

COMMITTEE AMENDMENT

[STAFF WORKING DRAFT]

March 16, 2010

Purpose: To modify the bill as introduced.

**IN THE COMMITTEE ON COMMERCE, SCIENCE, AND
TRANSPORTATION—111TH Cong., 2D Sess.**

S. 773, 111TH Congress, 2D Session

MARCH —, 2010

INTENDED to be proposed by Mr. ROCKEFELLER

Viz: Strike out all after the enacting clause and insert the following:

1 **SECTION 1. SHORT TITLE; TABLE OF CONTENTS.**

2 (a) SHORT TITLE.—This Act may be cited as the
3 “Cybersecurity Act of 2010”.

4 (b) TABLE OF CONTENTS.—The table of contents for
5 this Act is as follows:

- Sec. 1. Short title; table of contents.
- Sec. 2. Findings.
- Sec. 3. Definitions.
- Sec. 4. Procedure for designation of critical infrastructure information systems.

TITLE I—WORKFORCE DEVELOPMENT

- Sec. 101. Certification and training of cybersecurity professionals.
- Sec. 102. Federal Cyber Scholarship-for-Service Program.
- Sec. 103. Cybersecurity competition and challenge.
- Sec. 104. Cybersecurity workforce plan.
- Sec. 105. Measures of cybersecurity hiring effectiveness.

TITLE II—PLANS AND AUTHORITY

- Sec. 201. Cybersecurity responsibilities and authorities.
- Sec. 202. Biennial cyber review.
- Sec. 203. Cybersecurity dashboard pilot project.

- Sec. 204. NIST cybersecurity guidance.
- Sec. 205. Legal framework review and report.
- Sec. 206. Joint intelligence threat and vulnerability assessment
- Sec. 207. International norms and cybersecurity deterrence measures.
- Sec. 208. Federal Secure Products and Services Acquisitions.
- Sec. 209. Private sector access to classified information.
- Sec. 210. Authentication and civil liberties report.

TITLE III—CYBERSECURITY KNOWLEDGE DEVELOPMENT

- Sec. 301. Promoting cybersecurity awareness and education.
- Sec. 302. Federal cybersecurity research and development.

TITLE IV—PUBLIC-PRIVATE COLLABORATION

- Sec. 401. Cybersecurity Advisory Panel.
- Sec. 402. State and regional cybersecurity enhancement program.
- Sec. 403. Public-private clearinghouse.
- Sec. 404. Cybersecurity risk management report.

1 **SEC. 2. FINDINGS.**

2 The Congress finds the following:

3 (1) As a fundamental principle, cyberspace is a
4 vital asset for the nation and the United States
5 should protect it using all instruments of national
6 power, in order to ensure national security, public
7 safety, economic prosperity, and the delivery of crit-
8 ical services to the American public.

9 (2) President Obama has rightfully determined
10 that “our digital infrastructure—the networks and
11 computers we depend on every day will be treated .
12 . . as a strategic national asset”.

13 (3) According to the Obama Administration
14 Cyberspace Policy Review, “the architecture of the
15 Nation’s digital infrastructure is not secure or resil-
16 ient. Without major advances in the security of these
17 systems or significant change in how they are con-

1 structured or operated, it is doubtful that the United
2 States can protect itself from the growing threat of
3 cybercrime and state-sponsored intrusions and oper-
4 ations.”.

5 (4) With more than 85 percent of the Nation’s
6 critical infrastructure owned and operated by the
7 private sector, it is vital that the public and private
8 sectors cooperate to protect this strategic national
9 asset.

10 (5) According to the 2010 Annual Threat As-
11 sessment, that “sensitive information is stolen daily
12 from both government and private sector networks”
13 and that “we cannot protect cyberspace without a
14 coordinated and collaborative effort that incor-
15 porates both the US private sector and our inter-
16 national partners.”.

17 (6) The Director of National Intelligence testi-
18 fied before the Congress on February 2, 2010, that
19 the recent intrusions reported by Google should
20 serve as “a wake-up call to those who have not
21 taken this problem seriously.”.

22 (7) The National Cybersecurity Coordinator,
23 Howard Schmidt, stated on March 2, 2010, “we will
24 not defeat our cyber adversaries because they are
25 weakening, we will defeat them by becoming collec-

1 tively stronger, through stronger technology, a
2 stronger cadre of security professionals, and strong-
3 er partnerships.”.

4 (8) According to the National Journal, Mike
5 McConnell, the former Director of National Intel-
6 ligence, told President Bush in May 2007 that if the
7 9/11 attackers had chosen computers instead of air-
8 planes as their weapons and had waged a massive
9 assault on a United States bank, the economic con-
10 sequences would have been “an order of magnitude
11 greater” than those caused by the physical attack on
12 the World Trade Center. Mike McConnell has subse-
13 quently referred to cybersecurity as the “soft under-
14 belly of this country”.

15 (9) Paul Kurtz, a Partner and chief operating
16 officer of Good Harbor Consulting as well as a sen-
17 ior advisor to the Obama Transition Team for cyber-
18 security, has stated that the United States is unpre-
19 pared to respond to a “cyber-Katrina” and that “a
20 massive cyber disruption could have a cascading,
21 long-term impact without adequate co-ordination be-
22 tween government and the private sector”.

23 (10) According to the February 2003 National
24 Strategy to Secure Cyberspace, “our nation’s critical
25 infrastructures are composed of public and private

1 institutions in the sectors of agriculture, food, water,
2 public health, emergency services, government, de-
3 fense industrial base, information and telecommuni-
4 cations, energy, transportation, banking finance,
5 chemicals and hazardous materials, and postal and
6 shipping. Cyberspace is their nervous system the
7 control system of our country” and that “the corner-
8 stone of America’s cyberspace security strategy is
9 and will remain a public-private partnership”.

10 (11) The Center for Strategic and International
11 Studies report on Cybersecurity for the 44th Presi-
12 dency concluded that (A) cybersecurity is now a
13 major national security problem for the United
14 States, (B) decisions and actions must respect pri-
15 vacy and civil liberties, and (C) only a comprehen-
16 sive national security strategy that embraces both
17 the domestic and international aspects of cybersecu-
18 rity will make us more secure. The report continued,
19 stating that the United States faces “a long-term
20 challenge in cyberspace from foreign intelligence
21 agencies and militaries, criminals, and others, and
22 that losing this struggle will wreak serious damage
23 on the economic health and national security of the
24 United States”.

1 (12) James Lewis, Director and Senior Fellow,
2 Technology and Public Policy Program, Center for
3 Strategic and International Studies, testified on be-
4 half of the Center for Strategic and International
5 Studies that “the United States is not organized for,
6 and lacks a coherent national strategy for address-
7 ing, cybersecurity”.

8 (13) The Cyber Strategic Inquiry 2008, spon-
9 sored by Business Executives for National Security
10 and executed by Booz Allen Hamilton, recommended
11 to “establish a single voice for cybersecurity within
12 government” concluding that the “unique nature of
13 cybersecurity requires a new leadership paradigm”.

14 (14) Alan Paller, the Director of Research at
15 the SANS Institute, testified before the Congress
16 that “Congress can reduce the threat of damage
17 from these new cyber attacks both against govern-
18 ment and against the critical infrastructure by shift-
19 ing the government’s cyber security emphasis from
20 report writing to automated, real-time defenses” and
21 that “only active White House leadership will get the
22 job done”.

23 (15) A 2009 Partnership for Public Service
24 study and analysis by the nonprofit Partnership for
25 Public Service reports concluded that “the Federal

1 government will be unable to combat cyber threats
2 without a more coordinated, sustained effort to in-
3 crease cybersecurity expertise in the federal work-
4 force” and that “the President’s success in com-
5 bating these threats . . . must include building a vi-
6 brant, highly trained and dedicated cybersecurity
7 workforce in this country”.

8 **SEC. 3. DEFINITIONS.**

9 In this Act:

10 (1) **ADVISORY PANEL.**—The term “Advisory
11 Panel” means the Cybersecurity Advisory Panel es-
12 tablished or designated under section 401.

13 (2) **CYBERSECURITY.**—The term “cybersecu-
14 rity” means information security (as defined in sec-
15 tion 3532(b)(1) of title 44, United States Code.

16 (3) **CYBERSECURITY PROFESSIONAL.**—The
17 term “cybersecurity professional” means a person
18 who maintains a certification under section 101 of
19 this Act.

20 (4) **INFORMATION SYSTEM.**—The term “infor-
21 mation system” has the meaning given that term by
22 section 3532(b)(4) of title 44, United States Code.

