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(Original Signature of Member)

108TH CONGRESS
2D SESSION

H. R. _____

To enhance homeland security science and technology, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

Mr. COX (for himself and [see attached list of cosponsors]) introduced the following bill; which was referred to the Committee on

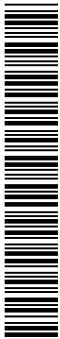
A BILL

To enhance homeland security science and technology, 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 “Department of Home-
5 land Security Science and Technology Enhancement Act
6 of 2004”.



1 **SEC. 2. HOMELAND SECURITY INSTITUTE EXTENSION.**

2 Section 312(g) of the Homeland Security Act of 2002
3 (6 U.S.C. 192(g)) is amended to read as follows:

4 “(g) **TERMINATION.**—The Homeland Security Insti-
5 tute shall terminate 10 years after its establishment.”.

6 **SEC. 3. SPECIAL ACCESS PROGRAMS.**

7 For the purposes of carrying out the responsibilities
8 of the Secretary under section 302 of the Homeland Secu-
9 rity Act of 2002 (6 U.S.C. 182), the Secretary is author-
10 ized to establish and maintain special access programs as-
11 sociated with research, development, test and evaluation,
12 and acquisition of technology or systems. Access to knowl-
13 edge of such programs shall be strictly limited, and such
14 programs shall be subject to restricted reporting require-
15 ments in the manner described in section 119 of title 10,
16 United States Code. Nothing in this section shall be con-
17 strued to alter or diminish the effect of section 306(a) of
18 the Homeland Security Act of 2002 (6 U.S.C. 186(a)).

19 **SEC. 4. HOMELAND SECURITY SCIENCE AND TECHNOLOGY**

20 **ADVISORY COMMITTEE.**

21 Section 311(c)(2) of the Homeland Security Act of
22 2002 (6 U.S.C. 191(c)(2)) is amended to read as follows:

23 “(2) **ORIGINAL APPOINTMENTS.**—The original
24 members of the Advisory Committee shall be ap-
25 pointed to three classes. One class of six shall have



1 a term of 1 year, one class of seven a term of 2
2 years, and one class of seven a term of 3 years.”.

3 **SEC. 5. ADDITIONAL BUDGET-RELATED SUBMISSIONS.**

4 (a) IN GENERAL.—Beginning in fiscal year 2006,
5 and annually thereafter, the Secretary of Homeland Secu-
6 rity shall submit to the Congress budget request informa-
7 tion for the Directorate of Science and Technology that
8 includes research portfolio-based budget submissions and
9 estimated funding summaries for each of—

10 (1) the Office of Research and Development;

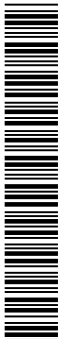
11 (2) the Office of Homeland Security Advanced
12 Research Projects Agency;

13 (3) the Office of Systems Engineering Develop-
14 ment;

15 (4) the Office of Plans, Programs, and Budget;
16 and

17 (5) such other major Directorate components as
18 the Secretary may establish.

19 (b) SUBMISSION.—The Secretary shall submit the in-
20 formation required under subsection (a) at the same time
21 as the submission of the President’s annual budget re-
22 quest to the Congress.



1 **SEC. 6. TECHNOLOGY-RELATED SOLICITATIONS, CON-**
2 **TRACTS, AND GRANTS.**

3 Not later than 60 days after the end of each fiscal
4 year, the Under Secretary for Science and Technology
5 shall transmit to the Congress a summary of the solicita-
6 tions and resulting contracts and grants awarded by the
7 Directorate of Science and Technology in the past fiscal
8 year, including—

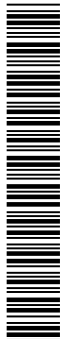
9 (1) a description of each solicitation offered, the
10 number of proposals received in response to each so-
11 licitation, and the number of proposals selected for
12 funding for each solicitation;

13 (2) a description of the process used for pro-
14 posal selection in each solicitation, including the role
15 of peer review;

16 (3) the status of contract funding with respect
17 to each selected proposal;

18 (4) a breakdown of the types of organizations
19 receiving funding, such as institutions of higher edu-
20 cation, small businesses, private industry, and non-
21 profit organizations; and

22 (5) the number of transactions entered into as
23 authorized under section 831(a)(1) of the Homeland
24 Security Act of 2002 (6 U.S.C. 391(a)(1)) and a de-
25 scription of the benefits of the use of this authority
26 by the Directorate of Science and Technology.



