both sides of the aisle, it is refreshing to see a moment when we can come together as Americans first, regardless of party affiliation, and do something that's right. Cybersecurity is in the best interest of the Nation. Defending the United States is a fundamental element under the Constitution. So, for me, personally, to see us come together like we have today is a very refreshing thing.

My father flew in a B–17 over Europe in 35 bombing missions. He was a bombardier. At that time, the state of warfare was very kinetic. They handed down a better country to this generation, but we're faced with a new threat. They're not bombs of his era, of his day, but, rather, digital bombs that can be dropped at any time and that have dropped on this government—on the Federal Government—and on our private sector. Bombs that have stolen trillions of dollars of intellectual property. Bombs that have committed espionage and stolen our military secrets. And bombs that could be conducted in a cyberwarfare attack.

I think the thing that keeps me up most at night is the idea of cyberwarfare, because we know what our offensive capability is. We know what we can do and conduct as a Nation against another nation. That technology in the wrong hands, in a country's like Iran, can cause great devastation against the interests of the United States, can bring down power grids, can bring down financial institutions. Every critical infrastructure tied to the Internet is vulnerable to this type of attack. So I believe that this legislation will protect this Nation from such attacks.

We all came up here to serve, not for ego, not for title but, at the end of the day, to make a difference, to make a fundamental difference in the lives of Americans. So I believe a moment like this is a great moment in which we can reflect back on later in our lives and think, you know, I made a difference. This bill protects Americans and future generations.

Let me thank all of those who have been involved in this critical legislation and, particularly, Mr. LIPINSKI for your patriotism to this country and for what you've done in getting this to move forward.

With that, Mr. Speaker, I yield back the balance of my time.

Ms. JACKSON LEE of Texas. Mr. Speaker, I rise today in support of H.R. 2096, the ''Cybersecurity Enhancement Act.'' The bill would reauthorize several National Science Foundation (NSF) programs that aim to enhance cybersecurity. In addition, it would require the National Institute of Standards and Technology (NIST) to continue a cybersecurity awareness program and to develop standards for managing personal identifying information stored on computer systems. Further, it would establish a task force which would recommend actions to improve our Nation's cybersecurity.

Cyberspace can easily be considered the nervous system—the control system of our country. Cyberspace is composed of hundreds of thousands of interconnected computers, servers, routers, switches, and fiber optic cables that allow our critical infrastructures to work. Thus, the healthy functioning of cyberspace is essential to our economy and our national security.

This issue is not new to me nor to any other Member of Congress. As a senior Member of the Judiciary Committee I have faced the problems which arise when there are breaches and how best to protect our system in both the Crime and Intellectual Property Subcommittees.

As a senior Member of the Homeland Security Committee, I am deeply concerned about vulnerabilities in our cyber security protection. For the last few years, threats originating in cyberspace have risen dramatically. The policy of the United States has been to protect against the debilitating disruption of the operation of information systems for critical infrastructures and, thereby, help to protect the people, economy, and national security of the United States.

I realize that we must act in advance to reduce all of our vulnerabilities to these types of threats, in order to prevent any damage to the cyber systems supporting our Nation's critical infrastructures.

According to the Government Accountability Office (GAO) the threat posed by cyber attacks is heightened by vulnerabilities in federal systems and systems supporting critical infrastructure. Specifically, significant weaknesses in information security controls continue to threaten the confidentiality, integrity, and availability of critical information and information systems supporting the operations, assets, and personnel of Federal Government agencies.

For example, 18 of 24 major Federal agencies have reported inadequate information security controls for financial reporting for fiscal year 2011, and inspectors general at 22 of these agencies identified information security as a major management challenge for their agency.

Moreover, GAO, agency, and inspector general assessments of information security controls during fiscal year 2011 revealed that most major agencies had weaknesses in most major categories of information system controls. These and similar weaknesses can be exploited by threat actors, with potentially severe effects.

In addition, the number of cybersecurity incidents reported by Federal agencies continues to rise, and recent incidents illustrate that these pose serious risk. Over the past 6 years, the number of incidents reported by Federal agencies to the Federal information security incident center has increased by nearly 680 percent.

These incidents include unauthorized access to systems; improper use of computing resources; and the installation of malicious software, among others.

Reported attacks and unintentional incidents involving Federal, private, and infrastructure systems demonstrate that the impact of a serious attack could be significant, including loss of personal or sensitive information, disruption or destruction of critical infrastructure, and damage to national and economic security.

Federal agencies are facing a set of emerging cybersecurity threats that are the result of increasingly sophisticated methods of attack and the blending of once distinct types of attack into more complex and damaging forms. Examples of these threats include spam (unsolicited commercial e-mail), phishing (fraudulent messages to obtain personal or sensitive data), and spyware (software that monitors user activity without user knowledge or consent).

Cyber attacks are analogous to guerilla warfare. Attribution of an attack to a specific source or entity is a significant challenge in cyberspace because the Internet was built on an open, anonymous platform. This architecture permits the original source of an attack to be easily masked. While an attack may be traced to a specific country, this does not necessarily mean that the government of that country is behind the attacks. Moreover, because of the near universal access to the Internet, disruptive activity can come from individual actors located in any corner of the globe.

In February 2009, the Director of National Intelligence testified that foreign nations and criminals have targeted government and private sector networks to gain a competitive advantage and potentially disrupt or destroy them, and that terrorist groups have expressed a desire to use cyberattacks as a means to target the United States.

The Federal Bureau of Investigation has identified multiple sources of threats to our Nation's critical information systems, including foreign nations engaged in espionage and information warfare, domestic criminals, hackers, virus writers, and disgruntled employees and contractors working within an organization.

