AUTHENTICATED
U.S. GOVERNMENT
INFORMATION
GPO

110TH CONGRESS, 1st Session } HOUSE OF REPRESENTATIVES { REPORT 110–451

HEALTHCARE INFORMATION TECHNOLOGY ENTERPRISE INTEGRATION ACT

NOVEMBER 15, 2007.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

Mr. GORDON of Tennessee, from the Committee on Science and Technology, submitted the following

R E P O R T

[To accompany H.R. 2406]

[Including cost estimate of the Congressional Budget Office]

The Committee on Science and Technology, to whom was referred the bill (H.R. 2406) to authorize the National Institute of Standards and Technology to increase its efforts in support of the integration of the healthcare information enterprise in the United States, having considered the same, report favorably thereon with an amendment and recommend that the bill as amended do pass.

CONTENTS

		Page
I.	Amendment	2
II.	Purpose of the Bill	4
III.	Background and Need for the Legislation	5
IV.	Hearing Summary	6
V.	Committee Actions	9
VI.	Summary of Major Provisions of the Bill	10
VII.	Section-by-Section Analysis	10
VIII.	Committee Views	11
IX.	Cost Estimate	13
X.	Congressional Budget Office Cost Estimate	13
XI.	Compliance with Public Law 104–4 (Unfunded Mandates)	14
XII.	Committee Oversight Findings and Recommendations	14
XIII.	Statement on General Performance Goals and Objectives	14
XIV.	Constitutional Authority Statement	14
XV.	Federal Advisory Committee Statement	14
XVI.	Congressional Accountability Act	15
XVII.	Earmark Identification	15
XVIII.	Statement on Preemption of State, Local, or Tribal Law	15
XIX.	Changes in Existing Laws Made by the Bill, As Reported	15
XX.	Committee Recommendations	15

69–006

XXI. Additional Views 16
XXII. Proceedings of Full Committee Markup 18

I. AMENDMENT

The amendment is as follows:
Strike all after the enacting clause and insert the following:

SECTION 1. SHORT TITLE.

This Act may be cited as the "Healthcare Information Technology Enterprise Integration Act".

SEC. 2. FINDINGS.

Congress finds the following:

(1) The National Institute of Standards and Technology, because of the electronic commerce, information technology and security expertise in its laboratories and the healthcare component of the Malcolm Baldrige National Quality Award, and its long history of working with the information technology and healthcare industries, is well equipped to complement the healthcare information technology implementation efforts as established by Executive Order 13335 of April 27, 2004, by addressing the technical challenges posed by healthcare information enterprise integration.

(2) Therefore, it is in the national interest for the National Institute of Standards and Technology to accelerate its efforts—

(A) to participate in the development of technical standards, standards conformance tests, and enterprise integration processes that are necessary to increase efficiency and quality of care, and lower costs in the healthcare industry; and

(B) ensuring that all components of the United States healthcare infrastructure can be a part of an electronic information network that is reliable, interoperable, and secure.

SEC. 3. HEALTHCARE INFORMATION ENTERPRISE INTEGRATION INITIATIVE.

(a) ESTABLISHMENT.—The Director of the National Institute of Standards and Technology shall establish an initiative for advancing healthcare information enterprise integration within the United States. In carrying out this section, the Director shall involve various units of the National Institute of Standards and Technology, including its laboratories and the Malcolm Baldrige National Quality Program. This initiative shall build upon ongoing efforts of the National Institute of Standards and Technology, the private sector, and other Federal agencies, shall involve consortia that include government and industry, and shall be designed to permit healthcare information enterprise integration. These efforts shall complement ongoing activities occurring under Executive Order 13335 of April 27, 2004.

(b) TECHNICAL ACTIVITIES.—In order to carry out this section, the Director may focus on—

(1) information technology standards and interoperability analysis, which may include the development of technical testbeds;

(2) supporting the establishment of conformance testing infrastructure, including software conformance and certification;

(3) security;

(4) medical device communication;

(5) supporting the provisioning of technical architecture products for management and retrieval; and

(6) information management including electronic health records management, health information usability, and access and decision support.

(c) OTHER ACTIVITIES.—The Director may assist healthcare representatives and organizations and Federal agencies in the development of technical roadmaps that identify the remaining steps needed to ensure that technical standards for application protocols, interoperability, data integrity, and security, as well as the corollary conformance test protocols, will be in place. These roadmaps shall rely upon voluntary consensus standards where possible consistent with Federal technology transfer laws.

(d) PLANS AND REPORTS.—Not later than 90 days after the date of enactment of this Act, and annually thereafter, the Director shall transmit a report to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate on the activities of the National Institute of Standards and Technology under this section.

SEC. 4. FEDERAL HEALTHCARE INFORMATION TECHNOLOGY SYSTEMS AND INFRASTRUCTURE.

(a) GUIDELINES AND STANDARDS.—Not later than 12 months after the date of enactment of this Act, the Director of the National Institute of Standards and Technology, in consultation with industry and appropriate Federal agencies, shall report on development of technology-neutral information technology infrastructure guidelines and standards, or the adoption of existing technology-neutral industry guidelines and private sector standards, for use by Federal agencies to enable those agencies to effectively select and utilize healthcare information technologies in a manner that is—

(1) sufficiently secure to meet the needs of those agencies (as is consistent with the Computer Security Act of 1987, as amended, section 225 of the Homeland Security Act of 2002, and title III of the E-Government Act of 2002), their transaction partners, and the general public;

(2) interoperable, to the maximum extent possible; and

(3) inclusive of ongoing Federal efforts that provide technical expertise to harmonize existing standards and assist in the development of interoperability specifications.

(b) ELEMENTS.—The guidelines and standards developed under subsection (a) shall—

(1) promote the use by Federal agencies of commercially available products that incorporate the guidelines and standards developed under subsection (a);

(2) develop uniform testing procedures suitable for determining the conformance of commercially available and Federal healthcare information technology products with the guidelines and standards;

(3) support and promote the testing of electronic healthcare information technologies utilized by Federal agencies;

(4) provide protection and security profiles;

(5) establish a core set of interoperability specifications in transactions between Federal agencies and their transaction partners; and

(6) include validation criteria to enable Federal agencies to select healthcare information technologies appropriate to their needs.

(c) REPORTS.—Not later than 18 months after the date of enactment of this Act, and annually thereafter, the Director shall transmit to the Congress a report that includes a description and analysis of—

(1) the level of interoperability and security of technologies for sharing healthcare information among Federal agencies; and

(2) the problems Federal agencies are having with, and the progress such agencies are making toward, ensuring interoperable and secure healthcare information systems and electronic healthcare records.

SEC. 5. RESEARCH AND DEVELOPMENT PROGRAMS.

(a) HEALTHCARE INFORMATION ENTERPRISE INTEGRATION RESEARCH CENTERS.—

(1) IN GENERAL.—The Director of the National Institute of Standards and Technology, in consultation the Director of the National Science Foundation and other appropriate Federal agencies, shall establish a program of assistance to institutions of higher education (or consortia thereof which may include nonprofit entities and Federal Government laboratories) to establish multidisciplinary Centers for Healthcare Information Enterprise Integration.

(2) REVIEW; COMPETITION.—Grants shall be awarded under this subsection on a merit-reviewed, competitive basis.

(3) PURPOSE.—The purposes of the Centers shall be—

(A) to generate innovative approaches to healthcare information enterprise integration by conducting cutting-edge, multidisciplinary research on the systems challenges to healthcare delivery; and

(B) the development and use of information technologies and other complementary fields.

(4) RESEARCH AREAS.—Research areas may include—

(A) the interfaces between human information and communications technology systems;

(B) voice-recognition systems;

(C) software that improves interoperability and connectivity among systems;

(D) software dependability in systems critical to healthcare delivery;

(E) measurement of the impact of information technologies on the quality and productivity of healthcare;

(F) healthcare information enterprise management; and

(G) information technology security and integrity.

(5) APPLICATIONS.—An institution of higher education (or a consortium thereof) seeking funding under this subsection shall submit an application to the Di-

rector at such time, in such manner, and containing such information as the Director may require. The application shall include, at a minimum, a description of—

(A) the research projects that will be undertaken by the Center and the respective contributions of the participating entities;

(B) how the Center will promote active collaboration among scientists and engineers from different disciplines, such as information technology, biologic sciences, management, social sciences, and other appropriate disciplines;

(C) technology transfer activities to demonstrate and diffuse the research results, technologies, and knowledge; and

(D) how the Center will contribute to the education and training of researchers and other professionals in fields relevant to healthcare information enterprise integration.

(b) NATIONAL INFORMATION TECHNOLOGY RESEARCH AND DEVELOPMENT PROGRAM.—The National High-Performance Computing Program established by section 101 of the High-Performance Computing Act of 1991 (15 U.S.C. 5511) shall coordinate Federal research and development programs related to the development and deployment of health information technology, including activities related to—

(1) computer infrastructure;

(2) data security;

(3) development of large-scale, distributed, reliable computing systems;

(4) wired, wireless, and hybrid high-speed networking;

(5) development of software and software-intensive systems;

(6) human-computer interaction and information management technologies; and

(7) the social and economic implications of information technology.

(c) STRATEGIC PLAN FOR HEALTHCARE TECHNOLOGIES AND CLASSIFICATION.—

(1) IN GENERAL.—The Director of the National Institute of Standards and Technology, in consultation with the Director of the National Science Foundation, not later than 90 days after the date of enactment of this Act, shall establish a task force whose membership includes representatives of other Federal agencies and industry groups (such as the American Health Information Management Association and the American Medical Informatics Association) to develop a strategic plan including recommendations for—

(A) the development, adoption, and maintenance of terminologies and classifications;

(B) gaining commitment of terminology and classification stakeholders (such as developers, end users, and other service and technology suppliers) to principles and guidelines for open and transparent processes to enable cost-effective interoperability and complete and accurate information;

(C) the design of a centralized authority or governance model, including principles for its operation and funding scenarios;

(D) United States participation in the International Health Terminology Standards Development Organization; and

(E) any other issues identified by the task force.

(2) TASK FORCE REPORT.—The task force shall report its findings and recommendations to the Committee on Science and Technology of the House of Representatives not later than 18 months after the date of enactment of this Act. The task force shall terminate after transmitting such report.

(3) FEDERAL ADVISORY COMMITTEE ACT.—The task force established under this subsection shall not be subject to the Federal Advisory Committee Act (5 U.S.C. App.).

SEC. 6. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated to the Director of the National Institute of Standards and Technology for carrying out this Act $8,000,000 for each of the fiscal years 2009 and 2010, to be derived from amounts authorized under section 3001 of Public Law 110–69.

II. PURPOSE OF THE BILL

The purpose of this bill is to direct the National Institute of Standards and Technology (NIST) to establish an initiative to advance healthcare information enterprise integration; to direct NIST to work with industry toward the development of or the adoption of technology-neutral technical guidelines and standards for healthcare information technology (HIT) systems used by Federal

agencies; to create a program of grants to universities and consortia for multidisciplinary HIT research centers; to direct the National High-Performance Computing Program to coordinate Federal research and development programs related to HIT; to direct NIST to establish a task force to develop recommendations on standards harmonization; and to authorize appropriations for fiscal years 2009 and 2010 to conduct these activities.

III. BACKGROUND AND NEED FOR LEGISLATION

While many sectors of the U.S. economy have fully integrated information technology into their operations, the U.S. healthcare system continues to rely on pen and paper for the bulk of its information needs. From patient medical histories, to prescriptions, to hospital charts, handwritten notations are the basis for patient care information. This system is costly, antiquated, and prone to dangerous or life-threatening medical errors. More than 98,000 Americans die and more than one million patients suffer injuries each year as a result of broken healthcare practices and system failures. According to the National Academies, between 30 and 40 percent of healthcare costs—more than half a trillion dollars per year—is spent on "overuse, underuse, misuse, duplication, system failures, and unnecessary repetition, poor communication, and inefficiency". In addition, the lack of integrated, interoperable electronic healthcare records (EHRs) means that, in our health care system, patients themselves must act as their own comprehensive healthcare record which often adds additional error in treatment.