1 **SEC. 7. HOMELAND SECURITY SCIENCE INVESTMENT.**

2 (a) ASSESSMENT.—The Secretary of Homeland Secu-
3 rity shall conduct an assessment of—

4 (1) the development of national capabilities in
5 homeland security science and technology to address
6 basic scientific research needs, which shall—

7 (A) identify the most important scientific
8 and technological challenges and priorities for
9 homeland security;

10 (B) assess the extent to which the Depart-
11 ment of Homeland Security research and devel-
12 opment agenda is addressing the challenges and
13 priorities identified under subparagraph (A);

14 (C) assess whether the Department is ef-
15 fectively coordinating Federal research and de-
16 velopment efforts in homeland security, particu-
17 larly in the areas identified under subparagraph
18 (A);

19 (D) assess the extent to which the agenda
20 of the Department for basic research ensures
21 that the Nation undertakes appropriate science
22 investments to meet the long-term homeland se-
23 curity needs of the Nation, and recommend the
24 extent to which such investments should be un-
25 dertaken; and



1 (E) identify the criteria used for setting
2 the optimal level of investment in basic re-
3 search; and

4 (2) the methods used by the Directorate of
5 Science and Technology for the prioritization of
6 science and technology projects among, and within,
7 research portfolios, including the selection and exe-
8 cution of such projects, which shall—

9 (A) evaluate the process by which the Di-
10 rectorate obtains classified and unclassified
11 threat and vulnerability information, and how
12 that information is used to inform decisions on
13 resource and funding allocations;

14 (B) evaluate the usefulness of following a
15 cost/benefit analysis to allocate funding among
16 those portfolios and Directorate components;
17 and

18 (C) evaluate the current methodology for
19 selecting, funding, and awarding homeland se-
20 curity science programs at the national labora-
21 tories and academic institutions, and whether
22 optimal use of such laboratories and institutions
23 is being made.

24 (b) DEADLINE.—Not later than one year after the
25 date of enactment of this Act, the Secretary shall transmit



1 to the Congress the findings of the Department's assess-
2 ment under subsection (a), including recommendations for
3 improvements where necessary.

4 **SEC. 8. CYBERSECURITY TRAINING PROGRAMS AND EQUIP-**
5 **MENT.**

6 (a) IN GENERAL.—The Secretary of Homeland Secu-
7 rity, acting through the Assistant Secretary for
8 Cybersecurity, may establish, in conjunction with the Na-
9 tional Science Foundation, a program to award grants to
10 institutions of higher education (and consortia thereof)
11 for—

12 (1) the establishment or expansion of
13 cybersecurity professional development programs;

14 (2) the establishment or expansion of associate
15 degree programs in cybersecurity; and

16 (3) the purchase of equipment to provide train-
17 ing in cybersecurity for either professional develop-
18 ment programs or degree programs.

19 (b) ROLES.—

20 (1) DEPARTMENT OF HOMELAND SECURITY.—

21 The Secretary, acting through the Assistant Sec-
22 retary for Cybersecurity and in consultation with the
23 Director of the National Science Foundation, shall
24 establish the goals for the program established



1 under this section and the criteria for awarding
2 grants under the program.

3 (2) NATIONAL SCIENCE FOUNDATION.—The Di-
4 rector of the National Science Foundation shall op-
5 erate the program established under this section
6 consistent with the goals and criteria established
7 under paragraph (1), including soliciting applicants,
8 reviewing applications, and making and admin-
9 istering grant awards. The Director may consult
10 with the Assistant Secretary for Cybersecurity in se-
11 lecting awardees.

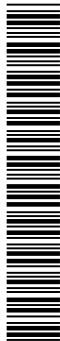
12 (3) FUNDING.—The Secretary shall transfer to
13 the National Science Foundation the funds nec-
14 essary to carry out this section.

15 (c) GRANT AWARDS.—

16 (1) PEER REVIEW.—All grant awards under
17 this section shall be made on a competitive, merit-
18 reviewed basis.

19 (2) FOCUS.—In making grant awards under
20 this section, the Director shall, to the extent prac-
21 ticable, ensure geographic diversity and the partici-
22 pation of women and underrepresented minorities.

23 (3) PREFERENCE.—In making grant awards
24 under this section, the Director shall give preference
25 to applications submitted by consortia of institutions



1 to encourage as many students and professionals as
2 possible to benefit from this program.

3 (d) AUTHORIZATION OF APPROPRIATIONS.—There is
4 authorized to be appropriated to the Secretary for car-
5 rying out this section \$3,700,000 for fiscal year 2005.

6 (e) DEFINITIONS.—In this section, the term “institu-
7 tion of higher education” has the meaning given that term
8 in section 101(a) of the Higher Education Act of 1965
9 (20 U.S.C. 1001(a)).

10 **SEC. 9. JOINT DEVELOPMENT OF COUNTERTERRORISM**
11 **AND HOMELAND SECURITY TECHNOLOGIES,**
12 **PRODUCTS, AND SERVICES.**

13 (a) AUTHORIZATION.—For the purpose of jointly de-
14 veloping counterterrorism and homeland security tech-
15 nologies, products, and services, the Secretary of Home-
16 land Security may enter into agreements or partnerships
17 with foreign governments that are allies of the United
18 States in the war on terrorism and have extensive experi-
19 ence in counterterrorism activities, including the Govern-
20 ment of Israel and the Government of the United King-
21 dom.

