

108TH CONGRESS
2D SESSION

H. R. 5069

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

IN THE HOUSE OF REPRESENTATIVES

SEPTEMBER 13, 2004

Mr. THORNBERRY (for himself and Ms. LOFGREN) introduced the following bill; which was referred to the Committee on Science, and in addition to the Select Committee on Homeland Security, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

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”.

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

8 Section 312(g) of the Homeland Security Act of 2002
9 (6 U.S.C. 192(g)) is amended to read as follows:

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

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

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

16 **SEC. 4. HOMELAND SECURITY SCIENCE AND TECHNOLOGY**
17 **ADVISORY COMMITTEE.**

18 Section 311(c)(2) of the Homeland Security Act of
19 2002 (6 U.S.C. 191(c)(2)) is amended to read as follows:

20 “(2) ORIGINAL APPOINTMENTS.—The original
21 members of the Advisory Committee shall be ap-
22 pointed to three classes. One class of six shall have
23 a term of 1 year, one class of seven a term of 2
24 years, and one class of seven a term of 3 years.”.

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

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

8 (1) the Office of Research and Development;

9 (2) the Office of Homeland Security Advanced
10 Research Projects Agency;

11 (3) the Office of Systems Engineering Develop-
12 ment;

13 (4) the Office of Plans, Programs, and Budget;
14 and

15 (5) such other major Directorate components as
16 the Secretary may establish.

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

21 **SEC. 6. TECHNOLOGY-RELATED SOLICITATIONS, CON-**
22 **TRACTS, AND GRANTS.**

23 Not later than 60 days after the end of each fiscal
24 year, the Under Secretary for Science and Technology
25 shall transmit to the Congress a summary of the solicita-
26 tions and resulting contracts and grants awarded by the

1 Directorate of Science and Technology in the past fiscal
2 year, including—

3 (1) a description of each solicitation offered, the
4 number of proposals received in response to each so-
5 licitation, and the number of proposals selected for
6 funding for each solicitation;

7 (2) a description of the process used for pro-
8 posal selection in each solicitation, including the role
9 of peer review;

10 (3) the status of contract funding with respect
11 to each selected proposal;

12 (4) a breakdown of the types of organizations
13 receiving funding, such as institutions of higher edu-
14 cation, small businesses, private industry, and non-
15 profit organizations; and

16 (5) the number of transactions entered into as
17 authorized under section 831(a)(1) of the Homeland
18 Security Act of 2002 (6 U.S.C. 391(a)(1)) and a de-
19 scription of the benefits of the use of this authority
20 by the Directorate of Science and Technology.

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

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

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

4 (A) identify the most important scientific
5 and technological challenges and priorities for
6 homeland security;

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

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

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

23 (E) identify the criteria used for setting
24 the optimal level of investment in basic re-
25 search; and

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

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

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

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

21 (b) DEADLINE.—Not later than one year after the
22 date of enactment of this Act, the Secretary shall transmit
23 to the Congress the findings of the Department’s assess-
24 ment under subsection (a), including recommendations for
25 improvements where necessary.

1 **SEC. 8. CYBERSECURITY TRAINING PROGRAMS AND EQUIP-**
2 **MENT.**

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

9 (1) the establishment or expansion of
10 cybersecurity professional development programs;

11 (2) the establishment or expansion of associate
12 degree programs in cybersecurity; and

13 (3) the purchase of equipment to provide train-
14 ing in cybersecurity for either professional develop-
15 ment programs or degree programs.

16 (b) ROLES.—

17 (1) DEPARTMENT OF HOMELAND SECURITY.—
18 The Secretary, acting through the Assistant Sec-
19 retary for Cybersecurity and in consultation with the
20 Director of the National Science Foundation, shall
21 establish the goals for the program established
22 under this section and the criteria for awarding
23 grants under the program.

24 (2) NATIONAL SCIENCE FOUNDATION.—The Di-
25 rector of the National Science Foundation shall op-
26 erate the program established under this section

1 consistent with the goals and criteria established
2 under paragraph (1), including soliciting applicants,
3 reviewing applications, and making and admin-
4 istering grant awards. The Director may consult
5 with the Assistant Secretary for Cybersecurity in se-
6 lecting awardees.

7 (3) FUNDING.—The Secretary shall transfer to
8 the National Science Foundation the funds nec-
9 essary to carry out this section.

10 (c) GRANT AWARDS.—

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

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

18 (3) PREFERENCE.—In making grant awards
19 under this section, the Director shall give preference
20 to applications submitted by consortia of institutions
21 to encourage as many students and professionals as
22 possible to benefit from this program.

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

1 (e) DEFINITIONS.—In this section, the term “institu-
2 tion of higher education” has the meaning given that term
3 in section 101(a) of the Higher Education Act of 1965
4 (20 U.S.C. 1001(a)).

5 **SEC. 9. JOINT DEVELOPMENT OF COUNTERTERRORISM**
6 **AND HOMELAND SECURITY TECHNOLOGIES,**
7 **PRODUCTS, AND SERVICES.**

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

17 (b) FUNDING.—Of the amounts appropriated for pro-
18 grams administered by the Directorate of Science and
19 Technology of the Department of Homeland Security for
20 fiscal year 2005, there is authorized up to \$20,000,000
21 to carry out this section.