Information technology (IT) offers enormous potential benefits to improve the functioning and efficiency of U.S. healthcare. A fully realized interoperable healthcare IT system could reduce errors, improve communication, help eliminate redundancy, and provide numerous other benefits that would protect patients and save up to tens of billions of dollars per year. The central challenge to achieving such a system is interoperability—the ability of data systems, medical devices and software from different vendors based on a diverse array of platforms to share patient EHRs, electronic physician orders for lab tests and drug prescriptions, electronic referrals to specialists, electronic access to information about current recommended treatments and research findings, and other information. Data security and privacy requirements present additional challenges, as electronic systems must comply with Federal and state laws mandating patient privacy.

Interoperability and data security in IT systems is accomplished by establishing technical standards for data formats, data exchange protocols, and other system communication needs. These standards enable different manufacturers and vendors to build and sell medical software and hardware devices that are based on the same underlying communication techniques. Without these standards, and the interoperable systems they enable, it is wasteful to spend money on healthcare IT systems, and healthcare providers are therefore reluctant to do so.

The Federal government's lead agency for supporting the development of technical standards is NIST, which has a long history of working with the private sector, Federal agencies and other stakeholders to develop consensus-based standards in such fields as electronic commerce, manufacturing, and information security. NIST's

organic legislation gives the agency authority to work in any field in which there is deficiency in technical standards. NIST has already conducted important work on technical standards to advance the adoption of secure, interoperable healthcare IT systems nationwide, working cooperatively with HHS. NIST also has expertise in developing conformance testing protocols to ensure that software products meet technical standards. Because of NIST's unique expertise in the technical standards-development process and its long history of involvement with guiding the development and adoption of consensus-based standards, it is important that NIST's role in healthcare IT be codified in statute.

The provisions of H.R. 2406 are based on recommendations in a 2004 report from the President's Information Technology Advisory Committee (PITAC) entitled Revolutionizing Health Care Through Information Technology, and a 2005 report from the National Academies entitled Building a Better Delivery System. These reports included specific recommendations for the development of a single set of standards for the interoperability of clinical information, the acceleration by the Federal government of the development of standards for the security of healthcare IT systems, and the establishment of multidisciplinary research programs in key areas of healthcare IT.

IV. HEARING SUMMARY

On February 23, 2006, the Subcommittee on Environment, Technology and Standards of the House Committee on Science held a hearing titled Health Care Information Technology: What are the Opportunities for and Barriers to Inter-operable Health Information Technology Systems? The Committee held the hearing to learn about the potential benefits of IT to healthcare providers and consumers, the impact of IT on healthcare costs and quality, and the major challenges to implementing a national healthcare information technology system.

Interoperability allows different information technology systems and software applications to communicate, exchange data, and use that information. Interoperable health IT systems can involve electronic healthcare records (EHRs); electronic physician orders for drug prescriptions and lab tests; electronic referrals to specialists and other health care providers; and electronic access to current treatments and research findings. For these systems to share information, especially if they are from different manufacturers and/or vendors, they must use common standards for data transmission, medical terminology, security, and other features.

The hearing reviewed Federal, state and private-sector efforts to promote connectivity, which enables healthcare providers to access patient data from any location. The hearing also examined efforts to develop standards for security, confidentiality and interoperability, which are crucial to the adoption of effective healthcare IT systems.

The Subcommittee heard testimony from: (1) Dr. William Jeffrey, Director of the National Institute of Standards and Technology (NIST); (2) Dr. Jody Pettit, Project Chair at the Oregon Health Care Quality Corporation; (3) Ms. Diane Cecchettini, RN, President and CEO of MultiCare Health System; (4) Mr. John Jay Kenagy, Chief Information Officer at Oregon Health and Science University;

(5) Dr. Homer Chin, Medical Director for Clinical Information Systems at Kaiser Permanente Northwest; (6) Mr. Luis Machuca, President and CEO of Kryptiq Corportation; and (7) Mr. Prem Urali, President and CEO of HealthUnity Corporation.

Summary of hearing

Dr. Jeffrey testified that NIST has been working with the Office of the National Coordinator for Health Information Technology (ONC) on standards harmonization, conformity assessment, developing the architectural management system for the health information network, and confidentiality and security. He said that because there are so many healthare IT standards in existence and under development, NIST is working with the healthcare community "to develop and demonstrate a prototype healthcare standards landscape."

Dr. Pettit testified that the goal of the Oregon Health Information Infrastructure (OHII) is to "catalyze the formation of a regional health information organization." She emphasized that the patient must be at the center of the healthcare IT system development process, and that the free flow of information is key. Finally, she argued that while Federal initiatives are moving forward, state initiatives are not being given enough support. She called on the Federal government to provide assistance or start-up capital.

Ms. Cecchettini testified that implementing EHRs has helped MultiCare Health System to reduce errors and redundant costs, to contact patients for drug recalls, and to improve childhood immunization and mammogram compliance figures. Ms. Cecchettini called for the Federal and state governments to adopt common standards to support interoperability, to provide payment incentives for adopters of information technology, to ensure protection of consumer privacy by enforcing security measures, and to support common vocabulary for medical technology.

Mr. Kenagy testified that the large number of choices rather than lack of choices available for healthcare IT adoption is a problem. In addition, he stated that learning and implementing a new healthcare IT system takes significant time for clinicians and other healthcare professionals. He called on the Federal government to expand research in healthcare IT, to support training programs for clinicians and IT professionals, and to address the economic disincentives to invest in healthcare IT.

Dr. Chin testified that Kaiser Permanente Northwest (KPNW) has been successful at utilizing healthcare IT because KPNW offers an integrated comprehensive healthcare system and because it provides prepaid insurance to its members, providing an incentive to keep members healthy. He identified a lack of incentives to be efficient and effective at delivering healthcare, and the subjective and changing nature of healthcare as the two primary problems facing effective healthcare. Dr. Chin stated that the Federal and state governments should provide incentives for healthcare organizations to implement IT, and more stringent standards.

Mr. Machuca testified that healthcare IT adoption strategies should focus on collaboration and communication in addition to EHRs. He called on the government to fund the implementation of electronic collaboration in public health settings and to mediate a standard for patient medical records.

Mr. Urali testified that efforts to promote healthcare IT adoption must start with clinicians. He encouraged the government to fund education and training to promote best practices, and to focus on creating the right policy and incentives environment, and that the private sector should innovate. Finally, he stated that there should be a greater focus on the regional level for adoption, rather than the national level.

On September 26, 2007 the Committee on Science and Technology held a hearing entitled Meeting the Need for Interoperability and Information Security Healthcare IT. This hearing provided an opportunity for private-sector stakeholders to discuss the current state of healthcare information technology and to provide their comments and views on H.R. 2406, a bill to support the development of technical standards for healthcare information technology systems by the National Institute of Standards and Technology (NIST).

The rising cost of healthcare, as well as the need to improve patient care, has prompted both the private and public sectors to look for new ways to economically provide high-quality medical care. Many industries have experienced significant increases in efficiency brought on by the introduction of information technology (IT) over the past two decades. However, as an industry reliant upon information, the healthcare industry lags behind other sectors in implementing IT systems. Needs for interoperability, reliability, and confidentiality have created a cautious attitude within the healthcare industry towards the adoption of IT.

The purpose of the hearing was to examine progress toward the broad use of information technology in healthcare and the investments in technical standards development that are needed to facilitate the adoption of secure, interoperable healthcare IT systems. Hearing participants discussed the potential benefits of IT to US healthcare, and the role of NIST in the development of healthcare IT technical standards.

The Subcommittee heard testimony from: (1) Ms. Linda L. Kloss, Chief Executive Officer of the American Health Information Management Association (AHIMA); (2) Dr. David E. Silverstone, Clinical Professor at Yale School of Medicine and Assistant Chief of Ophthalmology at Yale New Haven Hospital and chairman of the Health Information Technology Committee of the American Society of Cataract and Refractive Surgery; (3) Mr. Michael Raymer, Vice President and General Manager for Product Strategy and New Business Initiatives at GE Healthcare Integrated IT Solutions; (4) Ms. Noel Williams, President of the Hospital Corporation of American (HCA) Information Technology & Services, Inc.; and (5) Mr. Justin T. Barnes, Vice President of Marketing and Government Affairs for Greenway Medical Technologies, Inc.

Summary of hearing

Ms. Kloss testified that data content standards, especially a standardized method of medical terminology, is a significant issue that the Federal government should help guide the development of through NIST. She also stated that despite many beneficial voluntary private-sector efforts to develop standards, a long-term collaborative program for IT standards would be very helpful.

Dr. Silverstone testified that healthcare IT is needed to increase quality of care through better dissemination of medical information while decreasing the cost of care. He reported that adoption of IT systems has been slow by healthcare professionals, emphasizing that for many practitioners it is prohibitively expensive. Creating an effective and interoperable system is necessary for adoption by the small practices that dominate the American healthcare industry. Mr. Raymer testified that current healthcare IT standards efforts by existing public/private collaborations such as the Health Information Technology Standards Panel (HITSP) are effective in establishing standards. However, NIST's involvement could be beneficial in bridging the gaps in current efforts and providing expertise where existing projects fall short. Such expertise includes testing, security standards, and facilitation of interoperability between Federal agencies.

Ms. Williams testified that the presence of IT in healthcare would be beneficial and that it is under-implemented in the industry today. She testified that interoperability is a major issue when hospitals consider implementing an HIT system and that HIT efforts need national leadership to effectively coordinate the many organizations developing and promoting HIT standards. NIST has a role to play in standards development for HIT.

Mr. Barnes testified that the government could provide more incentives for adoption of HIT. The development of standards is already underway by public/private collaborations, and thus the real benefit of increased NIST participation would be to provide assistance to this process while recognizing the leadership role of the Healthcare Information Technology Standards Panel.

V. COMMITTEE ACTIONS

As summarized in Section IV, the Subcommittee on Environment, Technology and Standards of the Committee on Science heard testimony in the 109th Congress relevant to the provisions of H.R. 2406 on February 23, 2006, and the Committee on Science and Technology heard testimony in the 110th Congress relevant to the provisions of H.R. 2406 on September 26, 2007.

On October 24, 2007, the full Committee on Science and Technology met to consider H.R. 2406 as introduced. The Committee considered three amendments to the bill:

1. Mr. Gordon offered an amendment to clarify that the NIST work in healthcare IT authorized by the bill is to complement existing Federal efforts in healthcare IT, to strike the creation of a senior interagency council, to authorize $8 million for NIST in FY 2009 and FY 2010 to carry out the programs in the bill, and to make other minor changes. The amendment was agreed to by voice vote.

2. Mr. Hill offered an amendment directing NIST, in consultation with the National Science Foundation, to establish a task force including other Federal agencies and industry groups that will develop recommendations for the development of medical terminologies and classification, U.S. participation in the International Health Terminology Standards Development Organization, and related issues.

3. Mr. Gingrey offered a second degree amendment to Mr. Hill's amendment, to strike consultation with the National Science Foun-

dation. The amendment failed by a vote of 13–20. The Committee then voted on Mr. Hill's amendment, which passed by a vote of 21–13.

The bill as amended was then adopted by voice vote. Mr. Lampson moved that the Committee favorably report H.R. 2406 as amended to the House, and the motion was agreed to by voice vote.

VI. SUMMARY OF MAJOR PROVISIONS OF THE BILL AS REPORTED

The bill establishes an initiative for healthcare information enterprise integration at NIST. It directs NIST, working with the private sector, to establish technical standards for healthcare IT for Federal agencies that will promote the interoperability of Federal healthcare information systems. It creates a program of grants to universities and consortia to conduct multidisciplinary research in healthcare IT areas, directs the National High-Performance Computing Program to coordinate Federal R&D on healthcare IT, and further directs NIST to establish a task force to develop recommendations on standards harmonization. Finally, it authorizes $8 million for NIST in FY 2009 and FY 2010.

VII. SECTION-BY-SECTION ANALYSIS OF THE BILL AS REPORTED

Section 1. Short title

The Healthcare Information Technology Enterprise Integration Act.

Section 2. Findings

Establishes Congressional findings that the National Institute of Standards and Technology (NIST) is well equipped to complement existing Federal healthcare information technology (HIT) implementation efforts because of its experience with electronic commerce, information technology and security, as well as healthcare business through the Malcolm Baldrige National Quality Program. Further finds that it is in the national interest for NIST to accelerate its efforts in technical areas related to HIT.