22 (b) FUNDING.—Of the amounts appropriated for pro-
23 grams administered by the Directorate of Science and
24 Technology of the Department of Homeland Security for



1 fiscal year 2005, there is authorized up to \$20,000,000
2 to carry out this section.

3 **SEC. 10. GEOSPATIAL INFORMATION.**

4 (a) COORDINATION OF GEOSPATIAL INFORMATION.—

5 With respect to geospatial technology, and interoperability
6 of such technology, the Secretary of Homeland Security
7 shall—

8 (1) identify the homeland security-related
9 geospatial information needs of the Department of
10 Homeland Security;

11 (2) evaluate the geospatial information gather-
12 ing activities of the Directorates of the Depart-
13 ment, and take appropriate actions to enhance infor-
14 mation sharing, integration, or consolidation with re-
15 spect to such activities within the Department;

16 (3) evaluate geospatial technologies, including
17 information, data, systems, services, hardware, and
18 software, that are utilized by or available to the De-
19 partment;

20 (4) evaluate whether geospatial information col-
21 lected under projects for which the Department has
22 provided grant funds is available to the Department;

23 (5) ensure that the Department is participating
24 in and coordinating with the Federal Geographic
25 Data Committee and other similar entities;



1 (6) identify the homeland security-related
2 geospatial information that is being collected by
3 other Federal agencies, and evaluate its usefulness
4 to the Department;

5 (7) coordinate geospatial information sharing
6 processes between the Department and other Fed-
7 eral, State, and local agencies; and

8 (8) to the extent practicable, utilize commercial
9 geospatial data and services to meet the geospatial
10 information needs of the Department or to supple-
11 ment the geospatial activities of the Department and
12 its directorates.

13 (b) GEOSPATIAL MANAGEMENT OFFICE.—The Sec-
14 retary of Homeland Security shall establish a Geospatial
15 Management Office. The head of such office shall be the
16 Geospatial Information Officer, who shall be responsible
17 for coordinating the geospatial information activities of
18 the Department of Homeland Security, with support and
19 assistance from other Directorates and offices within the
20 Department.

21 (c) DEFINED TERMS.—As used in this subsection:

22 (1) GEOSPATIAL INFORMATION.—The term
23 “geospatial information” means graphical or digital
24 data depicting natural or manmade physical fea-
25 tures, phenomena, or boundaries of the earth and



1 any information related thereto, including surveys,
2 maps, charts, remote sensing data, and images.

3 (2) GEOSPATIAL TECHNOLOGY.—The term
4 “geospatial technology” means any technology uti-
5 lized by analysts, specialists, surveyors,
6 photogrammetrists, hydrographers, geodesists, car-
7 tographers, architects, or engineers for the collec-
8 tion, storage, retrieval, or dissemination of
9 geospatial information, including global satellite sur-
10 veillance systems, global position systems (GPS), ge-
11 ographic information systems (GIS), mapping equip-
12 ment, geocoding technology, and remote sensing de-
13 vices.

14 **SEC. 11. INTEROPERABLE COMMUNICATIONS.**

15 (a) COORDINATION OF PUBLIC SAFETY INTEROPER-
16 ABLE COMMUNICATIONS PROGRAMS.—The Secretary of
17 Homeland Security shall establish a program to enhance
18 public safety interoperable communications at all levels of
19 government. Such program shall—

20 (1) establish a comprehensive national approach
21 to achieving public safety interoperable communica-
22 tions;

23 (2) coordinate with other Federal agencies in
24 carrying out paragraph (1);



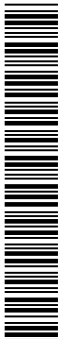
1 (3) develop, in consultation with other appro-
2 priate Federal agencies and State and local authori-
3 ties, an appropriate baseline of communications
4 interoperability for Federal, State, and local public
5 safety agencies;

6 (4) accelerate, in consultation with other Fed-
7 eral agencies, including the National Institute of
8 Standards and Technology, the private sector, and
9 nationally recognized standards organizations as ap-
10 propriate, the development of national voluntary
11 consensus standards for public safety interoperable
12 communications;

13 (5) encourage the development of flexible and
14 open architectures, with appropriate levels of secu-
15 rity, for short-term and long-term solutions to public
16 safety communications interoperability;

17 (6) assist other Federal agencies in identifying
18 priorities for research, development, and testing and
19 evaluation with regard to public safety interoperable
20 communications;

21 (7) identify priorities within the Department for
22 research, development, and testing and evaluation
23 with regard to public safety interoperable commu-
24 nications;



1 (8) establish coordinated guidance for Federal
2 grant programs for public safety interoperable com-
3 munications;

4 (9) provide technical assistance to State and
5 local public safety agencies regarding planning, ac-
6 quisition strategies, interoperability architectures,
7 training, and other functions necessary to achieve
8 public safety communications interoperability;

9 (10) develop and disseminate best practices to
10 improve public safety communications interoper-
11 ability; and

12 (11) develop appropriate performance measures
13 and milestones to systematically measure the Na-
14 tion's progress towards achieving public safety com-
15 munications interoperability, including the develop-
16 ment of national voluntary consensus standards.