For these reasons and more, I support this bipartisan legislation. We must continue to support the research and development of technology that will help to combat threats to our cybersecurity. It is also essential to train and develop the professionals who are able to continue with the implementation of countermeasures and are the future of R&D.

The SPEAKER pro tempore. The question is on the motion offered by the gentleman from Texas (Mr. MCCAUL) that the House suspend the rules and pass the bill, H.R. 2096, as amended.

The question was taken.

The SPEAKER pro tempore. In the opinion of the Chair, two-thirds being in the affirmative, the ayes have it.

Mr. MCCAUL. Mr. Speaker, on that I demand the yeas and nays.

The yeas and nays were ordered.

The SPEAKER pro tempore. Pursuant to clause 8 of rule XX, further proceedings on this question will be postponed.

□ 0950

ADVANCING AMERICA'S NETWORKING AND INFORMATION TECHNOLOGY RESEARCH AND DEVELOPMENT ACT OF 2012

Mr. HALL. Mr. Speaker, I move to suspend the rules and pass the bill (H.R. 3834) to amend the High-Performance Computing Act of 1991 to authorize activities for support of networking and information technology research, and for other purposes, as amended.

The Clerk read the title of the bill.

The text of the bill is as follows:

H.R. 3834

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ''Advancing America's Networking and Information Technology Research and Development Act of 2012''.

SEC. 2. PROGRAM PLANNING AND COORDINATION.

(a) PERIODIC REVIEWS.—Section 101 of the High-Performance Computing Act of 1991 (15 U.S.C. 5511) is amended by adding at the end the following new subsection:

''(d) PERIODIC REVIEWS.—The agencies identified in subsection (a)(3)(B) shall—

''(1) periodically assess the contents and funding levels of the Program Component Areas and restructure the Program when warranted, taking into consideration any relevant recommendations of the advisory committee established under subsection (b); and

''(2) ensure that the Program includes large-scale, long-term, interdisciplinary research and development activities, including activities described in section 104.''.

(b) DEVELOPMENT OF STRATEGIC PLAN.—Section 101 of such Act (15 U.S.C. 5511) is amended further by adding after subsection (d), as added by subsection (a) of this Act, the following new subsection:

''(e) STRATEGIC PLAN.—

''(1) IN GENERAL.—The agencies identified in subsection (a)(3)(B), working through the National Science and Technology Council and with the assistance of the National Coordination Office described under section 102, shall develop, within 12 months after the date of enactment of the Advancing America's Networking and Information Technology Research and Development Act of 2012, and update every 3 years thereafter, a 5-year strategic plan to guide the activities described under subsection (a)(1).

''(2) CONTENTS.—The strategic plan shall specify near-term and long-term objectives for the Program, the anticipated time frame for achieving the near-term objectives, the metrics to be used for assessing progress toward the objectives, and how the Program will—

''(A) foster the transfer of research and development results into new technologies and applications for the benefit of society, including through cooperation and collaborations with networking and information technology research, development, and technology transition initiatives supported by the States;

''(B) encourage and support mechanisms for interdisciplinary research and development in networking and information technology, including through collaborations across agencies, across Program Component Areas, with industry, with Federal laboratories (as defined in section 4 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3703)), and with international organizations;

''(C) address long-term challenges of national importance for which solutions require large-scale, long-term, interdisciplinary research and development;

''(D) place emphasis on innovative and high-risk projects having the potential for substantial societal returns on the research investment;

''(E) strengthen all levels of networking and information technology education and training programs to ensure an adequate, well-trained workforce; and

''(F) attract more women and underrepresented minorities to pursue postsecondary degrees in networking and information technology.

''(3) NATIONAL RESEARCH INFRASTRUCTURE.—The strategic plan developed in accordance with paragraph (1) shall be accompanied by milestones and roadmaps for establishing and maintaining the national research infrastructure required to support the Program, including the roadmap required by subsection (a)(2)(E).

''(4) RECOMMENDATIONS.—The entities involved in developing the strategic plan under paragraph (1) shall take into consideration the recommendations—

''(A) of the advisory committee established under subsection (b); and

''(B) of the stakeholders whose input was solicited by the National Coordination Office, as required under section 102(b)(3).

''(5) REPORT TO CONGRESS.—The Director of the National Coordination Office shall transmit the strategic plan required under paragraph (1) to the advisory committee, the Committee on Commerce, Science, and Transportation of the Senate, and the Committee on Science, Space, and Technology of the House of Representatives.''.

(c) ADDITIONAL RESPONSIBILITIES OF DIRECTOR.—Section 101(a)(2) of such Act (15 U.S.C. 5511(a)(2)) is amended—

(1) in subparagraph (A) by inserting ''education,'' before ''and other activities'';

(2) by redesignating subparagraphs (E) and (F) as subparagraphs (F) and (G), respectively; and

(3) by inserting after subparagraph (D) the following new subparagraph:

''(E) encourage and monitor the efforts of the agencies participating in the Program to allocate the level of resources and management attention necessary to ensure that the strategic plan under subsection (e) is developed and executed effectively and that the objectives of the Program are met;''.

(d) ADVISORY COMMITTEE.—Section 101(b)(1) of such Act (15 U.S.C. 5511(b)(1)) is amended—

(1) after the first sentence, by inserting the following: ''The co-chairs of the advisory committee shall meet the qualifications of committee membership and may be members of the President's Council of Advisors on Science and Technology.''; and

(2) in subparagraph (D), by striking ''high-performance'' and inserting ''high-end''.