Section 3. Healthcare information enterprise integration initiative

Directs NIST to establish an initiative to advance HIT enterprise integration in the U.S., building on existing efforts at NIST and involving government and industry consortia. The initiative will complement other Federal HIT work under Executive Order 13335. Technical activities of this initiative may include standards and interoperability analysis and the development of technical testbeds, supporting the establishment of conformance testing infrastructure, information security and confidentiality, medical device communication, data management and retrieval architecture, and information management for electronic healthcare records, health information usability, and physician decision support. The initiative may also include assistance to outside organizations and Federal agencies in developing technical roadmaps for HIT enterprise integration, relying on voluntary consensus standards where possible. NIST shall report to Congress annually on these activities.

Section 4. Federal healthcare information technology systems and infrastructure

Directs NIST to report on the development of or adoption of new or existing private-sector, technology-neutral HIT guidelines and standards for use by Federal agencies within 12 months of enactment. The guidelines and standards shall enable agencies to select and utilize HIT systems that provide security and confidentiality and are interoperable, in a manner that is inclusive of existing Federal efforts related to HIT. They shall promote the use of commercial HIT systems by Federal agencies, include conformance-testing procedures, provide confidentiality profiles, establish interoperability specifications, and include validation criteria. NIST will report annually on the progress toward and barriers to adoption of interoperable, secure and confidential HIT systems by Federal agencies.

Section 5. Research and development programs

Directs NIST, in consultation with the National Science Foundation (NSF), to establish a competitive grant program for universities or consortia (which may include nonprofits and Federal laboratories) to establish Centers for Healthcare Information Enterprise Integration. The Centers will generate innovative approaches to HIT enterprise integration by conducting research on the interfaces between human information and communications technology systems, voice-recognition systems, interoperability software, software dependability, metrics of the impact of information technology on healthcare, healthcare information enterprise management, and information technology security and integrity. Grant applications shall include descriptions of proposed projects, efforts to foster multidisciplinary collaboration, and technology transfer and education activities. The National High-Performance Computing Program established by the High-Performance Computing Act of 1991 shall coordinate federal R&D programs related to HIT. NIST, in consultation with NSF, shall establish a task force that includes other Federal agencies and industry groups to make recommendations to Congress on development of medical terminologies and related issues, within 18 months.

Section 6. Authorization of Appropriations

Authorizes $8 million for NIST in each of FY 2009 and FY 2010 to carry out this Act. The funds are to be derived from amounts authorized under Section 3001 of P.L. 110–69 (the America COMPETES Act).

VIII. COMMITTEE VIEWS

The Committee believes that a wider adoption of information technology by the healthcare industry would bring important benefits to the industry, to patients, and to the nation as a whole. A fully realized system of healthcare IT (HIT) in the U.S. could save tens of billions of dollars per year, improve the quality of patient care, and help prevent life-threatening medical errors. While information technology has been embraced by many sectors of the economy, resulting in major increases in efficiency, the healthcare in-

dustry has been slow to invest in IT systems. The Committee would like to see this adoption accelerated.

In order to allow the healthcare industry to make greater investments in information technology, it is critical that HIT systems be interoperable. Interoperability of systems allows them to communicate and exchange data, even if they are built and sold by different, competing manufacturers. The absence of interoperability prevents the realization of many of the advantages of information technology, such as the fast and inexpensive exchange of information. A lack of interoperability makes healthcare providers reluctant to invest in IT systems, because there is not a reasonable guarantee that they will be able to communicate and exchange data with other systems that are currently in use, or with systems that may be installed in the future.

It is also vital that HIT systems ensure the secure protection of patient information. Security is the protection of information from disclosure to people who are not authorized to have it. Protecting patients' records depends on keeping patient medical information, such as medical histories and current medications, confidential. Without a reasonable guarantee that information stored on a healthcare IT system will be kept securely, patients and the general public may resist interacting with these systems.

Both interoperability and security of HIT systems depend on technical standards, which enable manufacturers to build systems that are based on the same underlying communication techniques. These techniques allow diverse systems to exchange information, and also enable information about access to patient records, patient consent and notification, and other aspects of security to be accurately transmitted through the system.

The Committee recognizes that Federal healthcare IT efforts have been coordinated to date by the Department of Health and Human Services (HHS), under an executive order from 2004. NIST has performed technical HIT work for HHS under a MOU, including research on conformance requirements for electronic healthcare records systems, standards-based technology for sharing clinical documents, and tests and tools for improving interoperability of healthcare IT systems. In addition, NIST cryptographic standards are being used by private-sector healthcare standards development organizations.

The Committee believes that NIST should play a greater role in the field of healthcare IT. NIST's work should complement and support the efforts currently ongoing at the Department of Health and Human Services. The Committee further believes that an expanded effort by NIST to work with the private sector in guiding the development and harmonization of technical standards in HIT will accelerate the arrival of secure, interoperable healthcare IT systems. NIST's long track record of successful collaboration with industry and Federal agencies in developing technical standards in fields ranging from electronic commerce to industrial control to information security provides the Committee with confidence that a codified NIST role will be beneficial to this effort.

The bill also directs NIST, working with the private sector, to develop or adopt existing private-sector technical standards for healthcare IT systems that are to be used by Federal agencies. Currently, Federal healthcare records systems at the Departments

of Defense and Veterans Affairs and in other agencies are not interoperable, because they are not based on the same technical standards nor do they incorporate sufficient security protocols. The Committee believes that NIST is well positioned to improve the interoperability of these systems through the adoption of government-wide technical healthcare IT standards. This is a role analogous to NIST's work under the Federal Information Security Management Act (FISMA) to develop standards for the security of unclassified Federal computer systems. This provision is designed to permit NIST maximum flexibility in deciding between the adoption of existing private-sector HIT standards and the development of new ones when necessary, as is consistent with existing federal technology transfer laws, including the National Technology Transfer and Advancement Act of 1995 (Section 12 of PL 104–113).

The bill also includes the creation of a grant program at NIST for universities or consortia to conduct multidisciplinary research in areas relevant to healthcare IT, such as human-system interfaces, voice-recognition technology, and healthcare information enterprise management. The Committee believes that there are significant gaps in current understanding of many of these areas of technology, and a multidisciplinary approach to addressing them is likely to improve the efficiency and utility of healthcare IT systems.

IX. COST ESTIMATE

A cost estimate and comparison prepared by the Director of the Congressional Budget Office under section 402 of the Congressional Budget Act of 1974 has been timely submitted to the Committee on Science and Technology prior to the filing of this report and is included in Section X of this report pursuant to House Rule XIII, clause 3(c)(3).

H.R. 2406 does not contain new budget authority, credit authority, or changes in revenues or tax expenditures. Assuming that the sums authorized under the bill are appropriated, H.R. 2406 does authorize additional discretionary spending, as described in the Congressional Budget Office report on the bill, which is contained in Section X of this report.

X. CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

OCTOBER 26, 2007.

Hon. BART GORDON,
Chairman, Committee on Science and Technology,
House of Representatives, Washington, DC.

DEAR MR. CHAIRMAN: The Congressional Budget Office has prepared the enclosed cost estimate for H.R. 2406, the Healthcare Information Technology Enterprise Integration Act.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contact is Susan Willie.

Sincerely,

PETER R. ORSZAG.

Enclosure.

H.R. 2406—Healthcare Information Technology Enterprise Integration Act

H.R. 2406 would direct the National Institute of Standards and Technology (NIST) to develop a plan to coordinate efforts by the health care industry and federal agencies to integrate the information systems that support health care services. The bill also would require NIST to report to the Congress on the status of efforts to develop guidelines and standards to ensure that such information technology (IT) systems are interoperable and secure. H.R. 2406 also would authorize NIST to establish a grant program to encourage the development of IT systems that would meet established standards. Finally, the bill would require the Director of NIST to establish a task force to develop a strategic plan to standardize the terms and classifications used in developing integrated IT systems.

The bill would authorize the appropriation of $8 million in each of fiscal years 2009 and 2010. Based on information from NIST, CBO estimates that implementing the provisions of H.R. 2406 would cost $16 million over the 2008–2012 period, subject to appropriation of the amounts authorized to be appropriated to NIST in the America COMPETES Act. Enacting H.R. 2406 would not affect direct spending or revenues.

H.R. 2406 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act. The bill would authorize a grant program that could benefit public institutions of higher education. Any costs they might incur would result from complying with conditions of federal assistance.

The CBO staff contact for this estimate is Susan Willie. This estimate was approved by Theresa Gullo, Deputy Assistant Director for Budget Analysis.

XI. COMPLIANCE WITH PUBLIC LAW 104–4

H.R. 2406 contains no unfunded mandates.

XII. COMMITTEE OVERSIGHT FINDINGS AND RECOMMENDATIONS

The oversight findings and recommendations of the Committee on Science and Technology are reflected in the body of this report.

XIII. STATEMENT ON GENERAL PERFORMANCE GOALS AND OBJECTIVES

Pursuant to clause 3(c) of House rule XIII, the goals of H.R. 2406 are to advance the adoption of healthcare information technology systems in the private sector and the Federal government, by accelerating the development of technical standards that will enable these systems to be interoperable while protecting the security of patients' health information.

XIV. CONSTITUTIONAL AUTHORITY STATEMENT

Article I, section 8 of the Constitution of the United States grants Congress the authority to enact H.R. 2406.

XV. FEDERAL ADVISORY COMMITTEE STATEMENT

No Federal Advisory Committees are created by H.R. 2406.

XVI. CONGRESSIONAL ACCOUNTABILITY ACT

The Committee finds that H.R. 2406 does not relate to the terms and conditions of employment or access to public services or accommodations within the meaning of section 102(b)(3) of the Congressional Accountability Act (Public Law 104–1).

XVII. EARMARK IDENTIFICATION

H.R. 2406 does not contain any congressional earmarks, limited tax benefits, or limited tariff benefits as defined in clause 9(d), 9(e), or 9(f) of rule XXI.

XVIII. STATEMENT ON PREEMPTION OF STATE, LOCAL, OR TRIBAL LAW

This bill is not intended to preempt any state, local, or tribal law.

XIX. CHANGES IN EXISTING LAW MADE BY THE BILL, AS REPORTED

This bill makes no changes in existing law.

XX. COMMITTEE RECOMMENDATIONS

On October 24, 2007, the Committee on Science and Technology favorably reported the Healthcare Information Technology Enterprise Integration Act by a voice vote, and recommended its enactment.

XXI. ADDITIONAL VIEWS ON H.R. 2406, THE "HEALTH INFORMATION TECHNOLOGY ENTERPRISE INTEGRATION ACT" OF REPRESENTATIVES RALPH HALL, PHIL GINGREY, VERNON EHLERS, MICHAEL MCCAUL, TOM FEENEY AND ADRIAN SMITH

The American Health Information Community (AHIC) is a federal advisory body, chartered in 2005 to make recommendations to the Secretary of the U.S. Department of Health and Human Services on how best to accelerate the development and adoption of health information technology, including terminologies and classifications. Since 2005, the Federal Government has spent $122 million for activities related to coordinating health information technology, and the President has budgeted $118 million for FY 2008. In addition, AHIC and the National Library of Medicine are already working on medical terminologies and definitions. Additionally, the Office of the National Coordinator at the Department of Health and Human Services also established the Health Information Technology Standards Panel (HITSP)—public/private partnership with broad participation across more than 300 health related organizations—to identify and harmonize data and technical standards for healthcare.

At the Committee markup of H.R. 2406, an amendment was offered by Mr. Hill to create a new "task force" that is run through the National Institute of Standards and Technology (NIST) in consultation with the National Science Foundation (NSF). The minority feels that such a charter is not only redundant, but may slow the forward progress that is already being made by AHIC and HITSP. Indeed, AHIC has already recommended adoption of some standards, and several have already been rolled out.

Even more problematic to the minority is that the Hill amendment would go against NIST's core competencies and instead saddle NIST with responsibilities far outside of its expertise. NIST has never been a body that set standards. It takes an agreed-upon policy and develops the technical standards around that policy. However, as head of this new task force, NIST would be also charged with creating recommendations for the design of a centralized authority that develops, encourages adoption of, and maintains health information technology terminologies and classifications. These roles are beyond the scope of NIST. Further complicating this process, the amendment by Representative Hill also adds another agency into the picture—one that also lacks the expertise or experience in setting policies for health information technology. It is inadvisable for NIST to consult specifically with the NSF. While the NSF does have an important role to play with information technologies basic research, some of which may have the potential to be used by the health industry, determining standards and health terminology is not within their expertise.