23 (5) **INTERNET.**—The term “Internet” has the
24 meaning given that term by section 4(4) of the

1 High-Performance Computing Act of 1991 (15
2 U.S.C. 5503(4)).

3 (6) UNITED STATES CRITICAL INFRASTRUC-
4 TURE INFORMATION SYSTEM.—The term “United
5 States critical infrastructure information system”
6 means an information system designated under sec-
7 tion 4 of this Act.

8 **SEC. 4. PROCEDURE FOR DESIGNATION OF CRITICAL IN-**
9 **FRASTRUCTURE INFORMATION SYSTEMS.**

10 (a) ESTABLISHMENT OF DESIGNATION PROCE-
11 DURE.—Within 90 days after the date of enactment of
12 this Act or as soon thereafter as may be practicable, the
13 President, in consultation with sector coordinating coun-
14 cils, relevant government agencies, and regulatory entities,
15 shall initiate a rulemaking in accordance with the require-
16 ments of chapter 5 of title 5, United States Code, to estab-
17 lish a procedure for the designation of any information
18 system the infiltration, incapacitation, or disruption of
19 which would threaten a strategic national interests as a
20 critical infrastructure information system under this Act.

21 (b) THRESHOLD REQUIREMENTS.—The final rule, at
22 a minimum, shall—

23 (1) set forth objective criteria that meet the
24 standard in section (a) for such designations gen-
25 erally;

1 (2) provide for emergency and temporary des-
2 ignations when necessary and in the public interest;

3 (3) ensure the protection of confidential and
4 proprietary information associated with nongovern-
5 mental systems from disclosure;

6 (4) ensure the protection of classified and sen-
7 sitive security information; and

8 (5) establish a procedure, in accordance with
9 chapter 7 of title 5, United States Code, by which
10 the owner or operator of an information system may
11 appeal, or request modification of, the designation of
12 that system or network as a critical infrastructure
13 information system under this Act.

14 **TITLE I—WORKFORCE**
15 **DEVELOPMENT**

16 **SEC. 101. CERTIFICATION AND TRAINING OF CYBERSECU-**
17 **RITY PROFESSIONALS.**

18 (a) STUDY.—

19 (1) IN GENERAL.—The President shall enter
20 into an agreement with the National Academies to
21 conduct a comprehensive study of government, aca-
22 demic, and private-sector accreditation, training, and
23 certification programs for personnel working in cy-
24 bersecurity. The agreement shall require that the
25 National Academies consult with sector coordinating

1 councils and relevant governmental agencies, regu-
2 latory entities, and nongovernmental organizations
3 in the course of the study.

4 (2) SCOPE.—The study shall include—

5 (A) an evaluation of the body of knowledge
6 and various skills that specific categories of per-
7 sonnel working in cybersecurity should possess
8 in order to secure information systems;

9 (B) an assessment of whether existing gov-
10 ernment, academic, and private-sector accredi-
11 tation, training, and certification programs pro-
12 vide the body of knowledge and skills described
13 in subparagraph (A); and

14 (C) any other factors that should be con-
15 sidered for any accreditation, training, and cer-
16 tification programs.

17 (3) REPORT.—Not later than 1 year after the
18 date of enactment of this Act, the National Acad-
19 emies shall submit to the President and the Con-
20 gress a report on the results of the study required
21 by this subsection. The report shall include—

22 (A) findings regarding the state of cyberse-
23 curity accreditation, training, and certification
24 programs, including specific areas of deficiency
25 and demonstrable progress; and

1 (B) recommendations for the improvement
2 of cybersecurity accreditation, training, and cer-
3 tification programs.

4 (b) FEDERAL INFORMATION SYSTEMS.—Beginning
5 no later than 6 months after receiving the report under
6 subsection (a)(3), the President, in close and regular con-
7 sultation with sector coordinating councils and relevant
8 governmental agencies, regulatory entities, industry sec-
9 tors, and nongovernmental organizations, shall—

10 (1) develop and annually review and update—

11 (A) guidance for the identification and cat-
12 egorization of positions for personnel con-
13 ducting cybersecurity functions within the Fed-
14 eral government; and

15 (B) requirements for certification of per-
16 sonnel for categories identified under subpara-
17 graph (A); and

18 (2) annually evaluate compliance with the re-
19 quirements in paragraph (1)(B).

20 (c) UNITED STATES CRITICAL INFRASTRUCTURE IN-
21 FORMATION SYSTEMS.—

22 (1) IDENTIFICATION, CATEGORIZATION, AND
23 CERTIFICATION OF POSITIONS.—Not later than 6
24 months after receiving the report under section
25 (a)(3), the President, in close and regular consulta-

1 tion with sector coordinating councils and relevant
2 governmental agencies, regulatory entities, and non-
3 governmental organizations, shall require owners
4 and operators of United States critical infrastruc-
5 ture information systems to develop and annually re-
6 view and update—

7 (A) guidance for the identification and cat-
8 egorization of positions for personnel con-
9 ducting cybersecurity functions within their re-
10 spective information systems; and

11 (B) requirements for certification of per-
12 sonnel for categories identified under subpara-
13 graph (A).

14 (2) ACCREDITATION, TRAINING, AND CERTIFI-
15 CATION PROGRAMS.—Not later than 6 months after
16 receiving the certification requirements submitted
17 under paragraph (1)(B), the President, in consulta-
18 tion with sector coordinating councils, relevant gov-
19 ernmental agencies, regulatory entities, and non-
20 governmental organizations, shall convene sector
21 specific working groups to establish auditable pri-
22 vate-sector developed accreditation, training, and
23 certification programs for critical infrastructure in-
24 formation system personnel working in cybersecu-
25 rity.

1 (3) POSITIVE RECOGNITION.—Beginning no
2 later than 1 year after the President first convenes
3 sector specific working groups under paragraph (2),
4 the President shall—

5 (A) recognize and promote auditable pri-
6 vate-sector developed accreditation, training,
7 and certification programs established in para-
8 graph (b); and

9 (B) on an ongoing basis, but not less fre-
10 quently than annually, review and reconsider
11 recognitions under subparagraph (A) in order
12 to account for advances in accreditation, train-
13 ing, and certification programs for personnel
14 working in cybersecurity.

15 (4) UNITED STATES CRITICAL INFRASTRUC-
16 TURE INFORMATION SYSTEMS COMPLIANCE.—

17 (A) IN GENERAL.—Beginning no later
18 than 1 year after the President first recognizes
19 a program under paragraph (3)(A), and on a
20 semi-annual basis thereafter, the President
21 shall require each owner or operator of a
22 United States critical infrastructure informa-
23 tion system to report the results of independent
24 audits that evaluate compliance with the accred-

1 itation, training, and certification programs rec-
2 ognized under paragraph (3).

3 (B) POSITIVE RECOGNITION.—The Presi-
4 dent, in consultation with sector coordinating
5 councils, relevant governmental agencies, and
6 regulatory entities, and with the consent of in-
7 dividual companies, may publicly recognize
8 those owners and operators of United States
9 critical infrastructure information systems
10 whose independent audits demonstrate compli-
11 ance with the accreditation, training, and cer-
12 tification programs recognized under paragraph
13 (3).

14 (C) COLLABORATIVE REMEDIATION.—The
15 President shall require owners or operators of
16 United States critical infrastructure informa-
17 tion systems that fail to demonstrate substan-
18 tial compliance with the accreditation, training,
19 and certification programs recognized under
20 paragraph (3) through 2 consecutive inde-
21 pendent audits, in consultation with sector co-
22 ordinating councils, relevant governmental
23 agencies, and regulatory entities, to collabo-
24 ratively develop and implement a remediation
25 plan.

1 (d) REFERENCE LIST FOR CONSUMERS.—The Presi-
2 dent, in close and regular consultation with sector coordi-
3 nating councils and relevant governmental agencies, regu-
4 latory entities, and nongovernmental organizations, shall
5 annually—

6 (1) evaluate the cybersecurity accreditation,
7 training, and certification programs identified in
8 subsection (a);

9 (2) identify those cybersecurity accreditation,
10 training, and certification programs whose rigor and
11 effectiveness are beneficial to cybersecurity; and

12 (3) publish a noncompulsory reference list of
13 those programs identified under paragraph (2).

14 **SEC. 102. FEDERAL CYBER SCHOLARSHIP-FOR-SERVICE**
15 **PROGRAM.**

16 (a) IN GENERAL.—The Director of the National
17 Science Foundation shall establish a Federal Cyber Schol-
18 arship-for-Service program to recruit and train the next
19 generation of information technology professionals and se-
20 curity managers for Federal, State, local, and tribal gov-
21 ernments.