(e) REPORT.—Section 101(a)(3) of such Act (15 U.S.C. 5511(a)(3)) is amended—

(1) in subparagraph (C)—

(A) by striking ''is submitted,'' and inserting ''is submitted, the levels for the previous fiscal year,''; and

(B) by striking ''each Program Component Area;'' and inserting ''each Program Component Area and research area supported in accordance with section 104;'';

(2) in subparagraph (D)—

(A) by striking ''each Program Component Area,'' and inserting ''each Program Component Area and research area supported in accordance with section 104,'';

(B) by striking ''is submitted,'' and inserting ''is submitted, the levels for the previous fiscal year,''; and

(C) by striking ''and'' after the semicolon;

(3) by redesignating subparagraph (E) as subparagraph (G); and

(4) by inserting after subparagraph (D) the following new subparagraphs:

''(E) include a description of how the objectives for each Program Component Area, and the objectives for activities that involve multiple Program Component Areas, relate to the objectives of the Program identified in the strategic plan required under subsection (e);

''(F) include—

''(i) a description of the funding required by the National Coordination Office to perform the functions specified under section 102(b) for the next fiscal year by category of activity;

''(ii) a description of the funding required by such Office to perform the functions specified under section 102(b) for the current fiscal year by category of activity; and

''(iii) the amount of funding provided for such Office for the current fiscal year by each agency participating in the Program; and''.

(f) DEFINITION.—Section 4 of such Act (15 U.S.C. 5503) is amended—

(1) by redesignating paragraphs (1) through (7) as paragraphs (2) through (8), respectively;

(2) by inserting before paragraph (2), as so redesignated, the following new paragraph:

''(1) 'cyber-physical systems' means physical or engineered systems whose networking and information technology functions and physical elements are deeply integrated and are actively connected to the physical world through sensors, actuators, or other means to perform monitoring and control functions;'';

(3) in paragraph (3), as so redesignated, by striking ''high-performance computing'' and inserting ''networking and information technology'';

(4) in paragraph (4), as so redesignated—

(A) by striking ''high-performance computing'' and inserting ''networking and information technology''; and

(B) by striking ''supercomputer'' and inserting ''high-end computing'';

(5) in paragraph (6), as so redesignated, by striking ''network referred to as'' and all that follows through the semicolon and inserting ''network, including advanced computer networks of Federal agencies and departments;''; and

(6) in paragraph (7), as so redesignated, by striking ''National High-Performance Computing Program'' and inserting ''networking and information technology research and development program''.

SEC. 3. LARGE-SCALE RESEARCH IN AREAS OF NATIONAL IMPORTANCE.

Title I of such Act (15 U.S.C. 5511) is amended by adding at the end the following new section:

''SEC. 104. LARGE-SCALE RESEARCH IN AREAS OF NATIONAL IMPORTANCE.

''(a) IN GENERAL.—The Program shall encourage agencies identified in section 101(a)(3)(B) to support large-scale, long-term, interdisciplinary research and development activities in networking and information technology directed toward application areas that have the potential for significant contributions to national economic competitiveness and for other significant societal benefits. Such activities, ranging from basic research to the demonstration of technical solutions, shall be designed to advance the development of research discoveries. The advisory committee established under section 101(b) shall make recommendations to the Program for candidate research and development areas for support under this section.

''(b) CHARACTERISTICS.—

''(1) IN GENERAL.—Research and development activities under this section shall—

''(A) include projects selected on the basis of applications for support through a competitive, merit-based process;

''(B) involve collaborations among researchers in institutions of higher education and industry, and may involve nonprofit research institutions and Federal laboratories, as appropriate;

''(C) when possible, leverage Federal investments through collaboration with related State initiatives; and

''(D) include a plan for fostering the transfer of research discoveries and the results of technology demonstration activities, including from institutions of higher education and Federal laboratories, to industry for commercial development.

''(2) COST-SHARING.—In selecting applications for support, the agencies shall give special consideration to projects that include cost sharing from non-Federal sources.

''(3) AGENCY COLLABORATION.—If 2 or more agencies identified in section 101(a)(3)(B), or other appropriate agencies, are working on large-scale research and development activities in the same area of national importance, then such agencies shall strive to collaborate through joint solicitation and selection of applications for support and subsequent funding of projects.

''(4) INTERDISCIPLINARY RESEARCH CENTERS.—Research and development activities under this section may be supported through interdisciplinary research centers that are organized to investigate basic research questions and carry out

technology demonstration activities in areas described in subsection (a). Research may be carried out through existing interdisciplinary centers, including those authorized under section 7024(b)(2) of the America COMPETES Act (Public Law 110–69; 42 U.S.C. 1862o–10).''.

SEC. 4. CYBER-PHYSICAL SYSTEMS.

(a) ADDITIONAL PROGRAM CHARACTERISTICS.—Section 101(a)(1) of such Act (15 U.S.C. 5511(a)(1)) is amended—

(1) in subparagraph (H), by striking ''and'' after the semicolon;

(2) in subparagraph (I), by striking the period at the end and inserting a semicolon; and

(3) by adding at the end the following new subparagraphs:

''(J) provide for increased understanding of the scientific principles of cyber-physical systems and improve the methods available for the design, development, and operation of cyber-physical systems that are characterized by high reliability, safety, and security; and

''(K) provide for research and development on human-computer interactions, visualization, and big data.''.

(b) TASK FORCE.—Title I of such Act (15 U.S.C. 5511) is amended further by adding after section 104, as added by section 3 of this Act, the following new section:

''SEC. 105. UNIVERSITY/INDUSTRY TASK FORCE.

''(a) ESTABLISHMENT.—Not later than 180 days after the date of enactment of the Advancing America's Networking and Information Technology Research and Development Act of 2012, the Director of the National Coordination Office shall convene a task force to explore mechanisms for carrying out collaborative research and development activities for cyber-physical systems, including the related technologies required to enable these systems, through a consortium or other appropriate entity with participants from institutions of higher education, Federal laboratories, and industry.