Representative Gingrey (GA) offered a perfecting amendment to the amendment offered by Representative Hill (IN). The purpose of this perfecting amendment was to remove the National Science Foundation (NSF) from the task force to evaluate creation of national policies on health information technology standards. This amendment was supported by the minority, but was voted down by the majority. The Hill amendment to the bill was accepted in its original format after a vote in Committtee and will be included in the bill that is reported to the House.

In addition to concerns about the Hill amendment, the minority is also concerned with the language directing funding for this bill come from funds authorized for the COMPETES Act of 2007 (PL 110–69). Retroactively authorizing programs through previously authorized legislation sets a questionable precedent for future programs to be authorized in a similar manner. This practice would hamper the agencies enumerated in COMPETES which have long suffered declining or stagnant budgets. The purpose of the COMPETES Act was to increase America's competitiveness and innovation capacity. It is not clear that this bill directly achieves that purpose.

We urge our colleagues to consider the vital importance of properly and effectively creating national policies on health information technology standards in a focused manner so that these policies are universally and quickly adoptable.

RALPH M. HALL.
VERNON J. EHLERS.
PHIL GINGREY.
MICHAEL T. MCCAUL.
TOM FEENEY.
ADRIAN SMITH.

XXII. PROCEEDINGS OF THE FULL COMMITTEE MARKUP ON H.R. 2406, TO AUTHORIZE THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY TO INCREASE ITS EFFORTS IN SUPPORT OF THE INTEGRATION OF THE HEALTH CARE INFORMATION ENTERPRISE IN THE UNITED STATES

WEDNESDAY, OCTOBER 24, 2007

HOUSE OF REPRESENTATIVES,
COMMITTEE ON SCIENCE AND TECHNOLOGY,
Washington, DC.

The Committee met, pursuant to call, at 10:10 a.m., in Room 2318 of the Rayburn House Office Building, Hon. Bart Gordon [Chairman of the Committee] presiding.

Chairman GORDON. Good morning. The Committee will come to order, pursuant to notice. The Committee of Science and Technology meets to consider the following measures: H.R. 2406, *To authorize the National Institute of Standards and Technology to Increase its efforts in support of the integration of health care information enterprises in the United States;* H.R. 3877, the *Mine Communications Technology Innovation Act;* and H.R. 1834, the *National Ocean Exploration Program Act.*

As we start, let me welcome back Mike Quear. Mike is the brains and the inspiration for, particularly the health care bit of this. As we pointed out the other day, Mr. Hall was very complimentary; Mike had a stroke recently, complicated by some other matters. He is back, and we are glad you are here, Mike. You are very important to the entire Committee.

We now proceed with the markup, and I will begin with a brief statement. Today the Committee meets to markup three bills dealing with a wide range of issues.

The first bill we will markup, H.R. 2406, deals with the issue of health care information technology. The broad use of IT in the health care sector could have far reaching benefits, including saving tens of billions of dollars per year—and that is tens of billions of dollars for both the taxpayers as well as for patients—improving the quality of medical care, and reducing dangerous medical errors.

But meeting the challenge of developing and maintaining such a system is not simple. In order to achieve broad implementation, we need widely accepted technical standards that will let health care IT systems inter-operate while protecting patient privacy.

H.R. 2406 authorizes the National Institute of Standards and Technology to increase its efforts to support the integration of health care IT in the United States, to develop or adapt or adopt existing technical health care IT standards for federal agencies, and to create a university grant program for multi-disciplinary research in health care IT—and I thank Mr. Wu for that addition. The bill is based on the recommendations of a report by the President's Information Technology Advisory Committee in 2004 and a study by the National Academies in 2005.

The next bill we will markup is H.R. 3877, which addresses the issue of underground mine communication technology.

Tragedies in West Virginia and Utah over the last few years have given us a painful illustration for the need for robust emergency communications in mines.

H.R. 3877 authorizes research and standards development programs to address the important challenge of communication technology for underground mines. The bill authorizes an R&D and standards development program at the National Institute of Standards and Technology at NIST to promote development of innovative communications and tracking technologies of underground mines.

To be clear, this bill has not, in any way, diminished the role of the National Institute for Occupational Safety and Health. NIST's efforts to promote improved communications technology through R&D and technical standards only support NIOSH's important work. And I want to thank Mr. Matheson for bringing this very important and timely issue to us.

The *National Ocean Exploration and National Undersea Research Program Act* formally authorizes two programs at NOAA that have made important contributions to our knowledge of the oceans and developed technologies that enable us to explore these vast areas of our planet.

Once again the Committee has three good bills in front of it, which do address three different, but critical issues.

And once again, we are marking up both Republican and Democratic bills, because as I have said before, good ideas are good ideas, regardless of where they might originate. And I urge my colleagues to support each of these good bills.

I now recognize Mr. Hall to present his opening remarks.

[The prepared statement of Chairman Gordon follows:]

PREPARED STATEMENT OF CHAIRMAN BART GORDON

Today the Committee meets to markup three bills dealing with a wide range of issues.

The first bill we will markup, H.R. 2406, deals with the issue of health care information technology. The broad use of IT in the health care sector could have far reaching benefits, including saving tens of billions of dollars per year, improving the quality of medical care, and reducing dangerous medical errors.

But meeting the challenge of developing and maintaining such a system is not simple. In order to achieve broad implementation, we need widely accepted technical standards that will let health care IT systems inter-operate while protecting patient privacy.

H.R. 2406 authorizes the National Institute of Standards and Technology (NIST) to increase its efforts to support the integration of health care IT in the United States, to develop or adopt existing technical health care IT standards for federal agencies, and to create a university grant program for multi-disciplinary research in health care IT.

The bill is based on the recommendations of a report by the President's Information Technology Advisory Committee (PITAC) in 2004 and a study by the National Academies in 2005.

The next bill we will markup is H.R. 3877, which addresses the issue of underground mine communication technology.

Tragedies in West Virginia and Utah over the last few years have given us a painful illustration of the need for robust emergency communications in mines.

H.R. 3877 authorizes research and standards development programs to address the important challenge of communications technology for underground mines. The bill authorizes an R&D and standards development program at the National Institute of Standards and Technology (NIST) to promote development of innovative communications and tracking technologies for underground mines.

To be clear, this bill does not in any way diminish the role of the National Institute for Occupational Safety and Health (NIOSH). NIST's efforts to promote improved communications technology through R&D and technical standards support NIOSH's important work.

Historically, NIST has worked with industry and federal agencies on long- term R&D projects and development of technical standards, including first responder radio communications, and is the best agency to bridge the research and technology gap in the field of mine communications.

Finally, we will also consider H.R. 1834, introduced by our colleague on the Natural Resources Committee, Rep. Saxton. The *National Ocean Exploration and National Undersea Research Program Act* formally authorizes two programs at NOAA that have made important contributions to our knowledge of the oceans and developed technologies that enable us to explore these vast areas of our planet.

Once again the Committee has three good bills in front of it which address three different, but critical issues.

And once again, we are marking up both Republican and Democratic bills, because as I have said before, good ideas are good ideas regardless of where they come from. I urge my colleagues to support each of these good bills.

Mr. HALL. Thank you, Mr. Chairman. As you very ably pointed out, I am pleased, and our side of the docket is pleased that this committee is marking up three good bills today.

H.R. 2406 will certainly help clarify and codify NIST's role in the integration of health information technology. NIST has played a very important role in health information technology through their work with the Department of Health and Human Services, and this legislation helps them to continue that vital role as we develop inter-operability standards.

H.R. 3877 offers another opportunity to clarify NIST's role in the important area of mine communication technology. AS the tragedy in Utah unfortunately illustrated, we have a lot of work to do to improve communications between surface personnel and underground miners so as to advance miner health and safety.

And finally, H.R. 1834 authorizes two programs that are already in existence at NOAA, the Ocean Exploration Program and the National Undersea Research Program. These are two excellent initiatives, and it is time that we codify their goals and objections into law.

I would like to thank you and your staff for working with us to improve these bills and craft good policy.

I yield back the balance of my time.

[The prepared statement of Mr. Hall follows:]

PREPARED STATEMENT OF REPRESENTATIVE RALPH M. HALL

Thank you, Mr. Chairman. I am pleased that this committee is marking up three good bills today. H.R. 2406 will help clarify and codify NIST's role in the integration of health information technology. NIST has played an important role in health information technology through their work with the department of health and human services, and this legislation helps them continue that vital role as we develop interoperability standards.

H.R. 3877 offers another opportunity to clarify NIST's role in the important area of mine communications technology. As the tragedy in Utah unfortunately illustrated, we have a lot of work to do to improve communications between surface personnel and underground miners so as to advance miner health and safety.

Finally, H.R. 1834 authorizes two programs that are already in existence at NOAA, the Ocean Exploration Program and the National Undersea Research Program. These are two excellent initiatives, and it is time that we codify their goals and objectives into law.

I would like to thank you and your staff for working with us to improve these bills and craft good policy.

I yield back the balance of my time.

Chairman GORDON. Thank you, Mr. Hall.

Without objection, Members may place statements in the records at any point.

[The prepared statement of Mr. Mitchell follows:]

PREPARED STATEMENT OF REPRESENTATIVE HARRY E. MITCHELL

Thank you, Mr. Chairman.

As you know, our nation is facing a health care crisis. And I'm not even talking about the rising cost. We have an information crisis. Different information is stored in different systems, and too often we have to jump through hoops do share it. We have yet to get vital health information stored in one uniform system.

The inability to share health information puts patient care at risk. According to the Institute of Medicine, as many as 98,000 people die in hospitals yearly from medical errors such as improper medications and incorrect diagnoses, and as much as 49 percent of diagnostic testing is replicated because previous tests results are not readily accessible.

In addition to the honor of serving on this committee, I have the honor of serve as Chairman of the Veterans' Affairs Committee's Subcommittee on Oversight and Investigations. In the course of our work there, we have seen serious problems with medical information sharing between the Department of Defense and the Veterans Administration. Veterans are finding technological and bureaucratic hurdles when they try to access their own medical histories. This puts their medical care at risk, and I think our nation's heroes deserve better.

I am pleased with the work that the Science and Technology Committee has dome to help create a solution to this long vexing problem. I am a proud co-sponsor of H.R. 2406, and I am confident that this legislation will establish the technical standards necessary to ensure secure and accurate health care information sharing between federal agencies like the DOD and the VA.

I yield back.

[The prepared statement of Mr. Gingrey follows:]

PREPARED STATEMENT OF REPRESENTATIVE PHIL GINGREY

Mr. Chairman, I thank you for this opportunity to work with you on this important bill in a truly bipartisan fashion. I want to openly express my support for H.R. 2406.

Together, over the past few weeks since our last hearing you and I have worked closely together to make some very crucial changes to this bill so that this bill will best capture the role of NIST and the use of their technical expertise in assisting with the future of standards development in health information technology.

As you know, health information technology is a topic of great importance to me as a physician Member of this body—so I appreciate you putting forth this important legislation and I am excited to see the immense amount of positive impact your bill will have on properly developing inter-operability standards for Health Information Technology.

As I have stated many times before, Health Information Technology is one of the most promising ways to tackle today's problem of skyrocketing health care costs. According to a recent Rand study A *correctly implemented* and *widely adopted* interoperable HIT system would save the American health care system more than **$160 billion annually.**

In addition to this immense cost savings, there is the possibility that according to a recent IOM study a properly implemented HIT would **eliminate medical errors that lead to almost 100,000 deaths every year.**

Health information technology is and should continue to be a priority in Washington. Reaching our full potential for HIT in the **most efficient and effective way** is essential to providing the best future health care and taxpayer return to our American people and I believe that NIST is a vital player in this arena.

In the words of NIST themselves, NIST has a strong history in serving as a neutral third party in addressing sensitive measurement issues and have had a reputation of success because they have been committed to their scope of **assisting in** and working closely **with** the development of "best practices" of standards using these high level of technical expertise. This is **NOT** to be confused with developing the best practices guidelines themselves.

