILL

- To amend the National Institute of Standards and Technology Act to enhance the ability of the National Institute of Standards and Technology to improve computer security, 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 "Computer Security
- 5 Enhancement Act of 1997".
- 6 SEC. 2. FINDINGS AND PURPOSES.
- 7 (a) FINDINGS.—The Congress finds the following:

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1 (1) The National Institute of Standards and 2 Technology has responsibility for developing stand-3 ards and guidelines needed to ensure the cost-effec-4 tive security and privacy of sensitive information in 5 Federal computer systems.

6 (2) The Federal Government has an important 7 role in ensuring the protection of sensitive, but un-8 classified, information controlled by Federal agen-9 cies.

(3) Technology that is based on the application
of cryptography exists and can be readily provided
by private sector companies to ensure the confidentiality, authenticity, and integrity of information
associated with public and private activities.

15 (4) The development and use of encryption
16 technologies should be driven by market forces rath17 er than by Government imposed requirements.

(5) Federal policy for control of the export of
encryption technologies should be determined in
light of the public availability of comparable
encryption technologies outside of the United States
in order to avoid harming the competitiveness of
United States computer hardware and software companies.

25 (b) PURPOSES.—The purposes of this Act are to—

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1 (1) reinforce the role of the National Institute 2 of Standards and Technology in ensuring the secu-3 rity of unclassified information in Federal computer 4 systems; 5 (2) promote technology solutions based on pri-6 vate sector offerings to protect the security of Fed-7 eral computer systems; and 8 (3) provide the assessment of the capabilities of 9 information security products incorporating cryptog-10 raphy that are generally available outside the United 11 States. 12 SEC. 3. VOLUNTARY STANDARDS FOR PUBLIC KEY MAN-13 AGEMENT INFRASTRUCTURE. 14 Section 20(b) of the National Institute of Standards and Technology Act (15 U.S.C. 278g-3(b)) is amended-15 16 (1) by redesignating paragraphs (2), (3), (4), and (5) as paragraphs (3), (4), (7), and (8), respec-17 18 tively; and 19. (2) by inserting after paragraph (1) the follow-20 ing new paragraph: 21 "(2) upon request from the private sector, to 22 assist in establishing voluntary interoperable stand-23 ards, guidelines, and associated methods and tech-24 niques to facilitate and expedite the establishment of 25 non-Federal management infrastructures for public

1	keys that can be used to communicate with and con-
2	duct transactions with the Federal Government;".
3	SEC. 4. SECURITY OF FEDERAL COMPUTERS AND NET-
4	WORKS.
5	Section 20(b) of the National Institute of Standards
6	and Technology Act (15 U.S.C. 278g-3(b)), as amended
7	by section 3 of this Act. is further amended by inserting
8	after paragraph (4), as so redesignated by section $3(1)$
9	of this Act, the following new paragraphs:
10	"(5) to provide guidance and assistance to Fed-
11	eral agencies in the protection of interconnected
12	computer systems and to coordinate Federal re-
13	sponse efforts related to unauthorized access to Fed-
14	eral computer systems;
15	"(6) to perform evaluations and tests of—
16	"(A) information technologies to assess
17	security vulnerabilities; and
18	"(B) commercially available security prod-
19	ucts for their suitability for use by Federal
20	agencies for protecting sensitive information in
21	computer systems;".
22	SEC. 5. COMPUTER SECURITY IMPLEMENTATION.
23	Section 20 of the National Institute of Standards and
24	Technology Act (15 U.S.C. 278g-3) is further amended