''(b) FUNCTIONS.—The task force shall—

''(1) develop options for a collaborative model and an organizational structure for such entity under which the joint research and development activities could be planned, managed, and conducted effectively, including mechanisms for the allocation of resources among the participants in such entity for support of such activities;

''(2) propose a process for developing a research and development agenda for such entity, including guidelines to ensure an appropriate scope of work focused on nationally significant challenges and requiring collaboration and to ensure the development of related scientific and technological milestones;

''(3) define the roles and responsibilities for the participants from institutions of higher education, Federal laboratories, and industry in such entity;

''(4) propose guidelines for assigning intellectual property rights and for the transfer of research results to the private sector; and

''(5) make recommendations for how such entity could be funded from Federal, State, and non-governmental sources.

''(c) COMPOSITION.—In establishing the task force under subsection (a), the Director of the National Coordination Office—

''(1) shall appoint an equal number of individuals with knowledge and expertise in cyber-physical systems from—

''(A) institutions of higher education, including minority-serving institutions and community colleges; and

''(B) industry; and

''(2) may appoint not more than 2 individuals from Federal laboratories.

''(d) REPORT.—Not later than 1 year after the date of enactment of the Advancing America's Networking and Information Technology Research and Development Act of 2012, the Director of the National Coordination Office shall transmit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives a report describing the findings and recommendations of the task force.

''(e) TERMINATION.—The task force shall terminate upon transmittal of the report required under subsection (d).

''(f) COMPENSATION.—Members of the task force shall serve without compensation.''.

SEC. 5. CLOUD COMPUTING SERVICES FOR RESEARCH.

Title I of such Act (15 U.S.C. 5511) is amended further by adding after section 105, as added by section 4(b) of this Act, the following new section:

''SEC. 106. CLOUD COMPUTING SERVICES FOR RESEARCH.

''(a) INTERAGENCY WORKING GROUP.—Not later than 180 days after the date of enactment of the Advancing America's Networking and Information Technology Research and Development Act of 2012, the Director of the National Coordination Office, working through the National Science and Technology Council, shall convene an interagency working group to examine—

''(1) the research and development needed—

''(A) to enhance the effectiveness and efficiency of cloud computing environments;

''(B) to increase the trustworthiness of cloud applications and infrastructure; and

''(C) to enhance the foundations of cloud architectures, programming models, and interoperability; and

''(2) the potential use of cloud computing for federally-funded science and engineering research, including issues around funding mechanisms and policies for the use of cloud computing services for such research.

''(b) CONSULTATION.—In carrying out the tasks in paragraphs (1) and (2) of subsection (a), the working group shall consult with academia, industry, Federal laboratories, and other relevant organizations and institutions, as appropriate.

''(c) REPORT.—Not later than 1 year after the date of enactment of the Advancing America's Networking and Information Technology Research and Development Act of 2012, the Director of the National Coordination Office shall transmit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report describing the findings and any recommendations of the working group.

''(d) TERMINATION.—The interagency working group shall terminate upon transmittal of the report required under subsection (c).''.

SEC. 6. NATIONAL COORDINATION OFFICE.

Section 102 of such Act (15 U.S.C. 5512) is amended to read as follows:

''SEC. 102. NATIONAL COORDINATION OFFICE.

''(a) OFFICE.—The Director shall continue a National Coordination Office with a Director and full-time staff.

''(b) FUNCTIONS.—The National Coordination Office shall—

''(1) provide technical and administrative support to—

''(A) the agencies participating in planning and implementing the Program, including such support as needed in the development of the strategic plan under section 101(e); and

''(B) the advisory committee established under section 101(b);

''(2) serve as the primary point of contact on Federal networking and information technology activities for government organizations, academia, industry, professional societies, State computing and networking technology programs, interested citizen groups, and others to exchange technical and programmatic information;

''(3) solicit input and recommendations from a wide range of stakeholders during the development of each strategic plan required under section 101(e) through the convening of at least 1 workshop with invitees from academia, industry, Federal laboratories, and other relevant organizations and institutions;

''(4) conduct public outreach, including the dissemination of findings and recommendations of the advisory committee, as appropriate; and

''(5) promote access to and early application of the technologies, innovations, and expertise derived from Program activities to agency missions and systems across the Federal Government and to United States industry.

''(c) SOURCE OF FUNDING.—

''(1) IN GENERAL.—The operation of the National Coordination Office shall be supported by funds from each agency participating in the Program.

''(2) SPECIFICATIONS.—The portion of the total budget of such Office that is provided by each agency for each fiscal year shall be in the same proportion as each such agency's share of the total budget for the Program for the previous fiscal year, as specified in the report required under section 101(a)(3).''.

SEC. 7. IMPROVING NETWORKING AND INFORMATION TECHNOLOGY EDUCATION.

Section 201(a) of such Act (15 U.S.C. 5521(a)) is amended—

(1) by redesignating paragraphs (2) through (4) as paragraphs (3) through (5), respectively; and

(2) by inserting after paragraph (1) the following new paragraph:

''(2) the National Science Foundation shall use its existing programs, in collaboration with other agencies, as appropriate, to improve the teaching and learning of networking and information technology at all levels of education and to increase participation in networking and information technology fields, including by women and underrepresented minorities;''.

SEC. 8. CONFORMING AND TECHNICAL AMENDMENTS.