Therefore I am so glad that Chairman Gordon put forth this legislation that focuses of the technical expertise that the National Institute of Standards and Technology will official bring to the table in assisting ongoing efforts to the creation and implementation of HIT inter-operability standards not only quickly, but properly.

This bill has three specific and well targeted goals. (1)The first is to codifies into statute the role of NIST in the development of Health Information Technology Standards. (2) Second, is to clearly indicate that NIST's role will be to give technical assistance for the development and adoption of these of standards. (3) Third, is to allow NIST the authority to grant funds to institutes of higher education to research technical components of HIT.

I want to commend the Chairman for taking into account the repeated recommendations of the witnesses at our hearing a few weeks ago and working in a bipartisan fashion with the Minority to create legislation that will NOT allow the duplication of efforts already underway at HHS for national HIT standards and at the NIH's National Library of Medicine for international HIT standards.

Every one of the witnesses repeatedly mentioned the crucial importance of NOT duplicating and not undermining the efforts already underway by our own government organizations. Duplication of such efforts would be a waste of tax-payer dollars and would undermine the goals of bringing HIT effectively to the tax-paying American people. Therefore, I again commend the special efforts Chairman Gordon has taken in his bill to specifically indicate that NIST's efforts should only build upon and not undermine efforts already taking place.

I thank you again Mr. Chairman and I look forward to a successful markup of this bill that will continue to capture the strengths of H.R. 2406.

Chairman GORDON. We will now consider H.R. 2406, *To authorize the National Institute of Standards and Technology to increase its efforts in support of the integration of health care information enterprise in the United States,* and I yield myself five minutes to describe the bill.

The goal of H.R. 2406 is to promote the adoption and utilization of information technology in the health care community and creation of an inter-operable and secure network of electric health care records. There is a general consensus that the result of fully utilized information technology would be to lower costs—and when I mean lower costs, I mean billions of dollars in lower costs—for both the Federal Government as well as for patients, and to improve patient care.

Regardless of its acknowledged benefits, the use of IT by the health care community remains low and lags far behind other segments of our economy, such as financial services, banking manufacturing, and e-business. In January, I started holding a series of roundtables with the health care community to identify the barriers to their use of IT. What I discovered was concern about the lack of inter-operability between the different health care IT systems as well as serious reservations about the security, confidentiality, and privacy of patient data in electronic format were major issues of the health care community.

In a world of electronic information, these issues can only be resolved through the development of technical standards, and these standards currently do not exist in any comprehensive form.

NIST already has a proven track record in this type of work. One reason IT has been so heavily utilized in the banking, financial services, and e-business, telecommunications and manufacturing has been NIST's support for the development of inter-operability and security standards in those sectors. H.R. 2406 builds upon NIST's proven track record.

In addition, H.R. 2406 implements the recommendations of the President's Information Technology Advisory Committee report revolutionizing health care through information technology and the National Academies of Engineering and the Institute of Medicine's Report, *Building a Better Delivery System in Engineering Healthcare Partnership.* H.R. 2406 also incorporates the recommendations and views that the T&I Subcommittee received at its hearing. In addition, H.R. 2406 authorizes activities which NIST identifies as areas where they could do more work and make significant contributions to the health care field.

Later, I will also be offering a manager's amendment to H.R. 2406. This amendment reflects the comments the Committee received during our September hearing on the bill, and in consolation with NIST. And I want to thank Dr. Gingrey and his staff for their input in making this amendment even a better amendment. I would encourage the adoption of this amendment, and I urge my colleagues to support the bill.

I now recognize Mr. Hall to present any remarks on the bill.

Mr. HALL. Chairman, I thank you, and I, too, would like to express my support for H.R. 2406, a bill to authorize NIST's efforts to assist in the development of health information technology standards.

America has the most advance health care system in the world, and our doctors and scientists have extended and improved the lives of people worldwide. Our nation offers cutting-edge research and technologies to offer hope to millions of people; however, despite these amazing advancement, our health care system is hampered by outdated recordkeeping.

Far too many patients suffer from paper-record errors and mistakes rising from the inability to get timely information to health care providers. Indeed, several studies indicate that our country could save tens of billions of dollars annually by moving to electronic health care records. But in order for that to happen, we need to have clear inter-operability standards for industries to follow so that we can safely and securely share electronic data between computer networks.

This legislation will codify the role that NIST plays in advancing health information technology standards.

I would like to thank Dr. Gingrey, also, as you have, Mr. Chairman, for working so closely with our staff and yours in this legislation, and I want to yield the balance of my time to him to speak on the bill.

But before I close, I want to acknowledge Mr. Quear's excellent work on this legislation. He has worked long and hard on the topic over the last few months and years, and his efforts have continued even while he was recuperating from his illness. I have worked with him as a Democrat, and I have worked with him as a Repub-

lican, and you can't hook him up wrong. We are awfully glad to have him back.

[The prepared statement of Mr. Hall follows:]

PREPARED STATEMENT OF REPRESENTATIVE RALPH M. HALL

Thank you, Mr. Chairman. I, too, would like to express my support for H.R. 2406, a bill to authorize NIST's efforts to assist in the development of health information technology standards.

America has the most advanced health care system in the world. Our doctors and scientists have extended and improved the lives of people worldwide. Our nation offers cutting-edge research and technologies to offer hope to millions.

However, despite these amazing advancements, our health care system is hampered by outdated record keeping. Far too many patients suffer from paper-record errors and mistakes arising from the inability to get timely information to health care providers. Indeed, several studies indicate that our country could save tens of billions of dollars annually by moving to electronic health care records. But, in order for that to happen, we need to have clear inter-operability standards for industries to follow so that we can safely and securely share electronic data between computer networks.

This legislation will codify the role that NIST plays in advancing health information technology standards. I would like to thank Dr. Gingrey for working so closely with our staff and yours on this legislation, and I want to yield the balance of my time to him to speak on the bill.

But before I close, I want to acknowledge Mike Quear's excellent work on this legislation. He has worked long and hard on this topic over the last few months and years, and his efforts have continued even while he was recuperating from his illness. I know that we all wish him a speedy recovery and return to Washington.

With that, I yield the balance of my time to the distinguished Member from Georgia, Dr. Gingrey.

Chairman GORDON. With that, I yield the balance of my time to the distinguished Member from Georgia, Dr. Gingrey.

Mr. GINGREY. Mr. Chairman, I thank you and the Ranking Member for yielding time to me to make an opening statement as well, and it has been great to work with you on truly an important bill in a bipartisan fashion. I want to openly express my support, indeed, for H.R. 2406.

Together over the past few weeks since our last hearing, you and I have worked closely to make some very crucial changes to this bill so that it will best capture the role of NIST and the use of their technical expertise in assisting with the future of standards development in health information technology. As you know and have already stated, health information technology is a topic of great importance to me as a physician member of this body, and so, indeed, I appreciate you putting forth this important legislation, and I am excited to see the immense amount of positive impact your bill will have on properly developing inter-operability standards for HIT.

As I have stated many times before, health information technology is indeed one of the most promising ways to tackle today's problems of skyrocketing health care costs. According to a recently Rand study, a correctly implemented and widely adopted inter-operable HIT system would save the American health care system more than—and it has already been said—billions of dollars. But the ran study actually said more than $160 billion annually, so we are talking about a huge amount of savings.

In addition to this immense cost savings, there is a possibility that, according to a recent Institute of Medicine study, a properly implemented HIT would eliminate medical errors that lead to almost 100,000 deaths every year. Now, this was a report by Insti-

tute of Medicine a number of years ago, and I think they are probably pretty accurate.

Health information technology is and should continue to be a priority in Washington. Reaching our full potential in the most efficient and effective way is essential to providing the best future health care and taxpayer return to our American people, and I believe that NIST is a vital player in this arena.

In the words of NIST themselves, NIST has a strong history in serving as a neutral third party in addressing sensitive measurement issues, and have had a reputation of success because they have been committed to their scope and assisting in and working closely with the development of best practices of standards used in these high levels of technical expertise. This is not to be confused with developing the best practices guidelines, themselves.

Therefore, I am so glad that Chairman Gordon put forth this legislation that focuses on the technical expertise that NIST will officially bring to the table in assisting ongoing efforts to the creation and implementation of HIT inter-operability. So I want to commend the Chairman. I think that this is a good bill. I have got a second-degree amendment that I will offer at a later time, but I thank the Chairman, and I look forward to a successful markup of this bill, and that will continue to capture the strength of H.R. 2406.

Chairman GORDON. Thank you, Dr. Gingrey, for your really helpful firsthand information on this issue. Does anyone else wish to be recognized?

Mr. BARTLETT. Mr. Chairman?

Chairman GORDON. Mr. Bartlett is recognized.

Mr. BARTLETT. I would just like to note that our country really doesn't have much of a health care system. We have a really good sick-care system, the best in the world. And I would hope that we can move towards more of a health care system so that we will have less and less need for our really good sick-care system. Thank you very much.

Chairman GORDON. Thank you, Mr. Bartlett. You always add to our body of information.

Does anyone else wish to be recognized?

I ask unanimous consent that the bill is considered as read and open to amendment at any point and that the Members proceed with the amendments in the order of the roster. Without objection, so ordered.

The first amendment on the roster is the manager's amendment, offered by the Chair.

The Clerk will report the amendment.

The CLERK. Amendment to H.R. 2406, offered by Mr. Gordon of Tennessee.

Chairman GORDON. I ask unanimous consent to dispense with the reading. Without objection, so ordered.

I recognize myself for five minutes to explain the amendment. This amendment makes some important improvements to H.R. 2406. It reflects the helpful comments the Committee received from witnesses and stakeholders during our September hearing on the bill, and in consultation with NIST, and with Ranking Member Hall, and with Mr. Gingrey.

Specifically, the amendment makes clear that NIST's activities will complement, not compete, against the work of the National Coordinator of the Department of Health and Human Services by conducting work on technical standards for HIT. IT also ensures that NIST will fully participate in the development of technical standards and guidelines in cooperation and collaboration with the private sector.

The amendment emphasizes that NIST will focus on technical-security issues. It is not the intent of the Committee that NIST should become engaged in privacy policy issues.

Finally, the amendment strikes the language creating a senior interagency council for all federal health care information technology infrastructures to avoid redundancy and makes additional minor corrections.

I would strongly urge adoption of the amendment, and I would like to ask Counsel if—Mike is here—if the—Mr. Gingrey had a good suggestion that the 12-month study be increased to 18 months. Was that included in this amendment? Do you know? Was that included? Okay, excuse me. I think that speaks for itself, then.

Is there further discussion on the amendment? If not, the occurs upon the amendment. All in favor, say aye; opposed, no. The ayes have it. The amendment is agreed to.

The second amendment on the roster is offered by Mr. Hill. The gentleman from Indiana, are you ready to proceed with you amendment?

Mr. HILL. I am, Mr. Chairman.

Chairman GORDON. The Clerk will report the amendment.

The CLERK. Amendment to H.R. 2406, offered by Mr. Hill of Indiana.

Chairman GORDON. I ask unanimous consent to dispense with the reading. Without objection, so ordered.

The gentleman is recognized for five minutes to explain his amendment.

Mr. HILL. Thank you, Mr. Chairman, for introducing this important piece of legislation. Moving our health information technology into the 21st century can both save money and improve the quality of care for patients.

By increasing health IT capabilities, medical professionals will better be able to access critical health information of patients. And by streamlining health information retrieval, we can better ensure higher quality of care for patients. We currently have the technology to make this possible. The Chairman's bill is terrific start, and my amendment would improve the facilitation of this transition.

My amendment would direct the National Institute of Standards and Technology, NIST, and the National Science Foundation, NSF, to create a task force, comprised of other federal agencies and private industry groups to develop a strategic plan for implementation of health care technologies and classifications. This roadmap would provide several important recommendations, including the following: a plan for the development, adoption, and maintenance of terminologies and classifications; a plan for gaining the commitment of stakeholders to principles and guidelines for this process;

and a plan to design a centralized authority or governance model to maintain the program.

Eighteen months after this legislation is enacted, the task force would report its findings back to the Science Committee, where we can then debate and enact further legislation if we deem it necessary.

Mr. Chairman, my amendment would begin the process of brining stakeholders together and develop strategies that would move us forward. My amendment is endorsed by the American Health Information Management Association and the American Medical Informatics Association.