22 (b) PROGRAM DESCRIPTION AND COMPONENTS.—
23 The program shall—

24 (1) provide scholarships that provide full tui-
25 tion, fees, and a stipend, for up to 1,000 students

1 per year in their pursuit of undergraduate or grad-
2 uate degrees in the cybersecurity field;

3 (2) require scholarship recipients, as a condition
4 of receiving a scholarship under the program, to
5 agree to serve in a Federal, State, local, or tribal in-
6 formation technology workforce for a period equal to
7 the length of the scholarship following graduation if
8 offered employment in that field by a Federal, State,
9 local, or tribal agency;

10 (3) provide a procedure by which the Founda-
11 tion or a Federal agency may, consistent with regu-
12 lations of the Office of Personnel Management, re-
13 quest and fund security clearances for scholarship
14 recipients;

15 (4) provide opportunities for students to receive
16 temporary appointments for meaningful employment
17 in the Federal information technology workforce
18 during school vacation periods and for internships;

19 (5) provide a procedure for identifying prom-
20 ising K–12 students for participation in summer
21 work and internship programs that would lead to
22 certification of Federal information technology work-
23 force standards and possible future employment; and

1 (6) examine and develop, if appropriate, pro-
2 grams to promote computer security awareness in
3 secondary and high school classrooms.

4 (c) **HIRING AUTHORITY.**—For purposes of any law
5 or regulation governing the appointment of individuals in
6 the Federal civil service, upon the successful completion
7 of their studies, students receiving a scholarship under the
8 program shall be hired under the authority provided for
9 in section 213.3102(r) of title 5, Code of Federal Regula-
10 tions, and be exempt from competitive service. Upon ful-
11 fillment of the service term, such individuals may be con-
12 verted to a competitive service position without competi-
13 tion if the individual meets the requirements for that posi-
14 tion.

15 (d) **ELIGIBILITY.**—To be eligible to receive a scholar-
16 ship under this section, an individual shall—

17 (1) be a citizen of the United States; and

18 (2) demonstrate a commitment to a career in
19 improving the Nation’s cyber defenses.

20 (e) **EVALUATION AND REPORT.**—The Director shall
21 evaluate and report periodically to the Congress on the
22 success of recruiting individuals for the scholarships and
23 on hiring and retaining those individuals in the public sec-
24 tor workforce.

1 (f) AUTHORIZATION OF APPROPRIATIONS.—There
2 are authorized to be appropriated to the National Science
3 Foundation to carry out this section—

4 (1) \$50,000,000 for fiscal year 2010;

5 (2) \$55,000,000 for fiscal year 2011;

6 (3) \$60,000,000 for fiscal year 2012;

7 (4) \$65,000,000 for fiscal year 2013; and

8 (5) \$70,000,000 for fiscal year 2014.

9 **SEC. 103. CYBERSECURITY COMPETITION AND CHALLENGE.**

10 (a) IN GENERAL.—The Director of the National In-
11 stitute of Standards and Technology, directly or through
12 appropriate Federal entities, shall establish cybersecurity
13 competitions and challenges with cash prizes, and promul-
14 gate rules for participation in such competitions and chal-
15 lenges, in order to—

16 (1) attract, identify, evaluate, and recruit tal-
17 ented individuals for the Federal information tech-
18 nology workforce; and

19 (2) stimulate innovation in basic and applied
20 cybersecurity research, technology development, and
21 prototype demonstration that has the potential for
22 application to the information technology activities
23 of the Federal Government.

1 (b) TYPES OF COMPETITIONS AND CHALLENGES.—

2 The Director shall establish different competitions and
3 challenges targeting the following groups:

4 (1) Middle school students.

5 (2) High school students.

6 (3) Undergraduate students.

7 (4) Graduate students.

8 (5) Academic and research institutions.

9 (c) TOPICS.—In selecting topics for prize competi-
10 tions, the Director shall consult widely both within and
11 outside the Federal Government, and may empanel advi-
12 sory committees.

13 (d) ADVERTISING.—The Director shall widely adver-
14 tise prize competitions, in coordination with the awareness
15 campaign under section 301, to encourage participation.

16 (e) REQUIREMENTS AND REGISTRATION.—For each
17 prize competition, the Director shall publish a notice in
18 the Federal Register announcing the subject of the com-
19 petition, the rules for being eligible to participate in the
20 competition, the amount of the prize, and the basis on
21 which a winner will be selected.

22 (f) ELIGIBILITY.—To be eligible to win a prize under
23 this section, an individual or entity—

1 (1) shall have registered to participate in the
2 competition pursuant to any rules promulgated by
3 the Director under subsection (a);

4 (2) shall have complied with all the require-
5 ments under this section;

6 (3) in the case of a public or private entity,
7 shall be incorporated in and maintain a primary
8 place of business in the United States, and in the
9 case of an individual, whether participating singly or
10 in a group, shall be a citizen or permanent resident
11 of the United States; and

12 (4) shall not be a Federal entity or Federal em-
13 ployee acting within the scope of his or her employ-
14 ment.

15 (g) JUDGES.—For each competition, the Director, ei-
16 ther directly or through an agreement under subsection
17 (h), shall assemble a panel of qualified judges to select
18 the winner or winners of the prize competition. Judges for
19 each competition shall include individuals from the private
20 sector. A judge may not—

21 (1) have personal or financial interests in, or be
22 an employee, officer, director, or agent of any entity
23 that is a registered participant in a competition; or

24 (2) have a familial or financial relationship with
25 an individual who is a registered participant.

1 (h) ADMINISTERING THE COMPETITION.—The Direc-
2 tor may enter into an agreement with a private, nonprofit
3 entity to administer the prize competition, subject to the
4 provisions of this section.

5 (i) FUNDING.—

6 (1) PRIZES.—Prizes under this section may
7 consist of Federal appropriated funds and funds
8 provided by the private sector for such cash prizes.
9 The Director may accept funds from other Federal
10 agencies for such cash prizes. The Director may not
11 give special consideration to any private sector entity
12 in return for a donation.

13 (2) USE OF UNEXPENDED FUNDS.—Notwith-
14 standing any other provision of law, funds appro-
15 priated for prize awards under this section shall re-
16 main available until expended, and may be trans-
17 ferred, reprogrammed, or expended for other pur-
18 poses only after the expiration of 10 fiscal years
19 after the fiscal year for which the funds were origi-
20 nally appropriated. No provision in this section per-
21 mits obligation or payment of funds in violation of
22 the Anti-Deficiency Act (31 U.S.C. 1341).

23 (3) FUNDING REQUIRED BEFORE PRIZE AN-
24 NOUNCED.—No prize may be announced until all the
25 funds needed to pay out the announced amount of

1 the prize have been appropriated or committed in
2 writing by a private source. The Director may in-
3 crease the amount of a prize after an initial an-
4 nouncement is made under subsection (d) if—

5 (A) notice of the increase is provided in
6 the same manner as the initial notice of the
7 prize; and

8 (B) the funds needed to pay out the an-
9 nounced amount of the increase have been ap-
10 propriated or committed in writing by a private
11 source.

12 (4) NOTICE REQUIRED FOR LARGE AWARDS.—
13 No prize competition under this section may offer a
14 prize in an amount greater than \$5,000,000 unless
15 30 days have elapsed after written notice has been
16 transmitted to the Senate Committee on Commerce,
17 Science, and Transportation and the House of Rep-
18 resentatives Committee on Science and Technology.

19 (5) DIRECTOR'S APPROVAL REQUIRED FOR CER-
20 TAIN AWARDS.—No prize competition under this sec-
21 tion may result in the award of more than
22 \$1,000,000 in cash prizes without the approval of
23 the Director.

24 (j) USE OF FEDERAL INSIGNIA.—A registered partic-
25 ipant in a competition under this section may use any

1 Federal agency's name, initials, or insignia only after prior
2 review and written approval by the Director.

3 (k) COMPLIANCE WITH EXISTING LAW.—The Fed-
4 eral Government shall not, by virtue of offering or pro-
5 viding a prize under this section, be responsible for compli-
6 ance by registered participants in a prize competition with
7 Federal law, including licensing, export control, and non-
8 proliferation laws and related regulations.

9 (l) AUTHORIZATION OF APPROPRIATIONS.—There
10 are authorized to be appropriated to the National Institute
11 of Standards and Technology to carry out this section
12 \$15,000,000 for each of fiscal years 2010 through 2014.