(a) SECTION 3.—Section 3 of such Act (15 U.S.C. 5502) is amended—

(1) in the matter preceding paragraph (1), by striking ''high-performance computing'' and inserting ''networking and information technology'';

(2) in paragraph (1)—

(A) in the matter preceding subparagraph (A), by striking ''high-performance computing'' and inserting ''networking and information technology'';

(B) in subparagraphs (A), (F), and (G), by striking ''high-performance computing'' each place it appears and inserting ''networking and information technology''; and

(C) in subparagraph (H), by striking ''high-performance'' and inserting ''high-end''; and

(3) in paragraph (2)—

(A) by striking ''high-performance computing and'' and inserting ''networking and information technology and''; and

(B) by striking ''high-performance computing network'' and inserting ''networking and information technology''.

*(b) TITLE I.—The heading of title I of such Act (15 U.S.C. 5511) is amended by striking ''**HIGH-PERFORMANCE COMPUTING**'' and inserting ''**NETWORKING AND INFORMATION TECHNOLOGY**''.*

(c) SECTION 101.—Section 101 of such Act (15 U.S.C. 5511) is amended—

*(1) in the section heading, by striking ''**HIGH-PERFORMANCE COMPUTING**'' and inserting ''**NETWORKING AND INFORMATION TECHNOLOGY RESEARCH AND DEVELOPMENT**'';*

(2) in subsection (a)—

(A) in the subsection heading, by striking ''NATIONAL HIGH-PERFORMANCE COMPUTING'' and inserting ''NETWORKING AND INFORMATION TECHNOLOGY RESEARCH AND DEVELOPMENT'';

(B) in paragraph (1) of such subsection—

(i) in the matter preceding subparagraph (A), by striking ''National High-Performance Computing Program'' and inserting ''networking

and information technology research and development program'';

(ii) in subparagraph (A), by striking ''high-performance computing, including networking'' and inserting ''networking and information technology'';

(iii) in subparagraphs (B) and (G), by striking ''high-performance'' each place it appears and inserting ''high-end''; and

(iv) in subparagraph (C), by striking ''high-performance computing and networking'' and inserting ''high-end computing, distributed, and networking''; and

(C) in paragraph (2) of such subsection—

(i) in subparagraphs (A) and (C)—

(I) by striking ''high-performance computing'' each place it appears and inserting ''networking and information technology''; and

(II) by striking ''development, networking,'' each place it appears and inserting ''development,''; and

(ii) in subparagraphs (F) and (G), as redesignated by section 2(c)(1) of this Act, by striking ''high-performance'' each place it appears and inserting ''high-end'';

(3) in subsection (b)—

(A) in paragraph (1), in the matter preceding subparagraph (A), by striking ''high-performance computing'' both places it appears and inserting ''networking and information technology''; and

(B) in paragraph (2), in the second sentence, by striking ''2'' and inserting ''3''; and

(4) in subsection (c)(1)(A), by striking ''high-performance computing'' and inserting ''networking and information technology''.

(d) SECTION 201.—Section 201(a)(1) of such Act (15 U.S.C. 5521(a)(1)) is amended by striking ''high-performance computing'' and all that follows through ''networking;'' and inserting ''networking and information research and development;''.

(e) SECTION 202.—Section 202(a) of such Act (15 U.S.C. 5522(a)) is amended by striking ''high-performance computing'' and inserting ''networking and information technology''.

(f) SECTION 203.—Section 203(a) of such Act (15 U.S.C. 5523(a)(1)) is amended—

(1) in paragraph (1), by striking ''high-performance computing and networking'' and inserting ''networking and information technology''; and

(2) in paragraph (2)(A), by striking ''high-performance'' and inserting ''high-end''.

(g) SECTION 204.—Section 204 of such Act (15 U.S.C. 5524) is amended—

(1) in subsection (a)(1)—

(A) in subparagraph (A), by striking ''high-performance computing systems and networks'' and inserting ''networking and information technology systems and capabilities'';

(B) in subparagraph (B), by striking ''interoperability of high-performance computing systems in networks and for common user interfaces to systems'' and inserting ''interoperability and usability of networking and information technology systems''; and

(C) in subparagraph (C), by striking ''high-performance computing'' and inserting ''networking and information technology''; and

(2) in subsection (b)—

(A) in the heading, by striking ''HIGH-PERFORMANCE COMPUTING AND NETWORK'' and inserting ''NETWORKING AND INFORMATION TECHNOLOGY''; and

(B) by striking ''sensitive''.

(h) SECTION 205.—Section 205(a) of such Act (15 U.S.C. 5525(a)) is amended by striking ''computational'' and inserting ''networking and information technology''.

(i) SECTION 206.—Section 206(a) of such Act (15 U.S.C. 5526(a)) is amended by striking ''computational research'' and inserting ''networking and information technology research''.

(j) SECTION 207.—Section 207(b) of such Act (15 U.S.C. 5527(b)) is amended by striking ''high-performance computing'' and inserting ''networking and information technology''.

(k) SECTION 208.—Section 208 of such Act (15 U.S.C. 5528) is amended—

*(1) in the section heading, by striking ''**HIGH-PERFORMANCE COMPUTING**'' and inserting ''**NETWORKING AND INFORMATION TECHNOLOGY**''; and*

(2) in subsection (a)—

(A) in paragraph (1), by striking ''High-performance computing and associated'' and inserting ''Networking and information'';

(B) in paragraph (2), by striking ''high-performance computing'' and inserting ''networking and information technologies'';

(C) in paragraph (3), by striking ''high-performance'' and inserting ''high-end'';

(D) in paragraph (4), by striking ''high-performance computers and associated'' and inserting ''networking and information''; and

(E) in paragraph (5), by striking ''high-performance computing and associated'' and inserting ''networking and information''.