22 **SEC. 10. GEOSPATIAL INFORMATION.**

23 (a) COORDINATION OF GEOSPATIAL INFORMATION.—
24 With respect to geospatial technology, and interoperability

1 of such technology, the Secretary of Homeland Security
2 shall—

3 (1) identify the homeland security-related
4 geospatial information needs of the Department of
5 Homeland Security;

6 (2) evaluate the geospatial information gath-
7 ering activities of the Directorates of the Depart-
8 ment, and take appropriate actions to enhance infor-
9 mation sharing, integration, or consolidation with re-
10 spect to such activities within the Department;

11 (3) evaluate geospatial technologies, including
12 information, data, systems, services, hardware, and
13 software, that are utilized by or available to the De-
14 partment;

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

18 (5) ensure that the Department is participating
19 in and coordinating with the Federal Geographic
20 Data Committee and other similar entities;

21 (6) identify the homeland security-related
22 geospatial information that is being collected by
23 other Federal agencies, and evaluate its usefulness
24 to the Department;

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

4 (8) to the extent practicable, utilize commercial
5 geospatial data and services to meet the geospatial
6 information needs of the Department or to supple-
7 ment the geospatial activities of the Department and
8 its directorates.

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

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

18 (1) GEOSPATIAL INFORMATION.—The term
19 “geospatial information” means graphical or digital
20 data depicting natural or manmade physical fea-
21 tures, phenomena, or boundaries of the earth and
22 any information related thereto, including surveys,
23 maps, charts, remote sensing data, and images.

24 (2) GEOSPATIAL TECHNOLOGY.—The term
25 “geospatial technology” means any technology uti-

1 lized by analysts, specialists, surveyors,
2 photogrammetrists, hydrographers, geodesists, car-
3 tographers, architects, or engineers for the collec-
4 tion, storage, retrieval, or dissemination of
5 geospatial information, including global satellite sur-
6 veillance systems, global position systems (GPS), ge-
7 ographic information systems (GIS), mapping equip-
8 ment, geocoding technology, and remote sensing de-
9 vices.

10 **SEC. 11. INTEROPERABLE COMMUNICATIONS.**

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

16 (1) establish a comprehensive national approach
17 to achieving public safety interoperable communica-
18 tions;

19 (2) coordinate with other Federal agencies in
20 carrying out paragraph (1);

21 (3) develop, in consultation with other appro-
22 priate Federal agencies and State and local authori-
23 ties, an appropriate baseline of communications
24 interoperability for Federal, State, and local public
25 safety agencies;

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

8 (5) encourage the development of flexible and
9 open architectures, with appropriate levels of secu-
10 rity, for short-term and long-term solutions to public
11 safety communications interoperability;

12 (6) assist other Federal agencies in identifying
13 priorities for research, development, and testing and
14 evaluation with regard to public safety interoperable
15 communications;

16 (7) identify priorities within the Department for
17 research, development, and testing and evaluation
18 with regard to public safety interoperable commu-
19 nications;

20 (8) establish coordinated guidance for Federal
21 grant programs for public safety interoperable com-
22 munications;

23 (9) provide technical assistance to State and
24 local public safety agencies regarding planning, ac-
25 quisition strategies, interoperability architectures,

1 training, and other functions necessary to achieve
2 public safety communications interoperability;

3 (10) develop and disseminate best practices to
4 improve public safety communications interoper-
5 ability; and

6 (11) develop appropriate performance measures
7 and milestones to systematically measure the Na-
8 tion's progress towards achieving public safety com-
9 munications interoperability, including the develop-
10 ment of national voluntary consensus standards.

11 (b) OFFICE OF PUBLIC SAFETY INTEROPERABLE
12 COMMUNICATIONS.—

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

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

20 (c) REPORT.—Not later than 120 days after the date
21 of the enactment of this Act, the Secretary shall report
22 to the Congress on Department of Homeland Security
23 plans for accelerating the development of national vol-
24 untary consensus standards for public safety interoperable

1 communications, a schedule of milestones for such devel-
2 opment, and achievements of such development.

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

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

6 (1) by adding at the end of subsection (b) the
7 following new paragraph:

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

15 (2) by redesignating subsection (c) as sub-
16 section (d); and

17 (3) by inserting after subsection (b) the fol-
18 lowing new subsection:

19 “(c) TECHNOLOGY TRANSFER PROGRAM.—In devel-
20 oping the program described in subsection (b)(6), the Sec-
21 retary, acting through the Under Secretary for Science
22 and Technology, shall—

23 “(1) in consultation with the Under Secretary
24 for Emergency Preparedness and Response and the

1 Director of the Office for Domestic Preparedness, on
2 an ongoing basis—

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

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

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

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

24 “(A) consult with Federal, State, and local
25 emergency response providers;

1 “(B) consult with government and nation-
2 ally recognized standards organizations as ap-
3 propriate;

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

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

15 (b) REPORT.—Not later than one year after the date
16 of enactment of this Act, the Under Secretary for Science
17 and Technology shall transmit to the Congress a descrip-
18 tion of the progress the Department has made in imple-
19 menting the provisions of section 313 of the Homeland
20 Security Act of 2002, as amended by this Act, including
21 a description of the process used to review unsolicited pro-
22 posals received as described in subsection (b)(3) of such
23 section.

24 (c) SAVINGS CLAUSE.—Nothing in this section (in-
25 cluding the amendments made by this section) shall be

1 construed to alter or diminish the effect of the limitation
2 on the authority of the Secretary of Homeland Security
3 under section 302(4) of the Homeland Security Act of
4 2002 (6 U.S.C. 182(4)) with respect to human health-re-
5 lated research and development activities.

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