13 **SEC. 104. CYBERSECURITY WORKFORCE PLAN.**

14 (a) DEVELOPMENT OF PLAN.—Not later than 180
15 days after the date of enactment of this Act and in every
16 subsequent year, the head of each Federal agency, based
17 on guidance from the President, the Office of Personnel
18 Management, the Chief Human Capital Officers Council,
19 and the Chief Information Officers Council, shall develop
20 a strategic cybersecurity workforce plan as part of the
21 agency performance plan required under section 1115 of
22 title 31, United States Code. The plan shall include—

23 (1) cybersecurity hiring projections, including
24 occupation and grade level, over a 2-year period;

1 (2) long-term and short-term strategic planning
2 to address critical skills deficiencies, including anal-
3 ysis of the numbers of and reasons for cybersecurity
4 employee attrition;

5 (3) recruitment strategies, including the use of
6 student internships, to attract highly qualified can-
7 didates from diverse backgrounds;

8 (4) an assessment of the sources and avail-
9 ability of talent with needed expertise;

10 (5) streamlining the hiring process;

11 (6) a specific analysis of the capacity of the
12 agency workforce to manage contractors who are
13 performing cybersecurity work on behalf of the Fed-
14 eral government;

15 (7) an analysis of the barriers to recruiting and
16 hiring cybersecurity talent, including compensation,
17 classification, hiring flexibilities, and the hiring proc-
18 ess, and recommendations to overcome those bar-
19 riers; and,

20 (8) a cybersecurity-related training and develop-
21 ment plan to enhance or keep current the knowledge
22 level of employees.

23 (b) HIRING PROJECTIONS.—Each Federal agency
24 shall make hiring projections made under its strategic cy-

1 bersecurity workforce plan available to the public, includ-
2 ing on its website.

3 (c) CLASSIFICATION.—Based on the agency analyses
4 and recommendations made under subsection (a)(7) of
5 this section and other relevant information, the President
6 or the President’s designee, in consultation with affected
7 Federal agencies and councils, shall coordinate the estab-
8 lishment of new job classifications for cybersecurity func-
9 tions in government and certification requirements for
10 each job category.

11 **SEC. 105. MEASURES OF CYBERSECURITY HIRING EFFEC-**
12 **TIVENESS.**

13 (a) IN GENERAL.—Each agency shall measure and
14 collect information on cybersecurity hiring effectiveness
15 with respect to the following:

16 (1) RECRUITING AND HIRING.—

17 (A) Ability to reach and recruit well-quali-
18 fied talent from diverse talent pools.

19 (B) Use and impact of special hiring au-
20 thorities and flexibilities to recruit most quali-
21 fied applicants, including the use of student in-
22 ternship and scholarship programs as a talent
23 pool for permanent hires.

24 (C) Use and impact of special hiring au-
25 thorities and flexibilities to recruit diverse can-

1 candidates, including veteran, minority, and dis-
2 abled candidates.

3 (D) The age, educational level, and source
4 of applicants.

5 (2) HIRING MANAGER ASSESSMENT.—

6 (A) Manager satisfaction with the quality
7 of the applicants interviewed and new hires.

8 (B) Manager satisfaction with the match
9 between the skills of newly hired individuals
10 and the needs of the agency.

11 (C) Manager satisfaction with the hiring
12 process and hiring outcomes.

13 (D) Mission-critical deficiencies closed by
14 new hires and the connection between mission-
15 critical deficiencies and annual agency perform-
16 ance.

17 (E) Manager satisfaction with the length
18 of time to fill a position.

19 (3) APPLICANT ASSESSMENT.—Applicant satis-
20 faction with the hiring process (including clarity of
21 job announcement, reasons for withdrawal of appli-
22 cation should that apply, user-friendliness of the ap-
23 plication process, communication regarding status of
24 application, and timeliness of job offer).

25 (4) NEW HIRE ASSESSMENT.—

1 (A) New hire satisfaction with the hiring
2 process (including clarity of job announcement,
3 user-friendliness of the application process,
4 communication regarding status of application,
5 and timeliness of hiring decision).

6 (B) Satisfaction with the onboarding expe-
7 rience (including timeliness of onboarding after
8 the hiring decision, welcoming and orientation
9 processes, and being provided with timely and
10 useful new employee information and assist-
11 ance).

12 (C) New hire attrition, including by per-
13 formance level and occupation.

14 (D) Investment in training and develop-
15 ment for employees during their first year of
16 employment.

17 (E) Exit interview results.

18 (F) Other indicators and measures as re-
19 quired by the Office of Personnel Management.

20 (b) REPORTS.—

21 (1) IN GENERAL.—Each agency shall submit
22 the information collected under subsection (a) to the
23 Office of Personnel Management annually in accord-
24 ance with the regulations prescribed under sub-
25 section (c).

1 (2) AVAILABILITY OF RECRUITING AND HIRING
2 INFORMATION.—Each year the Office of Personnel
3 Management shall provide the information received
4 under paragraph (1) in a consistent format to allow
5 for a comparison of hiring effectiveness and experi-
6 ence across demographic groups and agencies to—

7 (A) the Congress before that information is
8 made publicly available; and

9 (B) the public on the website of the Office
10 within 90 days after receipt of the information
11 under subsection (b)(1).

12 (c) REGULATIONS.—Not later than 180 days after
13 the date of enactment of this Act, the Director of the Of-
14 fice of Personnel Management shall prescribe regulations
15 establishing the methodology, timing, and reporting of the
16 data described in subsection (a).

17 **TITLE II—PLANS AND**
18 **AUTHORITY**

19 **SEC. 201. CYBERSECURITY RESPONSIBILITIES AND AU-**
20 **THORITIES.**

21 (a) IN GENERAL.—The President shall—

22 (1) within 180 days after the date of enactment
23 of this Act, after notice and opportunity for public
24 comment, develop and implement a comprehensive

1 national cybersecurity strategy, which shall in-
2 clude—

3 (A) a long-term vision of the Nation’s cy-
4 bersecurity future; and

5 (B) a plan that addresses all aspects of na-
6 tional security, as it relates to cybersecurity, in-
7 cluding the proactive engagement of, and col-
8 laboration between, the Federal government
9 and the private sector;

10 (2) in consultation with sector coordinating
11 councils and relevant governmental agencies, regu-
12 latory entities, and nongovernmental organizations,
13 review critical functions impacted by a cyber attack
14 and develop a strategy for the acquisition, storage,
15 and periodic replacement of assets to support those
16 functions;

17 (3) through the Office of Science and Tech-
18 nology Policy, direct an annual review of all Federal
19 cyber technology research and development invest-
20 ments; and

21 (4) through the Office of Personnel Manage-
22 ment, promulgate rules for Federal professional re-
23 sponsibilities regarding cybersecurity, and provide to
24 the Congress an annual report on Federal agency
25 compliance with those rules.

1 (b) COLLABORATIVE EMERGENCY RESPONSE AND
2 RESTORATION.—The President—

3 (1) shall, in collaboration with owners and oper-
4 ators of United States critical infrastructure infor-
5 mation systems, sector coordinating councils and rel-
6 evant governmental agencies, regulatory entities, and
7 nongovernmental organizations, develop and re-
8 hearse detailed response and restoration plans that
9 clarify specific roles, responsibilities, and authorities
10 of government and private sector actors during cy-
11 bersecurity emergencies;

12 (2) may, in the event of an immediate threat to
13 strategic national interests involving compromised
14 Federal Government or United States critical infra-
15 structure information systems—

16 (A) declare a cybersecurity emergency; and

17 (B) implement the collaborative emergency
18 response and restoration plans developed under
19 paragraph (1);

20 (3) shall, in the event of a declaration of a cy-
21 bersecurity emergency—

22 (A) within 48 hours submit to Congress a
23 report in writing setting forth—

24 (i) the circumstances necessitating the
25 emergency declaration; and

1 (ii) the estimated scope and duration
2 of the emergency; and

3 (B) so long as the cybersecurity emergency
4 declaration remains in effect, report to the Con-
5 gress periodically, but in no event less fre-
6 quently than once every 30 days, on the status
7 of emergency as well as on the scope and dura-
8 tion of the emergency.

9 (c) **RULE OF CONSTRUCTION.**—This section does not
10 authorize, and shall not be construed to authorize, an ex-
11 pansion of existing Presidential authorities.

12 **SEC. 202. BIENNIAL CYBER REVIEW.**

13 (a) **IN GENERAL.**—Beginning with 2010 and in every
14 second year thereafter, the President, or the President’s
15 designee, shall complete a review of the cyber posture of
16 the United States, including an unclassified summary of
17 roles, missions, accomplishments, plans, and programs.
18 The review shall include a comprehensive examination of
19 the cyber strategy, force structure, personnel, moderniza-
20 tion plans, infrastructure, budget plan, the Nation’s abil-
21 ity to recover from a cyber emergency, and other elements
22 of the cyber program and policies with a view toward de-
23 termining and expressing the cyber strategy of the United
24 States and establishing a revised cyber program for the
25 next 2 years.