The SPEAKER pro tempore. Pursuant to the rule, the gentleman from Texas (Mr. HALL) and the gentlewoman from Texas (Ms. EDDIE BERNICE JOHNSON) each will control 20 minutes.

The Chair recognizes the gentleman from Texas.

GENERAL LEAVE

Mr. HALL. Mr. Speaker, I ask unanimous consent that all Members may have 5 legislative days to revise and extend their remarks and include extraneous material on H.R. 3834, as amended, the bill now under consideration.

The SPEAKER pro tempore. Is there objection to the request of the gentleman from Texas?

There was no objection.

Mr. HALL. Mr. Speaker, I yield myself such time as I may consume.

As a sponsor of H.R. 3834, the Advancing America's Networking and Information Technology Research and Development Act of 2012, I rise today in strong support of this legislation.

Before I delve into the details of the bill, however, I want to thank the Speaker and the majority leader for their leadership in putting together a cybersecurity task force to address our serious cybersecurity challenges. This task force, led by Representative MAC THORNBERRY, provided a compass point and set the direction for all the bills we're considering this week.

The Science Committee started our cybersecurity early in Congress, so I was very pleased to see the task force embrace both Mr. MCCAUL's bills, H.R. 2096 and H.R. 3834, as necessary steps to improve U.S. cybersecurity.

I would like to also thank my Texas colleague, Ranking Member JOHNSON, my neighbor, for joining me in cosponsoring H.R. 3834, which updates the NITRD Program. This program is an important component of our Nation's cybersecurity efforts, and it is critical to our overall networking and information technology research and development in general. It's a product of the High-Performance Computing Act of 1991 and represents and coordinates the Federal Government's nearly $4 billion R&D investment in unclassified networking, computing, software, cybersecurity, and related information technologies.

The bill before us today updates the underlying high-performance computing statute that has been in place for 20 years and codifies the work the National Coordination Office already undertakes. Specifically, H.R. 3834 improves program statistic planning and coordination; it rebalances R&D portfolios to focus less on short-term goals and more on long-scale, long-term interdisciplinary research; it updates research to reflect newer technologies like ''big data'' and ''cyberphysical'' systems. It also convenes an interagency working group to identify gaps in cloud computing research and examines the potential for using the cloud for federally funded research and codifies and emphasizes the role of the National Coordination Office.

Networking and information technology includes a broad range of technologies from smartphones to cloud computing. These innovations stem from numerous disciplines and have led to advances in search-and-rescue robots, unmanned aerial vehicles, near real-time weather forecasting, devices for assisted living, and computer-based education and training. R&D in this field seeks to minimize and prevent disruptions to critical infrastructure like power grids and emergency communication systems. This essential R&D is part of the reason that the House Republican Cybersecurity Task Force identified this program as important to our Nation.

Other cybersecurity efforts undertaken by NITRD agencies include research to detect, prevent, resist, respond to, and recover from actions that compromise or threaten the availability, ingenuity, or security of computer and network basic systems.

Currently, 15 Federal agencies are contributing members of NITRD, with an additional 20 or so participating in the program. Coordination among these agencies increases the overall effectiveness and productivity of our Nation's networking and information technology and cybersecurity R&D, leverages our strength, avoids duplication, and improves interoperability of R&D products. More importantly, in networking and information technology, R&D supports and boosts U.S. competitiveness, enhances national security, and helps strengthen the economy through the creation of high-level jobs.

H.R. 3834 is essentially the same bill that the House passed twice in the last Congress only to see it languish in the Senate. I urge passage of this measure once again and hope that the Senate will act accordingly. As with all cybersecurity bills before us today, H.R. 3834 enjoys the support of numerous industry supporters and technology stakeholders.

With that, I reserve the balance of my time.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Speaker, I yield myself such time as I may consume.

I rise in support of H.R. 3834, the Advancing America's Networking and Information Technology Research and Development Act of 2012.

H.R. 3834 is a good bipartisan bill which I was pleased to join Chairman HALL in introducing. It is largely based on the 2009 House-passed bill that was introduced by then-Chairman Gordon and Ranking Member HALL. But the current bill also includes some updates from the 2009 bill that appropriately reflect changes to the networking and information technology landscape, as well as policy and management recommendations made by an outside panel of experts charged with evaluating the NITRD Program.

The NITRD Program, as it is known, involves the collaboration of 15 Federal research and development agencies, each contributing its own unique expertise. To ensure that we make the most effective use of our Federal R&D resources and remain a leader in these fields, H.R. 3834 requires that all 15 agencies come together to develop and periodically update a strategic plan for Federal investments in NIT R&D.

H.R. 3834 calls for increased support for large-scale, long-term interdisciplinary research in NIT that will help us tackle national challenges such as improving the effectiveness and efficiency of our health care and energy-delivery systems. The bill also promotes partnerships between the Federal Government, academia, and industry to foster technology transfer.

In particular, I would like to highlight this bill's role in ensuring that the education of a future NIT workforce remains an important component of the NITRD Program.

I am hearing every day from small and large companies alike that the demand for skilled American IT professionals is higher than the supply. We hear the same message from university faculty who tell us that computer science graduates are snatched up the moment they graduate even while we're in the midst of a recession. This gap between supply and demand exists, despite the fact that these jobs are among the highest paying and most stable jobs out there.

It is imperative that we encourage more young Americans to pursue studies in NIT fields. In particular, because of the stark gender and racial gaps that we see in computer science programs, it is imperative that we encourage more young women and students of color to enter these fields. We simply cannot afford to ignore more than 50 percent of our Nation's brainpower.

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H.R. 3834 doesn't go quite as far as I'd like it to go in addressing these education challenges, but it still sends an important message about the need to educate more of our students in NIT fields and provide the necessary authority for the agencies to play an appropriate role here.