17 (b) OFFICE OF PUBLIC SAFETY INTEROPERABLE
18 COMMUNICATIONS.—

19 (1) ESTABLISHMENT.—The Secretary may es-
20 tablish an Office of Public Safety Interoperable
21 Communications to carry out this section.

22 (2) APPLICABILITY OF FEDERAL ADVISORY
23 COMMITTEE ACT.—The Federal Advisory Committee
24 Act (5 U.S.C. App.) shall not apply to advisory
25 groups established and maintained by the Office.



1 (c) REPORT.—Not later than 120 days after the date
2 of the enactment of this Act, the Secretary shall report
3 to the Congress on Department of Homeland Security
4 plans for accelerating the development of national vol-
5 untary consensus standards for public safety interoperable
6 communications, a schedule of milestones for such devel-
7 opment, and achievements of such development.

8 **SEC. 12. TECHNOLOGY DEVELOPMENT AND TRANSFER.**

9 (a) TRANSFER PROGRAM.—Section 313 of the Home-
10 land Security Act of 2002 (6 U.S.C. 193) is amended—

11 (1) by adding at the end of subsection (b) the
12 following new paragraph:

13 “(6) The establishment of a homeland security
14 technology and equipment transfer program to facili-
15 tate the identification, modification, and commer-
16 cialization of technology and equipment for use by
17 Federal, State, and local governmental agencies,
18 emergency response providers, and the private sec-
19 tor.”;

20 (2) by redesignating subsection (c) as sub-
21 section (d); and

22 (3) by inserting after subsection (b) the fol-
23 lowing new subsection:

24 “(c) TECHNOLOGY TRANSFER PROGRAM.—In devel-
25 oping the program described in subsection (b)(6), the Sec-



1 retary, acting through the Under Secretary for Science
2 and Technology, shall—

3 “(1) in consultation with the Under Secretary
4 for Emergency Preparedness and Response and the
5 Director of the Office for Domestic Preparedness, on
6 an ongoing basis—

7 “(A) conduct surveys and reviews of avail-
8 able appropriate technologies that have been de-
9 veloped, tested, evaluated, or demonstrated by
10 the Department, other Federal agencies, or the
11 private sector, and that may be useful in assist-
12 ing Federal, State, and local governmental
13 agencies, emergency response providers, or the
14 private sector to prevent, prepare for, or re-
15 spond to acts of terrorism;

16 “(B) conduct or support tests, evaluations,
17 or demonstrations as appropriate of tech-
18 nologies identified under subparagraph (A), in-
19 cluding any necessary modifications to such
20 technologies for counterterrorism use; and

21 “(C) communicate to Federal, State, and
22 local governmental agencies, emergency re-
23 sponse providers, or the private sector the avail-
24 ability of such technologies for counterterrorism
25 use; and



1 “(2) in support of the activities described in
2 paragraph (1)—

3 “(A) consult with Federal, State, and local
4 emergency response providers;

5 “(B) consult with government and nation-
6 ally recognized standards organizations as ap-
7 propriate;

8 “(C) enter into agreements and coordinate
9 with other Federal agencies as the Secretary
10 determines appropriate, in order to maximize
11 the effectiveness of such technologies or to fa-
12 cilitate commercialization of such technologies;
13 and

14 “(D) consult with existing technology
15 transfer programs and Federal and State train-
16 ing centers that test, evaluate, and transfer
17 military and other technologies for use by emer-
18 gency response providers.”.

19 (b) REPORT.—Not later than one year after the date
20 of enactment of this Act, the Under Secretary for Science
21 and Technology shall transmit to the Congress a descrip-
22 tion of the progress the Department has made in imple-
23 menting the provisions of section 313 of the Homeland
24 Security Act of 2002, as amended by this Act, including
25 a description of the process used to review unsolicited pro-



1 posals received as described in subsection (b)(3) of such
2 section.

3 (c) SAVINGS CLAUSE.—Nothing in this section (in-
4 cluding the amendments made by this section) shall be
5 construed to alter or diminish the effect of the limitation
6 on the authority of the Secretary of Homeland Security
7 under section 302(4) of the Homeland Security Act of
8 2002 (6 U.S.C. 182(4)) with respect to human health-re-
9 lated research and development activities.