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1	(1) by redesignating subsections (c) and (d) as
2	subsections (f) and (g), respectively; and
3	(2) by inserting after subsection (b) the follow-
4	ing new subsection:
5	"(c) In carrying out subsection (a)(3), the Institute
6	shall—
7	"(1) emphasize the development of technology-
8	neutral policy guidelines for computer security prac-
9	tices by the Federal agencies;
10	"(2) actively promote the use of commercially
11	available products to provide for the security and
12	privacy of sensitive information in Federal computer
13	systems; and
14	"(3) participate in implementations of
14 15	"(3) participate in implementations of encryption technologies in order to develop required
15	encryption technologies in order to develop required
15 16	encryption technologies in order to develop required standards and guidelines for Federal computer sys-
15 16 17	encryption technologies in order to develop required standards and guidelines for Federal computer sys- tems, including assessing the desirability of and the
15 16 17 18	encryption technologies in order to develop required standards and guidelines for Federal computer sys- tems, including assessing the desirability of and the costs associated with establishing and managing key
15 16 17 18 19	encryption technologies in order to develop required standards and guidelines for Federal computer sys- tems, including assessing the desirability of and the costs associated with establishing and managing key recovery infrastructures for Federal Government in-
15 16 17 18 19 20	encryption technologies in order to develop required standards and guidelines for Federal computer sys- tems, including assessing the desirability of and the costs associated with establishing and managing key recovery infrastructures for Federal Government in- formation.".
15 16 17 18 19 20 21	encryption technologies in order to develop required standards and guidelines for Federal computer sys- tems, including assessing the desirability of and the costs associated with establishing and managing key recovery infrastructures for Federal Government in- formation.". SEC. 6. COMPUTER SECURITY REVIEW, PUBLIC MEETINGS,
15 16 17 18 19 20 21 22	encryption technologies in order to develop required standards and guidelines for Federal computer sys- tems, including assessing the desirability of and the costs associated with establishing and managing key recovery infrastructures for Federal Government in- formation.". SEC. 6. COMPUTER SECURITY REVIEW, PUBLIC MEETINGS, AND INFORMATION.

1 as added by section 5 of this Act, the following new sub-2 section:

3 "(d)(1) The Institute shall solicit the recommendations of the Computer System Security and Privacy Advi-4 sory Board, established by section 21, regarding standards 5 and guidelines that are being considered for submittal to 6 the Secretary of Commerce in accordance with subsection 7 8 (a)(4). No standards or guidelines shall be submitted to the Secretary prior to the receipt by the Institute of the 9 Board's written recommendations. The recommendations 10 11 of the Board shall accompany standards and guidelines 12 submitted to the Secretary.

13 "(2) There are authorized to be appropriated to the Secretary of Commerce \$1,000,000 for fiscal year 1998 14 and \$1,030,000 for fiscal year 1999 to enable the Com-15 puter System Security and Privacy Advisory Board, estab-16 17 lished by section 21, to identify emerging issues related 18 to computer security, privacy, and cryptography and to 19 convene public meetings on those subjects, receive presentations, and publish reports, digests, and summaries for 20 21 public distribution on those subjects.".

22 SEC. 7. EVALUATION OF CAPABILITIES OF FOREIGN
23 ENCRYPTION.

Section 20 of the National Institute of Standards and
Technology Act (15 U.S.C. 278g-3), as amended by this

Act, is further amended by inserting after subsection (d),
 as added by section 6 of this Act, the following new sub section:

4 "(e)(1) If the Secretary has imposed, or proposes to 5 impose, export restrictions on a product that incorporates 6 encryption technologies, the Institute may accept technical 7 evidence from the commercial provider of the product of-8 fered to indicate that encryption technologies, embodied 9 in the form of software or hardware, that are offered and 10 generally available outside the United States for use, sale, 11 license, or transfer (whether for consideration or not) pro-12 vide stronger participation for privacy of computer data and transmissions of information in digital form than the 13 14 encryption technologies incorporated in the commercial 15 provider's product.

16 "(2) Within 30 days after accepting technical evidence from a commercial provider under paragraph (1), 17 the Institute shall evaluate the accuracy and completeness 18 19 of the technical evidence and transmit to the Secretary, 20 and to the Committee on Science of the House of Rep-21 resentatives and the Committee on Commerce, Science, 22 and Transportation of the Senate, a report containing the results of that evaluation. The Institute may obtain assist-23 ance from other Federal and private sector entities in car-24 25 rying out evaluations under this paragraph.

1 "(3) Not later than 180 days after the date of the 2 enactment of the Computer Security Enhancement Act of 3 1997, the Institute shall develop standard procedures and 4 tests for determining the capabilities of encryption tech-5 nologies, and shall provide information regarding those 6 procedures and tests to the public.

7 "(4) The Institute may require a commercial provider
8 seeking evaluation under this subsection to follow proce9 dures and carry out tests developed by the Institute pursu10 ant to paragraph (3).".

# 11 SEC. 8. LIMITATION ON PARTICIPATION IN REQUIRING 12 ENCRYPTION STANDARDS.

Section 20 of the National Institute of Standards and
Technology Act (15 U.S.C. 278g-3), as amended by this
Act, is further amended by adding at the end the following
new subsection:

"(h) The Institute shall not promulgate, enforce, or
otherwise adopt standards, or carry out activities or policies, for the Federal establishment of encryption standards
required for use in computer systems other than Federal
Government computer systems.".