Finally, since this is Cyber Week, I would be remiss not to mention that the NITRD Program serves as a coordinating and planning umbrella for all unclassified Federal cybersecurity R&D. Our committee addressed specific needs in cybersecurity R&D in a separate bill just considered today, but in doing so, we made sure that both the intellectual and financial resources for cybersecurity R&D are appropriately integrated into the rest of the Federal NIT portfolio. Information security R&D should not take place in its own silo. It bears on all network and information technologies.

In closing, NIT technologies cut across every sector of our economy and our national defense infrastructure. Our relatively modest 20-year investment in the NITRD Program has contributed immeasurably to our economic and national security by enabling innovation and job creation in NIT and providing American students with the skills to fulfill these jobs. Let's authorize this program today and ensure it remains strong.

I want to thank my friend, Chairman HALL, and his staff, especially Mele Williams, for working so collaboratively and openly with us on this good bipartisan bill. I'd also like to thank my staff, and in particular Dahlia Sokolov, for their hard work on the bill, and I urge my colleagues to support H.R. 3834.

I reserve the balance of my time.

Mr. HALL. Mr. Speaker, I yield 2 minutes to the gentlewoman from Illinois (Mrs. BIGGERT).

Mrs. BIGGERT. I thank the gentleman for yielding.

Mr. Speaker, I rise in today in support of H.R. 3834, also known as the Networking and Information Technology Research and Development Act, or NITRD.

This program provides critical support and coordination for some of the most promising research and development on the computing horizon, namely, protection for our cybernetworks and the next generation of supercomputing, known as exascale.

Information technology research plays a critical role in U.S. economic strength. According to the Council on Competitiveness, our country's ability to outcompete other nations will be determined by our ability to outcompute.

American scientists, businesses, and manufacturing already use computing technologies to accelerate the pace of research on everything from new energy sources, new medicine, intellectual property, and national security. By passing this bill today, we maintain our leadership and focus in technology innovation and information security.

I urge my colleagues to support this bill.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Speaker, I yield 5 minutes to the gentleman from Illinois (Mr. LIPINSKI).

Mr. LIPINSKI. Mr. Speaker, I rise in support of H.R. 3834, Advancing America's NITRD Act of 2012.

I would like to thank Chairman HALL and Ranking Member JOHNSON for their important work on this bipartisan legislation. It's been nearly 3 years since we last reauthorized and updated the NITRD Program. I was a cosponsor of that bill in 2009, and while the Senate never acted on it, I'm hopeful that this will be a first step in taking action this year.

The NITRD Program evolved from the High-Performance Computing Act of 1991, which funded the development of Mosaic, the first commercial Web browser, which made the Internet user friendly and facilitated the cyber-revolution in the 1990s. This innovation was created by a team of programmers at the National Center for Supercomputing Applications at the University of Illinois. Marc Andreessen, one of the lead programmers on this project and founder of Netscape, summed up the importance of Federal investment in this research saying: ''If it had been left to private industry, it wouldn't have happened, at least, not until years later.''

Innovative breakthroughs like the Mosaic Web browser changed their everyday lives and established the United States as a world leader in networking and information technologies. But today we find ourselves in a world in which we can no longer take U.S. supremacy for granted. We must make measured choices to prioritize cutting-edge, large-scale R&D and effective technology transfer policies to focus on the most advanced areas of network and information technology.

H.R. 3834 achieves these ends through the development of a coordinated Federal R&D investment strategy. This bill requires Federal agencies and the NSTC to develop 5-year plans specifying near- and long-term objectives and to assess and evaluate progress periodically to ensure we maintain U.S. leadership in these fields.

In order to guarantee groundbreaking advancements, the strategic plans will be required to encourage innovative and high-risk research projects that address long-term challenges of national importance. The increasingly complex challenges we face require sophisticated solutions that will draw not just on expertise from across economic fields, but across the public and private sectors as well. This legislation encourages collaboration among universities, industries, nonprofit research institutions, and Federal laboratories to tackle our biggest challenges and provides impetus needed to spur research on high-risk areas that might otherwise not be taken up.

We also need to be cognizant of how the R&D we fund will actually impact and benefit our economy and our society. While basic research is critical, the effective transfer of the results of research into products, companies, and jobs is necessary for our Nation to remain a leader in networking and information technology. This bill promotes effective technology transfer policies by requiring strategic plans and large-scale research projects to incorporate plans and policies that promote commercialization.

It is vital that we get our scientific development out of the lab and into the marketplace. We've put a lot of investment into our labs. We need to make sure that this provides the economic engine of growth for our Nation.

Mr. Speaker, this legislation will focus our scientific community through innovative, large-scale, and collaborative R&D. We need to remain a leader in networking in information technologies. This is a good bipartisan bill, and I urge my colleagues to support it.

Ms. EDDIE BERNICE JOHNSON of Texas. I urge passage of the bill, and I yield back the balance of my time.

Mr. HALL. I would like to point out that our efforts on this bill have been really a true illustration of the bipartisan work which the Science Committee and this Congress is capable of.

I believe Ms. JOHNSON will attest that our staffs have worked well together to ensure this measure reflects good policy for our Nation's networking and information technology. I want to thank her, and I want to thank her staff for their work on this bill.

Additionally, I would also like to thank Chairman BROOKS as chairman of the Research and Science Education Subcommittee for his leadership on the bill, and Mrs. BIGGERT for her many years of championing this issue.

I urge my colleagues to join me in supporting H.R. 3834, and I yield back the balance of my time.

Mr. SMITH of Texas. Mr. Speaker, and many thanks to my good friend and fellow Texan, RALPH HALL, for bringing H.R. 3834 to the House floor as part of cyber-week.