1 (b) INVOLVEMENT OF CYBERSECURITY ADVISORY
2 PANEL.—

3 (1) The President, or the President's designee,
4 shall apprise the Cybersecurity Advisory Panel es-
5 tablished or designated under section 401, on an on-
6 going basis, of the work undertaken in the conduct
7 of the review.

8 (2) Not later than 1 year before the completion
9 date for the review, the Chairman of the Advisory
10 Panel shall submit to the President, or the Presi-
11 dent's designee, the Panel's assessment of work un-
12 dertaken in the conduct of the review as of that date
13 and shall include in the assessment the recommenda-
14 tions of the Panel for improvements to the review,
15 including recommendations for additional matters to
16 be covered in the review.

17 (c) ASSESSMENT OF REVIEW.—Upon completion of
18 the review, the Chairman of the Advisory Panel, on behalf
19 of the Panel, shall prepare and submit to the President,
20 or the President's designee, an assessment of the review
21 in time for the inclusion of the assessment in its entirety
22 in the report under subsection (d).

23 (d) REPORT.—Not later than September 30, 2010,
24 and every 2 years thereafter, the President, or the Presi-
25 dent's designee, shall submit to the relevant congressional

1 Committees a comprehensive report on the review. The re-
2 port shall include—

3 (1) the results of the review, including a com-
4 prehensive discussion of the cyber strategy of the
5 United States and the collaboration between the
6 public and private sectors best suited to implement
7 that strategy;

8 (2) the threats examined for purposes of the re-
9 view and the scenarios developed in the examination
10 of such threats;

11 (3) the assumptions used in the review, includ-
12 ing assumptions relating to the cooperation of other
13 countries and levels of acceptable risk; and

14 (4) the Advisory Panel's assessment.

15 **SEC. 203. CYBERSECURITY DASHBOARD PILOT PROJECT.**

16 The Secretary of Commerce shall—

17 (1) in consultation with the Office of Manage-
18 ment and Budget, develop a plan within 90 days
19 after the date of enactment of this Act to implement
20 a system to provide dynamic, comprehensive, real-
21 time cybersecurity status and vulnerability informa-
22 tion of all Federal Government information systems
23 managed by the Department of Commerce, including
24 an inventory of such, vulnerabilities of such systems,
25 and corrective action plans for those vulnerabilities;

1 (2) implement the plan within 1 year after the
2 date of enactment of this Act; and

3 (3) submit a report to the Congress on the im-
4 plementation of the plan.

5 **SEC. 204. NIST CYBERSECURITY GUIDANCE.**

6 (a) IN GENERAL.—Beginning no later than 1 year
7 after the date of enactment of this Act, the National Insti-
8 tute of Standards and Technology, in close and regular
9 consultation with sector coordinating councils and relevant
10 governmental agencies, regulatory entities, and non-
11 governmental organizations, shall—

12 (1) recognize and promote auditable, private
13 sector developed cybersecurity risk measurement
14 techniques, risk management measures and best
15 practices for all Federal Government and United
16 States critical infrastructure information systems;
17 and

18 (2) on an ongoing basis, but not less frequently
19 than semi-annually, review and reconsider its rec-
20 ognitions under paragraph (1) in order to account
21 for advances in cybersecurity risk measurement tech-
22 niques, risk management measures, and best prac-
23 tices.

24 (b) FEDERAL INFORMATION SYSTEMS.—Within 1
25 year after the date of enactment of this Act, the President

1 shall require all Federal departments and agencies to
2 measure their risk in each operating unit using the tech-
3 niques recognized under subsection (a) and to comply with
4 or exceed the cybersecurity risk management measures
5 and best practices recognized under subsection (a).

6 (c) UNITED STATES CRITICAL INFRASTRUCTURE IN-
7 FORMATION SYSTEMS.—

8 (1) IN GENERAL.—Beginning no later than 1
9 year after the President first recognizes the cyberse-
10 curity risk measurement techniques, risk manage-
11 ment measures and best practices under subsection
12 (a), and on a semi-annual basis thereafter, the
13 President shall require each owner or operator of a
14 United States critical infrastructure information sys-
15 tem to report the results of independent audits that
16 evaluate compliance with cybersecurity risk measure-
17 ment techniques, risk management measures, and
18 best practices recognized under subsection (a).

19 (2) POSITIVE RECOGNITION.—The President, in
20 consultation with sector coordinating councils, rel-
21 evant governmental agencies, and regulatory entities,
22 and with the consent of individual companies, may
23 publicly recognize those owners and operators of
24 United States critical infrastructure information sys-
25 tems whose independent audits demonstrate compli-

1 ance with cybersecurity risk measurement tech-
2 niques, risk management measures, and best prac-
3 tices recognized under subsection (a);

4 (3) COLLABORATIVE REMEDICATION.—The
5 President shall require owners or operators of
6 United States critical infrastructure information sys-
7 tems that fail to demonstrate substantial compliance
8 with cybersecurity risk measurement techniques, risk
9 management measures, and best practices recog-
10 nized under subsection (a) through 2 consecutive
11 independent audits, in consultation with sector co-
12 ordinating councils, relevant governmental agencies,
13 and regulatory entities, to collaboratively develop
14 and implement a remediation plan.

15 (d) INTERNATIONAL STANDARDS DEVELOPMENT.—
16 Within 1 year after the date of enactment of this Act, the
17 Director, in coordination with the Department of State
18 and other relevant governmental agencies and regulatory
19 entities, and in consultation with sector coordinating coun-
20 cils and relevant nongovernmental organizations, shall—

21 (1) direct United States cybersecurity efforts
22 before all international standards development bod-
23 ies related to cybersecurity;

24 (2) develop and implement a strategy to engage
25 international standards bodies with respect to the

1 development of technical standards related to cyber-
2 security; and

3 (3) submit the strategy to the Congress.

4 (e) CRITERIA FOR FEDERAL INFORMATION SYS-
5 TEMS.—Notwithstanding any other provision of law (in-
6 cluding any Executive Order), rule, regulation, or guide-
7 line pertaining to the distinction between national security
8 systems and civilian agency systems, the Institute shall
9 adopt a risk-based approach in the development of Federal
10 cybersecurity guidance for Federal information systems.

11 (f) FCC BROADBAND CYBERSECURITY REVIEW.—
12 The Federal Communications Commission shall report on
13 effective and efficient means to ensure the cybersecurity
14 of commercial broadband networks, including consider-
15 ation of consumer education and outreach programs.

16 (g) ELIMINATION OF DUPLICATIVE REQUIRE-
17 MENTS.—The President shall direct the National Institute
18 of Standards and Technology and other appropriate Fed-
19 eral agencies to identify private sector entities already re-
20 quired to report their compliance with cybersecurity laws,
21 directives, and regulations to streamline compliance with
22 duplicative reporting requirements.

23 **SEC. 205. LEGAL FRAMEWORK REVIEW AND REPORT.**

24 (a) IN GENERAL.—Within 1 year after the date of
25 enactment of this Act, the Comptroller General shall com-

1 plete a comprehensive review of the Federal statutory and
2 legal framework applicable to cybersecurity-related activi-
3 ties in the United States, including—

4 (1) the Privacy Protection Act of 1980 (42
5 U.S.C. 2000aa);

6 (2) the Electronic Communications Privacy Act
7 of 1986 (18 U.S.C. 2510 note);

8 (3) the Computer Security Act of 1987 (15
9 U.S.C. 271 et seq.; 40 U.S.C. 759);

10 (4) the Federal Information Security Manage-
11 ment Act of 2002 (44 U.S.C. 3531 et seq.);

12 (5) the E-Government Act of 2002 (44 U.S.C.
13 9501 et seq.);

14 (6) the Defense Production Act of 1950 (50
15 U.S.C. App. 2061 et seq.);

16 (7) section 552 of title 5, United States Code;

17 (8) the Federal Advisory Committee Act (5
18 U.S.C. App.);

19 (9) any other Federal law bearing upon cyber-
20 security-related activities; and

21 (10) any applicable Executive Order or agency
22 rule, regulation, or guideline.

23 (b) REPORT.—Upon completion of the review the
24 Comptroller General shall submit a report to the Congress
25 containing the Comptroller General’s, findings, conclu-

1 sions, and recommendations regarding changes needed to
2 advance cybersecurity and protect civil liberties in light of
3 new cybersecurity measures.