Mr. Chairman, this basically does one thing: according to the old Bible scriptures, there is the Tower of Babel, where we had many different languages. This amendment tears down the Tower of Babel and creates a common language that is so important to deliver health technology.

So I ask unanimous consent to insert the support letter of the American Health Information Management Association and the American Medical Informatics Association into the record, and Mr. Chairman, I thank you for bringing a well drafted bill that addresses a critical area of need for our country, and I urge the adoption of my amendment.

[The information follows:]

October 23, 2007

Honorable Bart Gordon
Chairman
House Science and Technology Committee
2320 Rayburn House Office Building
Washington, DC 20515

Dear Mr. Chairman:

The American Health Information Management Association (AHIMA) and the American Medical Informatics Association (AMIA) are writing to express our support for HR 2406, a bill to authorize the National Institute of Standards and Technology (NIST) to increase its efforts in support of the integration of the healthcare information enterprise in the United States. HR 2406 initiates the important step of adding the electronic commerce, information technology, security and confidentiality expertise of the NIST laboratories to the public/private standards development process already underway.

AMIA and AHIMA thank you for your leadership on this important issue. We have been pleased to work with you on further modifying HR 2406 to account for and recognize the current standards development, adoption and certification environment. Critical progress has been made with standards over the past several years and we believe adding NIST's expertise to the process will help with accelerating those efforts. We are also pleased to offer our support for the amendment being offered by Rep. Baron Hill which recognizes the need for research on the important issue of coordinating and standardizing terminologies and classifications to help succeed in our nation's transition to an interoperable healthcare system. This research will enable an in-depth look at the systems and organization necessary to describe, organize and standardize the language of medicine and health along with assessing the components necessary for the establishment of a healthcare terminologies and classifications public/private authority to ensure the U.S. has:

- Robust and up-to-date terminologies and classifications for interoperability between systems
- Standards for developing terminologies and classifications in the EHR and PHR, including implementation guides
- Principles and guidelines for development, distribution, and maintenance of systems and coordination across systems
- Effective, responsible, international participation
- Timely and reliable industry guidance
- A coherent set of policies and procedures to ensure openness and performance for terminologies, classifications, and the systems that convert data encoded in one terminology or classification to another
- Business process automation to ensure cost-effective development of systems and cost-effective use by providers, payers, and other organizations.

Mr. Chairman, health information technology is a critical healthcare issue that can surely assist our healthcare system by protecting patient safety, reducing administrative costs and increasing efficiency, reducing fraud and abuse, and protecting the confidentiality and security of an individual's personal health information. To realize the potential of health information technology, we must ensure an efficient technical and data standards development process. Your bill is truly an important step that will assist with the harmonization of this process. Thank you once again for your leadership on this issue.

Sincerely.

Linda L. Kloss

Don Eugene Detmer

Linda L. Kloss, MA, RHIA, CAE
Chief Executive Officer
Executive Officer
American Health Information Management Association

Don Detmer
President and Chief
American Medical Informatics Association

Chairman GORDON. Is there further discussion on the amendment?

Dr. Gingrey is recognized.

Mr. GINGREY. Mr. Chairman, I do rise in opposition to this amendment, really, because I think we end up getting too much babbling, as Mr. Hill mentioned.

There is already a task force underway, designed to achieve the ends of the Hill amendment. The American Health Information Community, AHIC, is a federal advisory body, chartered in 2005, to make recommendations to the Secretary of the U.S. Department of Health and Human Services on how to accelerate the development and adoption of HIT, including terminologies and classifications. Since 2005, the Federal Government has already spent $122 million for activities related to coordinating health information

technology, and the President has budgeted $118 million for FY 2008.

In addition, AHIC and the National Library of Medicine are already working on medical terminologies and definition. The Office of the National Coordinator at the Department of Health and Human Services also established the Health Information Technologies Standards Panel, HITSP, and this is a public-private partnership, with broad participation across more than 300 health-related organizations for the purposes of identifying and harmonizing data and technical standards for health care. So I say establishing a new task force that is run through NIST and NSF is not only redundant, but it also may slow the forward progress that is already being made by AHIC and HITSP.

Indeed, AHIC has already recommended adoption of some standards, and several have already been ruled out, so this amendment would go against NIST's core competency and instead saddle NIST with, I think, responsibilities that are outside of their expertise. NIST has never been a body that sets standards. They take an agreed-upon policy and then develop the technical standards around that policy. While this amendment does not task them with setting standards, it does put them in charge of a task force that creates recommendations for the development and adoption of terminologies and classifications.

Moreover, as head of this task force, NIST is also charge with creating recommendations for the design of a centralized authority on this topic. Both of these roles, I think, are beyond the scope of NIST, so I think that this amendment unduly complicates an otherwise good, bipartisan bill.

And again, I think, you know, you got too much babbling, quite honestly. It brings in another agency that was not part of the mix before. It is not clear why NIST would consult specifically with the National Science Foundation. In addition, this amendment does not clarify what NSF will do, exactly, so you know, for these reasons, Mr. Chairman, I respectfully oppose the Hill amendment, and I yield back.

Chairman GORDON. Thank you, Mr. Gingrey. Let me say again, I think those were very thoughtful comments.

Let me give you some background on the origin of this amendment. These were stakeholders that came to the Committee with these recommendations, and I guess this somewhat simplifies it, but I think the way to look at this is that our original bill looks at inter-operability on a national basis. What this does is add another level to it, and that is it helps to look at it on a more international basis. The reason that is important, as you know, now, oftentimes, x-rays that are taken during the day might be read and developed in India or Australia during our night/their day, sent back to us. I think this can add to additional savings. I think this can add, hopefully, to exports as our stakeholders told us.

The reason that the National Science Foundation has a very small role here, consultative role, is that they deal with the international business community. They are best able to help us with that international piece of it. We, as always, will continue to work with you as we go through this process, as we go to the Senate and beyond. We continue to want to make a good bill better, but from

all that I have seen and heard, I think Mr. Hill's amendment does improve an already good bill.

And I would also—and I was reminded that this is just a report, also, an advisory report.

Mr. Hill is recognized.

Mr. HILL. Mr. Chairman, in my opening remarks, I asked for unanimous consent to insert a letter of endorsement from the American Health Information Management Association and the Medical Informatics Association, so I would repeat that request.

Chairman GORDON. And may I ask, did you amend your amendment, as requested, Mr. Gingrey, to change the report—the time from 12 months to 18 months?

Mr. GINGREY. I did. We changed it from 12 months to 18 months, and that amendment was requested by the gentleman from Georgia, and we have conceded to that request.

Mr. HALL. Mr. Chairman?

Chairman GORDON. Mr. Hall is recognized.

Mr. HALL. I would just say a word or so in opposition to the amendment. And when he goes biblical on me, it reminds me of Billy Graham saying he loved the sinner but he hated the sin.

I am crazy about the author of this bill here, and I admire him very much, and I have worked with him long ago, and he is a good man, and all of you folks that you have mentioned look forward to this because they are part of the task force. I don't blame them for supporting this amendment.

It is not the worst amendment in the world, but why not use HHS, since they are developing this already, and this is already a task force here, and it seems like it is a little redundant. It is not a killer of the bill, but I had hoped that these two men, so thoughtful both of them, and so knowledgeable could get together and work out something that we could agree on.

I yield back my time, and I realize I haven't hardly said anything.

Chairman GORDON. But you do it well, and thank you, Mr. Hall. Dr. Ehlers is recognized.

Mr. EHLERS. Thank you, Mr. Chairman, and I am afraid I will probably say more than the previous speaker, but it will mean less. People from Texas have a way of saying a lot in very few words.

I just have to express some concerns about this, the amendment, and the inclusion NSF. NSF has a lot on its plate. I don't think it has any particular expertise in this area that we want to draw on because they do not—NSF excels not so much by having a lot of expertise in house, but by giving grants to people who do have a lot of expertise and do a lot of research and perform extremely well for our nation, and that has been NSF's role, and I am not sure why we want to include NSF.

Let me also express concern about an even bigger issue. I noticed that the funding for this bill is going to come out of the America Competes funding. The funding for Matheson's bill which is coming up is coming out of the funding for the *America Competes Act.* I never, on any stretch of the imagination, thought that money was going to go to ongoing projects like this. The whole idea is to improve our education, our programs in math and science, to improve our manufacturing capabilities, improve our ability to compete with

other countries, and we are not really competing that much with health care, except for the people who fly to Thailand to get surgery at 10 percent of the cost.

But I hope this is not a trend that every bill that comes along that needs money, we are going to say, well, we will take it out of the *America Competes Act.* On the surface—and I don't like to accuse anyone of subterfuge—but it seems the way to get around the pay requirements that the current Congress has.

I really have to register extreme reservations about starting to use the *America Competes Act* to fund all of the bills that we come up with here, and pretty soon, we will defeat the overall goal.

And I know, Mr. Chairman, you have worked very, very hard on the *America Competes Act,* and I totally agree with you and supported you at every turn of the road on that, but I just want to throw a precaution flag here and say, hey, wait a minute. That is not what I thought we were going to use that money for.

With that, I will yield back.

Chairman GORDON. Thank you, Mr. Ehlers.

Let me, again, thank you for always having a very thoughtful approach to this. I will make a couple of suggestions. First of all, as you know, the—for NIST in the *America Competes Act* was doubled. You say that we are not competing with other countries in terms of health care, i.e. Thailand or whatever might be the case. The fact of the matter is I would say that we are in dramatic competition, because our health care costs is the most rapid growing part of any business's bills. You know, if you look at automobiles right now, we talked about automobiles not being competitive. To a great extent, the reason is the health care costs, so clearly, by getting our health care costs down, I think it does make us more competitive.

I agree with you that his should not be a kitty that we go to for every pet cause. I very sincerely think that reducing our health care costs makes us more competitive on an international basis, and I certainly yield to Dr. Ehlers for any other comments.

Mr. EHLERS. Well, obviously, I am well aware of the automobile situation, being from Michigan. The problem is not just health care costs, but the fact that the auto companies gave lifetime health benefits to retirees who are retiring at age 55 and weren't expected to live that long. So they dug themselves, both the unions and the companies, dug themselves into a huge hole.

I recognize the competitive aspects of health care, but that is not really what the *America Competes Act* was getting at. I am struck by the comment that Mr. Bartlett made before he left, and what he says is very true. I was struck some years ago, when I spent a year in Germany, and at that time, we referred to our health care as hospitalization insurance. Over there, it was called health care. Well, we have changed, but we haven't changed the motif of health care in this country. The reason the Europeans call that is because it is largely preventive, to reduce costs through prevention, which we have no real—we handle it through public health agencies here and never give them enough money.

I am not trying to get into major argument here, but I just want to comment that there are a lot of factors in health care costs other than IT, and I am not sure that really affects the competitiveness

as much as we would like. But I won't make a big issue of it now. I am just serving notice that I have got some pirates waiting to board the ship if this happens again and again. Thank you.

Chairman GORDON. I think you are a good conscience on that issue, and you should be. I would say, as was said, a billion here, a billion there starts to add up. As Dr. Gingrey pointed out, this is hundreds of billions of dollars, and it can make a big difference.

Okay, is there further discussion on the amendment?

Dr. Baird.

Mr. BAIRD. Mr. Chairman, I appreciate very much my Ranking Member and friend Dr. Ehlers's comments about NSF and just wonder if the author of the bill or if someone might enlighten us about the rationale for including NSF, and if they have had a chance to discuss this NSF to see what they would add or whether that would detract from their mission.

Chairman GORDON. If the gentleman would yield to me?

Mr. BAIRD. I would be happy.

Chairman GORDON. Again, it is my—this amendment was developed in response from the stakeholders in trying to take this from more of a national inter-operability to the potential to have international inter-operability. The national—NSF is a point of contact for much of our international scientific work, and it really is not a matter—I mean it is a—I wouldn't say they are a major component of this, but it is an effort to better the best we all can in incremental parts. And that was the reason. This will continue to be fleshed out as the Chairman of the Committee that oversees NSF—we want to continue to get your input on this as we go through the process through the Senate and through conference, and we want to get the best bill possible. The bill that was introduced wasn't the best bill possible. The bill we have today, you know, wasn't the best bill; we have amended it. And I think we can probably continue to do so.