22 SEC. 9. MISCELLANEOUS AMENDMENTS.

23 Section 20 of the National Institute of Standards and
24 Technology Act (15 U.S.C. 278g-3), as amended by this
25 Act, is further amended—

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1	(1) in subsection (b)(8), as so redesignated by
2	section 3(1) of this Act, by inserting "to the extent
3	that such coordination will improve computer secu-
4	rity and to the extent necessary for improving such
5	security for Federal computer systems" after "Man-
6	agement and Budget)";
7	(2) in subsection (f), as so redesignated by sec-
8	tion 5(1) of this Act, by striking "shall draw upon"
9	and inserting in lieu thereof "may draw upon";
10	(3) in subsection (f)(2), as so redesignated by
11	section 5(1) of this Act, by striking "(b)(5)" and in-
12	serting in lieu thereof "(b)(5)"; and
13	(4) in subsection (g)(1)(B)(i), as so redesig-
14	nated by section 5(1) of this Act, by inserting "and
15	computer networks" after "computers".
16	SEC. 10. FEDERAL COMPUTER SYSTEM SECURITY TRAIN-
17	ING.
18	Section 5(b) of the Computer Security Act of 1987
19	(49 U.S.C. 759 note) is amended-
20	(1) by striking "and" at the end of paragraph
21	(1);
22	(2) by striking the period at the end of para-
23	graph (2) and inserting in lieu thereof "; and"; and
24	(3) by adding at the end the following new
25	paragraph:

"(3) to include emphasis on protecting sensitive
 information in Federal databases and Federal com puter sites that are accessible through public net works.".

#### 5 SEC. 11. COMPUTER SECURITY FELLOWSHIP PROGRAM.

6 There are authorized to be appropriated to the Secretary of Commerce \$250,000 for fiscal year 1998 and 7 8 \$250,000 for fiscal year 1999 for the Director of the National Institute of Standards and Technology for fellow-9 10 ships, subject to the provisions of section 18 of the National Institute of Standards and Technology Act (15 11 U.S.C. 278g-1), to support students at institutions of 12 13 higher learning in computer security. Amounts authorized 14 by this section shall not be subject to the percentage limi-15 tation stated in such section 18.

## 16 SEC. 12. STUDY OF PUBLIC KEY INFRASTRUCTURE BY THE 17 NATIONAL RESEARCH COUNCIL.

(a) REVIEW BY NATIONAL RESEARCH COUNCIL.--19 Not later than 90 days after the date of the enactment
20 of this Act, the Secretary of Commerce shall enter into
21 a contract with the National Research Council of the Na22 tional Academy of Sciences to conduct a study of public
23 key infrastructures for use by individuals, businesses, and
24 government.

3 (1) assess technology needed to support public
4 key infrastructures;

5 (2) assess current public and private plans for6 the deployment of public key infrastructures;

7 (3) assess interoperability, scalability, and in8 tegrity of private and public entities that are ele9 ments of public key infrastructures;

10 (4) make recommendations for Federal legisla11 tion and other Federal actions required to ensure
12 the national feasibility and utility of public key in13 frastructures; and

14 (5) address such other matters as the National
15 Research Council considers relevant to the issues of
16 public key infrastructure.

(c) INTERAGENCY COOPERATION WITH STUDY.—All
agencies of the Federal Government shall cooperate fully
with the National Research Council in its activities in carrying out the study under this section, including access
by properly cleared individuals to classified information if
necessary.

23 (d) REPORT.—Not later than 18 months after the
24 date of the enactment of this Act, the Secretary of Com25 merce shall transmit to the Committee on Science of the

House of Representatives and the Committee on Com
 merce, Science, and Transportation of the Senate a repor
 setting forth the findings, conclusions, and recommenda
 tions of the National Research Council for public polic
 related to public key infrastructures for use by individuals
 businesses, and government. Such report shall be submit
 ted in unclassified form.

8 (e) AUTHORIZATION OF APPROPRIATIONS.—Then 9 are authorized to be appropriated to the Secretary of Con 10 merce \$450,000 for fiscal year 1998, to remain availab 11 until expended, for carrying out this section.

### 12 SEC. 13. SOURCE OF AUTHORIZATIONS.

Amounts authorized to be appropriated by this Ashall be derived from amounts authorized under the Ntional Institute of Standards and Technology Authoriz
tion Act of 1997.

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