4 **SEC. 206. JOINT INTELLIGENCE THREAT AND VULNER-**
5 **ABILITY ASSESSMENT.**

6 The Director of National Intelligence, the Secretary
7 of Commerce, the Secretary of Homeland Security, the At-
8 torney General, the Secretary of Defense, and the Sec-
9 retary of State shall submit to the Congress a joint assess-
10 ment of, and report on, cybersecurity threats to and
11 vulnerabilities of Federal information systems and United
12 States critical infrastructure information systems.

13 **SEC. 207. INTERNATIONAL NORMS AND CYBERSECURITY**
14 **DETERRENCE MEASURES.**

15 The President shall—

16 (1) work with representatives of foreign govern-
17 ments, private sector entities, and nongovernmental
18 organizations—

19 (A) to develop norms, organizations, and
20 other cooperative activities for international en-
21 gagement to improve cybersecurity; and

22 (B) to encourage international cooperation
23 in improving cybersecurity on a global basis;
24 and

1 (2) provide an annual report to the Congress on
2 the progress of international initiatives undertaken
3 pursuant to subparagraph (A).

4 **SEC. 208. FEDERAL SECURE PRODUCTS AND SERVICES AC-**
5 **QUISITIONS.**

6 (a) ACQUISITION REQUIREMENTS.—The Adminis-
7 trator of the General Services Administration, in coopera-
8 tion with the Office of Management and Budget and other
9 appropriate Federal agencies, shall require that requests
10 for information and requests for proposals for Federal in-
11 formation systems products and services include cyberse-
12 curity risk measurement techniques, risk management
13 measures, and best practices recognized under section 204
14 and the cybersecurity professional certifications recognized
15 under section 101 of this Act.

16 (b) ACQUISITION COMPLIANCE.—After the publica-
17 tion of the requirements established by the Administrator
18 under subsection (a), a Federal agency may not issue a
19 request for proposals for Federal information systems
20 products and services that does not comply with the re-
21 quirements.

22 **SEC. 209. PRIVATE SECTOR ACCESS TO CLASSIFIED INFOR-**
23 **MATION.**

24 (a) EVALUATION.—The President shall conduct an
25 annual evaluation of the sufficiency of present access to

1 classified information among owners and operators of
2 United States critical infrastructure information systems
3 and submit a report to the Congress on the evaluation.

4 (b) SECURITY CLEARANCES.—To the extent deter-
5 mined by the President to be necessary to enhance public-
6 private information sharing and cybersecurity collabora-
7 tion, the President may—

8 (1) grant additional security clearances to own-
9 ers and operators of United States critical infra-
10 structure information systems; and

11 (2) delegate original classification authority to
12 appropriate Federal officials on matters related to
13 cybersecurity.

14 **SEC. 210. AUTHENTICATION AND CIVIL LIBERTIES REPORT.**

15 Within 1 year after the date of enactment of this Act,
16 the President, or the President’s designee, in consultation
17 with sector coordinating councils, relevant governmental
18 agencies, regulatory entities, and nongovernmental organi-
19 zations, shall review, and report to Congress, on the feasi-
20 bility of an identity management and authentication pro-
21 gram, with the appropriate civil liberties and privacy pro-
22 tections, for Federal government and United States crit-
23 ical infrastructure information systems.

1 **TITLE III—CYBERSECURITY**
2 **KNOWLEDGE DEVELOPMENT**

3 **SEC. 301. PROMOTING CYBERSECURITY AWARENESS AND**
4 **EDUCATION.**

5 (a) **IN GENERAL.**—The Secretary of Commerce, in
6 consultation with sector coordinating councils, relevant
7 governmental agencies, regulatory entities, and non-
8 governmental organizations, shall develop and implement
9 a national cybersecurity awareness campaign that—

10 (1) calls a new generation of Americans to serv-
11 ice in the field of cybersecurity;

12 (2) heightens public awareness of cybersecurity
13 issues and concerns;

14 (3) communicates the Federal Government’s
15 role in securing the Internet and protecting privacy
16 and civil liberties with respect to Internet-related ac-
17 tivities; and

18 (4) utilizes public and private sector means of
19 providing information to the public, including public
20 service announcements.

21 (b) **EDUCATIONAL BASELINES.**—The Secretary of
22 Education, in consultation with State school superintend-
23 ents, relevant Federal agencies, industry sectors, and non-
24 governmental organizations, shall establish baseline K-12

1 curriculum guidelines to address cyber safety, cybersecu-
2 rity, and cyber ethics.

3 **SEC. 302. FEDERAL CYBERSECURITY RESEARCH AND DE-**
4 **VELOPMENT.**

5 (a) **FUNDAMENTAL CYBERSECURITY RESEARCH.—**

6 The Director of the National Science Foundation, in co-
7 ordination with the Office of Science and Technology Pol-
8 icy, and drawing on the recommendations of the Office
9 of Science and Technology Policy’s annual review of all
10 Federal cyber technology research and development invest-
11 ments required by section 201(a)(3), shall develop a na-
12 tional cybersecurity research and development plan. The
13 plan shall encourage computer and information science
14 and engineering research to meet the following challenges
15 in cybersecurity:

16 (1) How to design and build complex software-
17 intensive systems that are secure and reliable when
18 first deployed.

19 (2) How to test and verify that software,
20 whether developed locally or obtained from a third
21 party, is free of significant known security flaws.

22 (3) How to test and verify that software ob-
23 tained from a third party correctly implements stat-
24 ed functionality, and only that functionality.

1 (4) How to guarantee the privacy of an individ-
2 ual's identity, information, or lawful transactions
3 when stored in distributed systems or transmitted
4 over networks.

5 (5) How to build new protocols to enable the
6 Internet to have robust security as one of its key ca-
7 pabilities.

8 (6) How to determine the origin of a message
9 transmitted over the Internet.

10 (7) How to support privacy in conjunction with
11 improved security.

12 (8) How to address the growing problem of in-
13 sider threat.

14 (b) SECURE CODING RESEARCH.—The Director shall
15 support research that evaluates selected secure coding
16 education and improvement programs. The Director shall
17 also support research on new methods of integrating se-
18 cure coding improvement into the core curriculum of com-
19 puter science programs and of other programs where grad-
20 uates have a substantial probability of developing software
21 after graduation.

22 (c) ASSESSMENT OF SECURE CODING EDUCATION IN
23 COLLEGES AND UNIVERSITIES.—Within 1 year after the
24 date of enactment of this Act, the Director shall submit
25 to the Senate Committee on Commerce, Science, and

1 Transportation and the House of Representatives Com-
2 mittee on Science and Technology a report on the state
3 of secure coding education in America's colleges and uni-
4 versities for each school that received National Science
5 Foundation funding in excess of \$1,000,000 during fiscal
6 year 2008. The report shall include—

7 (1) the number of students who earned under-
8 graduate degrees in computer science or in each
9 other program where graduates have a substantial
10 probability of being engaged in software design or
11 development after graduation;

12 (2) the percentage of those students who com-
13 pleted substantive secure coding education or im-
14 provement programs during their undergraduate ex-
15 perience; and

16 (3) descriptions of the length and content of the
17 education and improvement programs and an eval-
18 uation of the effectiveness of those programs based
19 on the students' scores on standard tests of secure
20 coding and design skills.

21 (d) CYBERSECURITY MODELING AND TESTBEDS.—
22 Within 1 year after the date of enactment of this Act, the
23 Director shall conduct a review of existing cybersecurity
24 testbeds. Based on the results of that review, the Director
25 shall establish a program to award grants to institutions

1 of higher education to establish cybersecurity testbeds ca-
2 pable of realistic modeling of real-time cyber attacks and
3 defenses. The purpose of this program is to support the
4 rapid development of new cybersecurity defenses, tech-
5 niques, and processes by improving understanding and as-
6 sassing the latest technologies in a real-world environment.
7 The testbeds shall be sufficiently large in order to model
8 the scale and complexity of real world networks and envi-
9 ronments.

10 (e) NSF COMPUTER AND NETWORK SECURITY RE-
11 SEARCH GRANT AREAS.—Section 4(a)(1) of the Cyberse-
12 curity Research and Development Act (15 U.S.C.
13 7403(a)(1)) is amended—

14 (1) by striking “and” after the semicolon in
15 subparagraph (H);

16 (2) by striking “property.” in subparagraph (I)
17 and inserting “property;”; and

18 (3) by adding at the end the following:

19 “(J) secure fundamental protocols that are at
20 the heart of inter-network communications and data
21 exchange;

22 “(K) secure software engineering and software
23 assurance, including—

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

1 “(ii) portable or reusable code that re-
2 mains secure when deployed in various environ-
3 ments;

4 “(iii) verification and validation tech-
5 nologies to ensure that requirements and speci-
6 fications have been implemented; and

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

9 “(L) holistic system security that—

10 “(i) addresses the building of secure sys-
11 tems from trusted and untrusted components;

12 “(ii) proactively reduces vulnerabilities;

13 “(iii) addresses insider threats; and

14 “(iv) supports privacy in conjunction with
15 improved security;

16 “(M) monitoring and detection; and

17 “(N) mitigation and rapid recovery methods.”.