Mr. BAIRD. I appreciate that, and I think NSF does have a strong international component, and that is certainly a worthy aspect of this amendment, and I intend to support the amendment, but I would like to, down the road, you know, before final passage, at least have some discussions with NSF and see what specifically they feel they can add to this debate and make sure that it is not drawing resources, unnecessarily, from an already fairly stretched entity.

Chairman GORDON. If the gentleman would yield? I think that is well said. If you will look at the wording, it says in consultation with the Director of the National Science Foundation. So it is, in essence, to ask them if they have value added. If they say they don't have value added, then we move on.

Mr. BAIRD. I appreciate very much the explanation. Thank you.

Chairman GORDON. Does anyone wish to speak?

Mr. GINGREY. Mr. Chairman?

Chairman GORDON. Dr. Gingrey.

Mr. GINGREY. I have a second-degree amendment to the Hill Amendment.

Chairman GORDON. The Clerk will report the bill.

The CLERK. Amendment to H.R. 2406, offered by Mr. Gingrey of Georgia, to the amendment offered by Mr. Hill of Indiana.

Chairman GORDON. I ask unanimous consent to dispense with the reading. Without objection, so ordered.

The gentleman is recognized for five minutes to explain his amendment.

Mr. GINGREY. Mr. Chairman, thank you, and first of all, let me—I do want to thank Representative Hill.

As he knows, I had two second-degree amendments to offer. One, of course, was to extend the time period for NIST to report back to the Committee. I think the amendment, the original Hill amendment, was nine months, and well, actually, a total of 12 months, three months to form the committee, and nine months to report back. That amendment, or that second-degree amendment would just simply say—and this was at NIST's request—that is not enough time, to give them, instead of 12 months, actually, 18 months, a year and a half. I want to thank Mr. Hill for accepting that amendment and making that a part of, an amendment to, his amendment, so I don't have to offer that second-degree amendment.

The other one, though, that I am offering now, is just simply to strike language that says in consultation with the Director of the National Science Foundation. And as I had mentioned in my remarks in opposition to the Hill Amendment, I felt that, indeed, it brings in yet another agency that was not part of the mix before, and as has been stated, I think, more eloquently than I by Dr. Ehlers, it is really not clear why NIST would consult specifically with the NSF, and I think, actually, Dr. Baird just expressed some concerns, too. What exactly do they bring to the table? I am not clear, and so I think that this amendment would just simply get them out of the mix. As Mr. Hill said in describing his amendment, you know, in making a reference and analogy to the Tower of Babel, sometimes you can put too many cooks and spoil the broth, and I don't really think we need NSF in here, so that is the amendment, and it just simply strikes that language.

And I yield back, Mr. Chairman.

Chairman GORDON. Is there further discussion on the amendment?

Mr. BAIRD. Mr. Chairman?

Chairman GORDON. Dr. Baird is recognized.

Mr. BAIRD. Yes, I appreciate Mr. Gingrey's comments, the gentleman from Georgia, but I think with the chair having pointed out that the language with NSF, basically involving the consultation, given that NSF already has groups working on this, given their international reach, at that level—if we were mandating a whole new operation for NSF, I would, perhaps, be supportive of Mr. Gingrey's amendment, but the notion that we are just consulting with NSF, I think it is a sound judgment, and therefore, I would encourage Mr. Gingrey to perhaps consider withdrawing the portion of his amendment that specifically rules out NSF.

If we are asking on our top science agencies in this country to give us consultation on a matter of this importance, I think that makes sense, and I would support the original language, and urge defeat of this particular amendment.

Chairman GORDON. Thank you, Dr. Baird. Is there further discussion on the amendment? If there is no other discussion, the vote

occurs on Dr. Gingrey's amendment to the amendment. All in favor, say aye; opposed no. In the judgment of the Chair, the nos have it.

Mr. GINGREY. Mr. Chairman, could I have a recorded vote, please?

Chairman GORDON. Certainly. The roll will be called.

The CLERK. Chairman Gordon.

Chairman GORDON. No.

The CLERK. Chairman Gordon votes no. Mr. Costello.

Mr. COSTELLO. No.

The CLERK. Mr. Costello votes no. Ms. Johnson.

[No response.]

The CLERK. Ms. Woolsey.

[No response.]

The CLERK. Mr. Udall.

Mr. UDALL. No.

The CLERK. Mr. Udall votes no. Mr. Wu.

[No response.]

The CLERK. Mr. Baird.

Mr. BAIRD. No.

The CLERK. Mr. Baird votes no. Mr. Miller.

[No response.]

The CLERK. Mr. Lipinski.

Mr. LIPINSKI. No.

The CLERK. Mr. Lipinski votes no. Mr. Lampson.

Mr. LAMPSON. No.

The CLERK. Mr. Lampson votes no. Ms. Giffords.

Ms. GIFFORDS. No.

The CLERK. Ms. Giffords votes no. Mr. McNerney.

Mr. MCNERNEY. No.

The CLERK. Mr. McNerney votes no. Ms. Richardson.

Ms. RICHARDSON. No.

The CLERK. Ms. Richardson votes no. Mr. Kanjorski.

[No response.]

The CLERK. Ms. Hooley.

Ms. HOOLEY. No.

The CLERK. Ms. Hooley votes no. Mr. Rothman.

Mr. ROTHMAN. No.

The CLERK. Mr. Rothman votes no. Mr. Matheson.

Mr. MATHESON. No.

The CLERK. Mr. Matheson votes no. Mr. Ross.

Mr. ROSS. No.

The CLERK. Mr. Ross votes no. Mr. Chandler.

Mr. CHANDLER. No.

The CLERK. Mr. Chandler votes no. Mr. Carnahan.

Mr. CARNAHAN. No.

The CLERK. Mr. Carnahan votes no. Mr. Melancon.

Mr. MELANCON. No.

The CLERK. Mr. Melancon votes no. Mr. Hill.

Mr. HILL. No.

The CLERK. Mr. Hill votes no. Mr. Mitchell.

Mr. MITCHELL. No.

The CLERK. Mr. Mitchell votes no. Mr. Wilson.

[No response.]

The CLERK. Mr. Hall.
Mr. HALL. Aye.
The CLERK. Mr. Hall votes aye. Mr. Sensenbrenner.
[No response.]
The CLERK. Mr. Lamar Smith.
[No response.]
The CLERK. Mr. Rohrabacher.
[No response.]
The CLERK. Mr. Bartlett.
[No response.]
The CLERK. Mr. Ehlers.
Mr. EHLERS. Aye.
The CLERK. Mr. Ehlers votes aye. Mr. Lucas.
Mr. LUCAS. Aye.
The CLERK. Mr. Lucas votes aye. Mrs. Biggert.
Ms. BIGGERT. Aye.
The CLERK. Mrs. Biggert votes aye. Mr. Akin.
Mr. AKIN. Aye.
The CLERK. Mr. Akin votes aye. Mr. Bonner.
[No response.]
The CLERK. Mr. Feeney.
Mr. FEENEY. Aye.
The CLERK. Mr. Feeney votes aye. Mr. Neugebauer.
Mr. NEUGEBAUER. Aye.
The CLERK. Mr. Neugebauer votes aye. Mr. Inglis.
Mr. INGLIS. Aye.
The CLERK. Mr. Inglis vote aye. Mr. Reichert.
[No response.]
The CLERK. Mr. McCaul.
Mr. MR. MCCAUL. Aye.
The CLERK. Mr. McCaul votes aye. Mr. Diaz-Balart.
Mr. DIAZ-BALART. Aye.
The CLERK. Mr. Diaz-Balart votes aye. Mr. Gingrey.
Mr. GINGREY. Aye.
The CLERK. Mr. Gingrey votes aye. Mr. Bilbray.
[No response.]
The CLERK. Mr. Adrian Smith.
Mr. ADRIAN SMITH. Aye.
The CLERK. Mr. Adrian Smith votes aye. Mr. Broun.
[No response.]
Chairman GORDON. The gentleman from California?
The CLERK. Mr. Rohrabacher.
Mr. ROHRABACHER. Aye.
The CLERK. Okay, Mr. Rohrabacher votes aye.
Chairman GORDON. Mr. Wu.
The CLERK. Mr. Wu is not recorded. Mr. Wu votes no.
Chairman GORDON. How is Ms. Woolsey recorded?
The CLERK. Ms. Woolsey is not recorded. Ms. Woolsey votes no.
Chairman GORDON. Happy birthday, Ms. Woolsey.
Ms. WOOLSEY. Thank you very much.
Chairman GORDON. Is there anyone who has not had their vote recorded? If not, the Clerk will report.
The CLERK. Mr. Chairman, 13 Members vote aye, and 20 Members vote no.

COMMITTEE ON SCIENCE AND TECHNOLOGY

ROLL CALL ____1___ BILL H.R. 2406 DATE 10/24/07

AMEND #_____ PASSED X DEFEATED ___ VOICE VOTE ___ WITHDRAW ___

SPONSOR/AMENDMENT
Gingrey

MEMBER	AYE	NO	PRESENT	NOT VOTING
Mr. GORDON, Chairman		X		
Mr. COSTELLO		X		
Ms. JOHNSON				
Ms. WOOLSEY		X		
Mr. UDALL		X		
Mr. WU		X		
Mr. BAIRD		X		
Mr. MILLER				
Mr. LIPINSKI		X		
Mr. LAMPSON		X		
Ms. GIFFORDS		X		
Mr. McNERNEY		X		
Ms. RICHARDSON		X		
Mr. KANJORSKI				
Ms. HOOLEY		X		
Mr. ROTHMAN		X		
Mr. MATHESON		X		
Mr. ROSS		X		
Mr. CHANDLER		X		
Mr. CARNAHAN		X		
Mr. MELANCON		X		
Mr. HILL		X		
Mr. MITCHELL		X		
Mr. WILSON				

Mr. HALL	X			
Mr. SENSENBRENNER				
Mr. LAMAR SMITH, TX				
Mr. ROHRABACHER	X			
Mr. BARTLETT				
Mr. EHLERS	X			
Mr. LUCAS	X			
Mrs. BIGGERT	X			
Mr. AKIN	X			
Mr. BONNER				
Mr. FEENEY	X			
Mr. NEUGEBAUER	X			
Mr. INGLIS	X			
Mr. REICHERT				
Mr. McCAUL	X			
Mr. DIAZ-BALART	X			
Mr. GINGREY	X			
Mr. BILBRAY				
Mr. ADRIAN SMITH, NE	X			
Mr. BROUN				
TOTALS				

Mr. Chairman, 13 Members vote AYE and 20 vote NO

44 / Quorum /15 vote / 22 Report
Revised 8/23/07

Chairman GORDON. Thank you. The amendment fails—amendment to the amendment fails. And let me just quickly say we spent a lot of time on a very small but important part of this bill, because we have spent months on the rest of the bill, and have worked it out to get a very, very good bill, and I thank everyone for this constructive last effort, and it will continue as we go on to Senate and to conference.

The vote now occurs on Mr. Hill's amendment. All in favor, say aye; opposed, nay. It appears the ayes have it. The ayes have it. Is there——

Mr. GINGREY. Mr. Chairman.

Chairman GORDON. Yes?

Mr. GINGREY. I would like a recorded vote on that, please.

Chairman GORDON. The Clerk will call the roll.

The CLERK. Chairman Gordon.

Chairman GORDON. Aye.

The CLERK. Chairman Gordon votes aye. Mr. Costello.

Mr. COSTELLO. Aye.

The CLERK. Mr. Costello votes aye. Ms. Johnson.

[No response.]

The CLERK. Ms. Woolsey.

Ms. WOOLSEY. Aye.

The CLERK. Ms. Woolsey votes aye. Mr. Udall.

Mr. UDALL. Aye.