Just about every aspect of our lives is somehow connected to the internet in one way or another. My hometown of San Antonio is often referred to as "Cyber-City USA," due to the work of the Air Force, private industry, and the University of Texas at San Antonio's Institute for Cybersecurity.

Cyber-crimes risk our personal finances, proprietary business information, and national security know-how. Hackers have sought to physically damage our air traffic control system, DoD and NASA satellites, and electrical grid.

Hackers from a variety of countries, especially China and Russia, as well as those working inside the United States, cause a great deal of damage to our nation's economy and national security. The GAO reported this week that cyberattacks on the federal government have exploded by 680 percent in the past five years.

The NITRD program is a unique collaboration among Federal research and development agencies that coordinate Federal R&D projects to advance information technologies such as computing, networking, and software, while avoiding duplication of efforts. One of the primary goals of the NITRD program is to accelerate development and deployment of these technologies to maintain American leadership in the IT field. The NITRD program was first authorized in 1991, and the House Republican Task Force on Cybersecurity, chaired by my Texas colleague, MAC THORNBERRY, identified it as in need of an update.

This is a good bill for which I thank Science, Space and Technology Chairman RALPH HALL and Ranking Member EDDIE BERNICE JOHNSON for bringing to the floor. I urge my colleagues to support it.

The SPEAKER pro tempore. The question is on the motion offered by the gentleman from Texas (Mr. HALL) that the House suspend the rules and pass the bill, H.R. 3834, as amended.

The question was taken.

The SPEAKER pro tempore. In the opinion of the Chair, two-thirds being in the affirmative, the ayes have it.

Mr. HALL. Mr. Speaker, I object to the vote on the ground that a quorum is not present and make the point of order that a quorum is not present.

The SPEAKER pro tempore. Pursuant to clause 8 of rule XX, further proceedings on this question will be postponed.

The point of no quorum is considered withdrawn.

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SEQUOIA AND KINGS CANYON NATIONAL PARKS BACKCOUNTRY ACCESS ACT

Mr. HASTINGS of Washington. Mr. Speaker, I ask unanimous consent that the Committee on Natural Resources be discharged from further consideration of the bill (H.R. 4849) to direct the Secretary of the Interior to issue commercial use authorizations to commercial stock operators for operations in designated wilderness within the Sequoia and Kings Canyon National Parks, and for other purposes, and ask for its immediate consideration in the House.

The Clerk read the title of the bill.

The SPEAKER pro tempore. Is there objection to the request of the gentleman from Washington?

Mr. GEORGE MILLER of California. Mr. Speaker, reserving the right to object, and I will not object, I yield to the gentleman from Washington, the chairman of the committee.

Mr. HASTINGS of Washington. I thank the gentleman for yielding.

This legislation addresses an urgent need at Sequoia and Kings Canyon National Parks in California. Because of a lawsuit, the National Park Service has chosen not to issue commercial packer permits this year. These permits allow mules and horses into the park to carry visitors and supplies. Unfortunately, this not only means the loss of hundreds of jobs, it also canceled long-planned family vacations into the outdoors. For many Americans, whether elderly or handicapped, stock animals are the only option if they want to visit our national parks.

Today, we have the option to right a wrong and allow these permits to be awarded to responsible stewards of our parks. This bipartisan legislation was worked out between Members of both parties in the California delegation. Time is very crucial here. This only extends what has been happening for decades in Sequoia and Kings Canyon National Parks. We must act now if there's any hope in preserving the season for those individuals who have planned and paid for their visit in the national park.

Mr. GEORGE MILLER of California. Further reserving my right to object, Mr. Speaker, the bill before us today, as amended this morning, gives the Secretary of the Interior the authority to reopen the wilderness areas in Sequoia and Kings Canyon National Parks to pack and saddle animals for the 2012 and 2013 seasons.

Earlier this week, I joined with my colleagues, JIM COSTA, MIKE THOMPSON, JOHN GARAMENDI, and SAM FARR, in a letter to Chairman HASTINGS and Ranking Member MARKEY of the Natural Resources Committee. We asked the committee, on behalf of our California constituents, to resolve a situation that's already affecting families and businesses and harming the regional economy.

In response to a court order, the National Park Service has not been allowing pack animals into the parks' wilderness areas this year. This situation has caused economic harm to outfitters, packers, guides, and other permit holders who rely on the income that the park visitors bring to the area, and it's causing visitors to reconsider their trips to the park and the wilderness areas.

Today, this House is taking this action, and I want to thank Mr. MARKEY and Chairman HASTINGS. I spoke to Chairman HASTINGS less than 24 hours ago on the content of our letter, and both he and Mr. NUNES came forward and asked whether or not we could do this by unanimous consent, and that's why we're here this morning.

I want to thank the staffs of both of the majority and the minority side of this committee for all of their work. They worked overnight because very early this morning we all signed off on this legislation.

I think that this legislation is a very good deal for families and visitors to the park. It's a good deal for the businesses who depend upon spring and summer wilderness trips for their livelihood.

The high country wilderness in the Sierras is one of the premier experiences the National Park System has to offer, and for many, the only way to have this experience is through use of pack animals for whatever personal reasons, either frailty, age—age would be my reason. I think it's important. I've had the honor and the pleasure to hike the high country in Kings Canyon and in Sequoia and Yosemite, and it's a unique experience, unique to the American Sierra Mountains system.

I hope that the Senate will be able to take this up by unanimous consent quickly so, again, the people planning to take the trips will have certainty, the packers will have certainty, and the surrounding businesses around Sequoia-Kings Canyon Park will have certainty that the summer trade will be there.