18 (f) NSF COMPUTER AND NETWORK SECURITY
19 GRANTS.—Section 4(a)(3) of the Cybersecurity Research
20 and Development Act (15 U.S.C. 7403(a)(3)) is amend-
21 ed—

22 (1) by striking “and” in subparagraph (D);

23 (2) by striking “2007” in subparagraph (E)

24 and inserting “2007;”; and

25 (3) by adding at the end of the following:

1 “(F) \$150,000,000 for fiscal year 2010;
2 “(G) \$155,000,000 for fiscal year 2011;
3 “(H) \$160,000,000 for fiscal year 2012;
4 “(I) \$165,000,000 for fiscal year 2013;
5 and
6 “(J) \$170,000,000 for fiscal year 2014.”.

7 (g) COMPUTER AND NETWORK SECURITY CEN-
8 TERS.—Section 4(b)(7) of such Act (15 U.S.C.
9 7403(b)(7)) is amended—

- 10 (1) by striking “and” in subparagraph (D);
11 (2) by striking “2007” in subparagraph (E)
12 and inserting “2007;”; and
13 (3) by adding at the end of the following:

14 “(F) \$50,000,000 for fiscal year 2010;
15 “(G) \$52,000,000 for fiscal year 2011;
16 “(H) \$54,000,000 for fiscal year 2012;
17 “(I) \$56,000,000 for fiscal year 2013; and
18 “(J) \$58,000,000 for fiscal year 2014.”.

19 (h) COMPUTER AND NETWORK SECURITY CAPACITY
20 BUILDING GRANTS.—Section 5(a)(6) of such Act (15
21 U.S.C. 7404(a)(6)) is amended—

- 22 (1) by striking “and” in subparagraph (D);
23 (2) by striking “2007” in subparagraph (E)
24 and inserting “2007;”; and
25 (3) by adding at the end of the following:

1 “(F) \$40,000,000 for fiscal year 2010;
2 “(G) \$42,000,000 for fiscal year 2011;
3 “(H) \$44,000,000 for fiscal year 2012;
4 “(I) \$46,000,000 for fiscal year 2013; and
5 “(J) \$48,000,000 for fiscal year 2014.”.

6 (i) SCIENTIFIC AND ADVANCED TECHNOLOGY ACT
7 GRANTS.—Section 5(b)(2) of such Act (15 U.S.C.
8 7404(b)(2)) is amended—

9 (1) by striking “and” in subparagraph (D);
10 (2) by striking “2007” in subparagraph (E)
11 and inserting “2007;”; and
12 (3) by adding at the end of the following:

13 “(F) \$5,000,000 for fiscal year 2010;
14 “(G) \$6,000,000 for fiscal year 2011;
15 “(H) \$7,000,000 for fiscal year 2012;
16 “(I) \$8,000,000 for fiscal year 2013; and
17 “(J) \$9,000,000 for fiscal year 2014.”.

18 (j) GRADUATE TRAINEESHIPS IN COMPUTER AND
19 NETWORK SECURITY RESEARCH.—Section 5(c)(7) of
20 such Act (15 U.S.C. 7404(c)(7)) is amended—

21 (1) by striking “and” in subparagraph (D);
22 (2) by striking “2007” in subparagraph (E)
23 and inserting “2007;”; and
24 (3) by adding at the end of the following:

25 “(F) \$20,000,000 for fiscal year 2010;

1 “(G) \$22,000,000 for fiscal year 2011;
2 “(H) \$24,000,000 for fiscal year 2012;
3 “(I) \$26,000,000 for fiscal year 2013; and
4 “(J) \$28,000,000 for fiscal year 2014.”.

5 (k) CYBERSECURITY FACULTY DEVELOPMENT
6 TRAINEESHIP PROGRAM.—Section 5(e)(9) of such Act (15
7 U.S.C. 7404(e)(9)) is amended by striking “2007.” and
8 inserting “2007 and for each of fiscal years 2010 through
9 2014.”.

10 (l) NETWORKING AND INFORMATION TECHNOLOGY
11 RESEARCH AND DEVELOPMENT PROGRAM.—Section
12 204(a)(1) of the High-Performance Computing Act of
13 1991 (15 U.S.C. 5524(a)(1)) is amended—

14 (1) by striking “and” after the semicolon in
15 subparagraph (B); and

16 (2) by inserting after subparagraph (C) the fol-
17 lowing:

18 “(D) develop and propose standards and
19 guidelines, and develop measurement techniques
20 and test methods, for enhanced cybersecurity
21 for computer networks and common user inter-
22 faces to systems; and”.

1 **TITLE IV—PUBLIC-PRIVATE**
2 **COLLABORATION**

3 **SEC. 401. CYBERSECURITY ADVISORY PANEL.**

4 (a) **IN GENERAL.**—The President shall establish or
5 designate a Cybersecurity Advisory Panel.

6 (b) **QUALIFICATIONS.**—The President—

7 (1) shall appoint as members of the panel rep-
8 representatives of industry, academic, non-profit organi-
9 zations, interest groups and advocacy organizations,
10 and State and local governments who are qualified
11 to provide advice and information on cybersecurity
12 research, development, demonstrations, education,
13 personnel, technology transfer, commercial applica-
14 tion, or societal and civil liberty concerns; and

15 (2) may seek and give consideration to rec-
16 ommendations from the Congress, industry, the cy-
17 bersecurity community, the defense community,
18 State and local governments, and other appropriate
19 organizations.

20 (c) **DUTIES.**—The panel shall advise the President on
21 matters relating to the national cybersecurity program
22 and strategy and shall assess—

23 (1) trends and developments in cybersecurity
24 science research and development;

1 (2) progress made in implementing the strat-
2 egy;

3 (3) the need to revise the strategy;

4 (4) the readiness and capacity of the Federal
5 and national workforces to implement the national
6 cybersecurity program and strategy, and the steps
7 necessary to improve workforce readiness and capac-
8 ity;

9 (5) the balance among the components of the
10 national strategy, including funding for program
11 components;

12 (6) whether the strategy, priorities, and goals
13 are helping to maintain United States leadership
14 and defense in cybersecurity;

15 (7) the management, coordination, implementa-
16 tion, and activities of the strategy; and

17 (8) whether societal and civil liberty concerns
18 are adequately addressed.

19 (d) REPORTS.—The panel shall report, not less fre-
20 quently than once every 2 years, to the President on its
21 assessments under subsection (c) and its recommendations
22 for ways to improve the strategy.

23 (e) TRAVEL EXPENSES OF NON-FEDERAL MEM-
24 BERS.—Non-Federal members of the panel, while attend-
25 ing meetings of the panel or while otherwise serving at

1 the request of the head of the panel while away from their
2 homes or regular places of business, may be allowed travel
3 expenses, including per diem in lieu of subsistence, as au-
4 thorized by section 5703 of title 5, United States Code,
5 for individuals in the government serving without pay.
6 Nothing in this subsection shall be construed to prohibit
7 members of the panel who are officers or employees of the
8 United States from being allowed travel expenses, includ-
9 ing per diem in lieu of subsistence, in accordance with law.

10 (f) EXEMPTION FROM FACA SUNSET.—Section 14
11 of the Federal Advisory Committee Act (5 U.S.C. App.)
12 shall not apply to the Advisory Panel.

13 **SEC. 402. STATE AND REGIONAL CYBERSECURITY EN-**
14 **HANCEMENT PROGRAM.**

15 (a) CREATION AND SUPPORT OF CYBERSECURITY
16 CENTERS.—The Secretary of Commerce shall provide as-
17 sistance for the creation and support of Regional Cyberse-
18 curity Centers for the promotion of private sector devel-
19 oped cybersecurity risk measurement techniques, risk
20 management measures, and best practices. Each Center
21 shall be affiliated with a United States-based nonprofit in-
22 stitution or organization, or consortium thereof, that ap-
23 plies for and is awarded financial assistance under this
24 section.

1 (b) PURPOSE.—The purpose of the Centers is to en-
2 hance the cybersecurity of small and medium sized busi-
3 nesses in the United States through—

4 (1) the promotion of private sector developed
5 cybersecurity risk measurement techniques, risk
6 management measures, and best practices to small-
7 and medium-sized companies throughout the United
8 States;

9 (2) the voluntary participation of individuals
10 from industry, universities, State governments, other
11 Federal agencies, and, when appropriate, the Insti-
12 tute in cooperative technology transfer activities in
13 accordance with existing technology transfer rules
14 and intellectual property protection measures;

15 (3) efforts to make new cybersecurity tech-
16 nology, standards, and processes usable by United
17 States-based small- and medium-sized companies;

18 (4) the active dissemination of scientific, engi-
19 neering, technical, and management information
20 about cybersecurity to industrial firms, including
21 small- and medium-sized companies; and

22 (5) the utilization, when appropriate, of the ex-
23 pertise and capability that exists in Federal labora-
24 tories other than the Institute.

25 (c) ACTIVITIES.—The Centers shall—

1 (1) disseminate cybersecurity technologies,
2 standard, and processes based on research by the In-
3 stitute for the purpose of demonstrations and tech-
4 nology transfer;

5 (2) actively transfer and disseminate private
6 sector developed cybersecurity risk measurement
7 techniques, risk management measures, and best
8 practices to protect against and mitigate the risk of
9 cyber attacks to a wide range of companies and en-
10 terprises, particularly small- and medium-sized busi-
11 nesses; and

12 (3) make loans, on a selective, short-term basis,
13 of items of advanced protective cybersecurity meas-
14 ures to small businesses with less than 100 employ-
15 ees.

16 (c) DURATION AND AMOUNT OF SUPPORT; PROGRAM
17 DESCRIPTIONS; APPLICATIONS; MERIT REVIEW; EVALUA-
18 TIONS OF ASSISTANCE.—

19 (1) FINANCIAL SUPPORT.—The Secretary may
20 provide financial support, not to exceed 50 percent
21 of the Center’s annual operating and maintenance
22 costs, to any Center for a period not to exceed 6
23 years (except as provided in paragraph (5)(D)).

24 (2) PROGRAM DESCRIPTION.—Within 90 days
25 after the date of enactment of this Act, the Sec-

1 retary shall publish in the Federal Register a draft
2 description of a program for establishing Centers
3 and, after a 30-day comment period, shall publish a
4 final description of the program. The description
5 shall include—

6 (A) a description of the program;

7 (B) procedures to be followed by appli-
8 cants;

9 (C) criteria for determining qualified appli-
10 cants;

11 (D) criteria, including those described in
12 paragraph (4), for choosing recipients of finan-
13 cial assistance under this section from among
14 the qualified applicants; and

15 (E) maximum support levels expected to be
16 available to Centers under the program in the
17 fourth through sixth years of assistance under
18 this section.

19 (3) APPLICATIONS; SUPPORT COMMITMENT.—

20 Any nonprofit institution, or consortia of nonprofit
21 institutions, may submit to the Secretary an applica-
22 tion for financial support under this section, in ac-
23 cordance with the procedures established by the Sec-
24 retary. In order to receive assistance under this sec-
25 tion, an applicant shall provide adequate assurances

1 that it will contribute 50 percent or more of the pro-
2 posed Center's annual operating and maintenance
3 costs for the first 3 years and an increasing share
4 for each of the next 3 years.

5 (4) AWARD CRITERIA.—Awards shall be made
6 on a competitive, merit-based review. In making a
7 decision whether to approve an application and pro-
8 vide financial support under this section, the Sec-
9 retary shall consider, at a minimum—

10 (A) the merits of the application, particu-
11 larly those portions of the application regarding
12 technology transfer, training and education, and
13 adaptation of cybersecurity technologies to the
14 needs of particular industrial sectors;

15 (B) the quality of service to be provided;

16 (C) geographical diversity and extent of
17 service area; and

18 (D) the percentage of funding and amount
19 of in-kind commitment from other sources.

20 (5) THIRD YEAR EVALUATION.—

21 (A) IN GENERAL.—Each Center which re-
22 ceives financial assistance under this section
23 shall be evaluated during its third year of oper-
24 ation by an evaluation panel appointed by the
25 Secretary.

1 (B) EVALUATION PANEL.—Each evalua-
2 tion panel shall be composed of private experts
3 and Federal officials, none of whom shall be
4 connected with the involved Center. Each eval-
5 uation panel shall measure the Center’s per-
6 formance against the objectives specified in this
7 section.

8 (C) POSITIVE EVALUATION REQUIRED FOR
9 CONTINUED FUNDING.—The Secretary may not
10 provide funding for the fourth through the sixth
11 years of a Center’s operation unless the evalua-
12 tion by the evaluation panel is positive. If the
13 evaluation is positive, the Secretary may pro-
14 vide continued funding through the sixth year
15 at declining levels.

16 (D) FUNDING AFTER SIXTH YEAR.—After
17 the sixth year, the Secretary may provide addi-
18 tional financial support to a Center if it has re-
19 ceived a positive evaluation through an inde-
20 pendent review, under procedures established by
21 the Institute. An additional independent review
22 shall be required at least every 2 years after the
23 sixth year of operation. Funding received for a
24 fiscal year under this section after the sixth
25 year of operation may not exceed one third of

1 the annual operating and maintenance costs of
2 the Center.

3 (6) PATENT RIGHTS TO INVENTIONS.—The pro-
4 visions of chapter 18 of title 35, United States Code,
5 shall (to the extent not inconsistent with this sec-
6 tion) apply to the promotion of technology from re-
7 search by Centers under this section except for con-
8 tracts for such specific technology extension or
9 transfer services as may be specified by statute or
10 by the President, or the President’s designee.

11 (d) ACCEPTANCE OF FUNDS FROM OTHER FEDERAL
12 DEPARTMENTS AND AGENCIES.—In addition to such
13 sums as may be authorized and appropriated to the Sec-
14 retary and President, or the President’s designee, to oper-
15 ate the Centers program, the Secretary and the President,
16 or the President’s designee, also may accept funds from
17 other Federal departments and agencies for the purpose
18 of providing Federal funds to support Centers. Any Center
19 which is supported with funds which originally came from
20 other Federal departments and agencies shall be selected
21 and operated according to the provisions of this section.

22 **SEC. 403. PUBLIC-PRIVATE CLEARINGHOUSE.**

23 (a) SURVEY OF EXISTING MODELS OF INTERAGENCY
24 AND PUBLIC-PRIVATE INFORMATION SHARING.—Within
25 180 days after the date of enactment of this Act, the

1 President, or the President's designee, in consultation
2 with sector coordinating councils, relevant governmental
3 agencies and regulatory entities, and nongovernmental or-
4 ganizations, shall conduct a review and assessment of ex-
5 isting information sharing models used by Federal agen-
6 cies.

7 (b) DESIGNATION.—Pursuant to the results of the re-
8 view and assessment required by subsection (a), the Presi-
9 dent shall establish or designate a facility to serve as the
10 central cybersecurity threat and vulnerability information
11 clearinghouse for the Federal Government and United
12 States critical infrastructure information systems. The fa-
13 cility shall incorporate the best practices and concepts of
14 operations of existing information sharing models in order
15 to effectively promote the sharing of public-private cyber-
16 security threat and vulnerability information.

17 (c) INFORMATION SHARING RULES AND PROCE-
18 DURES.—The President, or the President's designee, in
19 consultation with sector coordinating councils, relevant
20 governmental agencies and regulatory entities, and non-
21 governmental organizations, shall promulgate rules and
22 procedures regarding cybersecurity threat and vulner-
23 ability information sharing, that—

24 (1) expand the Federal Government's sharing
25 of cybersecurity threat and vulnerability information

1 with owners and operators of United States critical
2 infrastructure information systems;

3 (2) ensure confidentiality and privacy protec-
4 tions for individuals and personally identifiable in-
5 formation;

6 (3) ensure confidentiality and privacy protec-
7 tions for private sector-owned intellectual property
8 and proprietary information;

9 (4) establish criteria under which owners or op-
10 erators of United States critical infrastructure infor-
11 mation systems share actionable cybersecurity threat
12 and vulnerability information and relevant data with
13 the Federal Government;

14 (5) protect against, or mitigate, civil and crimi-
15 nal liability implicated by information shared; and

16 (6) otherwise will enhance the sharing of cyber-
17 security threat and vulnerability information be-
18 tween owners or operators of United States critical
19 infrastructure information systems and the Federal
20 Government

21 **SEC. 404. CYBERSECURITY RISK MANAGEMENT REPORT.**

22 Within 1 year after the date of enactment of this Act,
23 the President, or the President's designee, shall report to

- 1 the Congress on the feasibility of creating a market for
- 2 cybersecurity risk management.