The CLERK. Mr. Udall votes aye. Mr. Wu.
Mr. WU. Aye.
The CLERK. Mr. Wu votes aye. Mr. Baird.
Mr. BAIRD. Aye.
The CLERK. Mr. Baird votes aye. Mr. Miller.
[No response.]
The CLERK. Mr. Lipinski.
Mr. LIPINSKI. Aye.
The CLERK. Mr. Lipinski votes aye. Mr. Lampson.
Mr. LAMPSON. Aye.
The CLERK. Mr. Lampson votes aye. Ms. Giffords.
Ms. GIFFORDS. Aye.
The CLERK. Ms. Giffords votes aye. Mr. McNerney.
Mr. MCNERNEY. Aye.
The CLERK. Mr. McNerney votes aye. Ms. Richardson.
Ms. RICHARDSON. Aye.
The CLERK. Ms. Richardson votes aye. Mr. Kanjorski.
Mr. KANJORSKI. Aye.
The CLERK. Mr. Kanjorski votes aye. Ms. Hooley.
Ms. HOOLEY. Aye.
The CLERK. Ms. Hooley votes aye. Mr. Rothman.
Mr. ROTHMAN. Aye.
The CLERK. Mr. Rothman votes aye. Mr. Matheson.
Mr. MATHESON. Aye.
The CLERK. Mr. Matheson votes aye. Mr. Ross.
Mr. ROSS. Aye.
The CLERK. Mr. Ross votes aye. Mr. Chandler.
Mr. CHANDLER. Aye.
The CLERK. Mr. Chandler votes aye. Mr. Carnahan.
Mr. CARNAHAN. Aye.
The CLERK. Mr. Carnahan votes aye. Mr. Melancon.
Mr. MELANCON. Aye.
The CLERK. Mr. Melancon votes aye. Mr. Hill.
Mr. HILL. Aye.
The CLERK. Mr. Hill votes aye. Mr. Mitchell.
Mr. MITCHELL. Aye.
The CLERK. Mr. Mitchell votes aye. Mr. Wilson.
[No response.]
The CLERK. Mr. Hall.
Mr. HALL. No.
The CLERK. Mr. Hall votes no. Mr. Sensenbrenner.
[No response.]
The CLERK. Mr. Lamar Smith.
[No response.]
The CLERK. Mr. Rohrabacher.
Mr. ROHRABACHER. No.
The CLERK. Mr. Rohrabacher votes no. Mr. Bartlett.
[No response.]
The CLERK. Mr. Ehlers.
Mr. EHLERS. No.
The CLERK. Mr. Ehlers votes no. Mr. Lucas.
Mr. LUCAS. No.
The CLERK. Mr. Lucas votes no. Mrs. Biggert.
Ms. BIGGERT. No.

The CLERK. Mrs. Biggert votes no. Mr. Akin.
Mr. AKIN. No.
The CLERK. Mr. Akin votes no. Mr. Bonner.
[No response.]
The CLERK. Mr. Feeney.
Mr. FEENEY. No.
The CLERK. Mr. Feeney votes no. Mr. Neugebauer.
Mr. NEUGEBAUER. No.
The CLERK. Mr. Neugebauer votes no. Mr. Inglis.
Mr. INGLIS. No.
The CLERK. Mr. Inglis vote no. Mr. Reichert.
[No response.]
The CLERK. Mr. McCaul.
Mr. MCCAUL. No.
The CLERK. Mr. McCaul votes no. Mr. Diaz-Balart.
Mr. DIAZ-BALART. No.
The CLERK. Mr. Diaz-Balart votes no. Mr. Gingrey.
Mr. GINGREY. No.
The CLERK. Mr. Gingrey votes no. Mr. Bilbray.
[No response.]
The CLERK. Mr. Adrian Smith.
Mr. ADRIAN SMITH. No.
The CLERK. Mr. Adrian Smith votes no. Mr. Broun.
[No response.]
Chairman GORDON. How was Senator Udall reported?
The CLERK. Mr. Udall is not recorded.
Mr. UDALL. Aye.
The CLERK. Mr. Udall votes aye.
Chairman GORDON. Is there anyone else that has not been recorded? The Clerk will report.
The CLERK. Mr. Chairman, 21 Members vote aye, and 13 Members vote no.

COMMITTEE ON SCIENCE AND TECHNOLOGY

ROLL CALL 2 BILL H.R. 2406 DATE 10/24/07

AMEND #_____ PASSED X DEFEATED ___ VOICE VOTE ___ WITHDRAW ___

SPONSOR/AMENDMENT

MEMBER	AYE	NO	PRESENT	NOT VOTING
Mr. GORDON, Chairman	X			
Mr. COSTELLO	X			
Ms. JOHNSON				
Ms. WOOLSEY	X			
Mr. UDALL	X			
Mr. WU	X			
Mr. BAIRD	X			
Mr. MILLER				
Mr. LIPINSKI	X			
Mr. LAMPSON	X			
Ms. GIFFORDS	X			
Mr. McNERNEY	X			
Ms. RICHARDSON	X			
Mr. KANJORSKI	X			
Ms. HOOLEY	X			
Mr. ROTHMAN	X			
Mr. MATHESON	X			
Mr. ROSS	X			
Mr. CHANDLER	X			
Mr. CARNAHAN	X			
Mr. MELANCON	X			
Mr. HILL	X			
Mr. MITCHELL	X			
Mr. WILSON				

Mr. HALL		X		
Mr. SENSENBRENNER				
Mr. LAMAR SMITH, TX				
Mr. ROHRABACHER		X		
Mr. BARTLETT				
Mr. EHLERS		X		
Mr. LUCAS		X		
Mrs. BIGGERT		X		
Mr. AKIN		X		
Mr. BONNER				
Mr. FEENEY		X		
Mr. NEUGEBAUER		X		
Mr. INGLIS		X		
Mr. REICHERT				
Mr. McCAUL		X		
Mr. DIAZ-BALART		X		
Mr. GINGREY		X		
Mr. BILBRAY				
Mr. ADRIAN SMITH, NE		X		
Mr. BROUN				
TOTALS				

Mr. Chairman, 21 Members vote AYE and 13 vote NO

44 / Quorum /15 vote / 22 Report
Revised 8/23/07

Chairman GORDON. The amendment passes. Are there other amendments? If no, then the vote is on the bill H.R. 2406, as amended. All of those in favor, say aye; all opposed, say no. In the opinion of the Chair, the ayes have it.

I recognize Mr. Lampson to offer a motion.

Mr. LAMPSON. Mr. Chairman, I move that the Committee favorably report H.R. 2406, as amended, to the House with the recommendation that the bill do pass. Furthermore, I move that the staff be instructed to prepare the legislative report and make necessary technical and conforming changes and that the Chairman take all necessary steps to bring the bill before the House for consideration.

Chairman GORDON. The question is on the motion to report the bill favorably. Those in favor of the motion will signify by saying aye; opposed, no. The ayes have it, and the bill is favorably reported.

Without objection, the motion to reconsider is laid upon the desk. Members will have two subsequent calendar days in which to submit supplement Minority or additional views on the measure, ending Monday, October the 29th at 9:00 a.m.

I move, pursuant to Clause 1 of Rule 22 of the Rules of the House of Representatives that the Committee authorize the Chairman to offer such motions as may be necessary in the House to adopt and pass H.R. 2406, *To authorize the National Institute of Standards and Technology to increase its effort in support of the in-*

tegration of health care information enterprise in the United States, as amended. Without objection, so ordered.

Chairman GORDON. Let me say to the Members, this appears to be our last markup of this year. I thank you for your attendance. I think this is probably a record year, and we want to do more than just have numbers. We want to have good content, too, and this is 30-something bills, all of which have been bipartisan. All but one had been unanimous. I thank you for your cooperation, and let us continue next year in the same way.

This concludes this markup——

Mr. LAMPSON. Mr. Chairman, just may I before you end, just commend you for the leadership that you have provided to this committee. It has been excellent. It is great to work with you, and I think this is a wonderful committee to be a part of. Thank you so much.

Chairman GORDON. Thank you.

Mr. LAMPSON. And the staff.

Chairman GORDON. I was going to say, it helps to have excellent staff. And we do. Thank you very much.

[Whereupon, at 11:18 a.m., the Committee was adjourned.]

Appendix:

H.R. 2406, Section-by-Section Analysis, Amendment Roster

110TH CONGRESS
1ST SESSION

H. R. 2406

To authorize the National Institute of Standards and Technology to increase its efforts in support of the integration of the healthcare information enterprise in the United States.

IN THE HOUSE OF REPRESENTATIVES

MAY 21, 2007

Mr. GORDON of Tennessee introduced the following bill; which was referred to the Committee on Science and Technology

---

A BILL

To authorize the National Institute of Standards and Technology to increase its efforts in support of the integration of the healthcare information enterprise in the United States.

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

SECTION 1. FINDINGS.

Congress finds the following:

(1) The National Institute of Standards and Technology, because of the electronic commerce, information technology, security, and privacy expertise in its laboratories and the healthcare component of

1 the Malcolm Baldrige National Quality Award, and
2 its long history of working with the information
3 technology and healthcare industries, is well
4 equipped to address the technical challenges posed
5 by healthcare information enterprise integration.
6 (2) Therefore, it is in the national interest for
7 the National Institute of Standards and Technology
8 to accelerate its efforts—
9 (A) to develop standards, standards con-
10 formance tests, and enterprise integration proc-
11 esses that are necessary to increase efficiency
12 and quality of care, and lower costs in the
13 healthcare industry; and
14 (B) ensuring that all components of the
15 United States healthcare infrastructure can be
16 a part of an electronic information network that
17 is reliable, interoperable, and secure, and pro-
18 tects privacy.

19 **SEC. 2. HEALTHCARE INFORMATION ENTERPRISE INTE-**
20 **GRATION INITIATIVE.**

21 (a) ESTABLISHMENT.—The Director of the National
22 Institute of Standards and Technology shall establish an
23 initiative for advancing healthcare information enterprise
24 integration within the United States. In carrying out this
25 section, the Director shall involve various units of the Na-

1 tional Institute of Standards and Technology, including its
2 laboratories and the Malcolm Baldrige National Quality
3 Program. This initiative shall build upon ongoing efforts
4 of the National Institute of Standards and Technology,
5 the private sector, and other Federal agencies, shall in-
6 volve consortia that include government and industry, and
7 shall be designed to permit healthcare information enter-
8 prise integration.

9 (b) TECHNICAL ACTIVITIES.—In order to carry out
10 this section, the Director may focus on—

11 (1) information technology standards and inter-
12 operability analysis, which may include the develop-
13 ment of technical testbeds;

14 (2) software conformance and certification;

15 (3) security and privacy;

16 (4) medical device communication;

17 (5) supporting the provisioning of technical ar-
18 chitecture products for management and retrieval;

19 (6) supporting the establishment of conform-
20 ance testing infrastructure;

21 (7) information management, including elec-
22 tronic health records management and data summa-
23 rization; and

24 (8) health information usability, access, and de-
25 cision support.

1 (c) OTHER ACTIVITIES.—The Director may assist
2 healthcare representatives and organizations and Federal
3 agencies in the development of technical roadmaps that
4 identify the remaining steps needed to ensure that stand-
5 ards for application protocols, interoperability, data integ-
6 rity, and security and privacy, as well as the corollary con-
7 formance test protocols, will be in place. These roadmaps
8 shall rely upon voluntary consensus standards where pos-
9 sible.

10 (d) PLANS AND REPORTS.—Not later than 90 days
11 after the date of enactment of this Act, and annually
12 thereafter, the Director shall transmit a report to the
13 Committee on Science and Technology of the House of
14 Representatives and the Committee on Commerce,
15 Science, and Transportation of the Senate on the activities
16 of the National Institute of Standards and Technology
17 under this section.

18 **SEC. 3. FEDERAL HEALTHCARE INFORMATION TECH-**
19 **NOLOGY SYSTEMS AND INFRASTRUCTURE.**

20 (a) GUIDELINES AND STANDARDS.—Not later than
21 6 months after the date of enactment of this Act, the Di-
22 rector of the National Institute of Standards and Tech-
23 nology, in consultation with industry and appropriate Fed-
24 eral agencies, shall develop technology-neutral information
25 technology infrastructure guidelines and standards, or

1 adopt existing technology-neutral industry guidelines and
2 standards, for use by Federal agencies to enable those
3 agencies to effectively select and utilize healthcare infor-
4 mation technologies in a manner that is—
5 (1) sufficiently secure and provides adequate
6 privacy to meet the needs of those agencies, their
7 transaction partners, and the general public; and
8 (2) interoperable, to the maximum extent pos-
9 sible.
10 (b) ELEMENTS.—The guidelines and standards devel-
11 oped under subsection (a) shall—
12 (1) promote the use by Federal agencies of
13 commercially available products that incorporate the
14 guidelines and standards developed under subsection
15 (a);
16 (2) develop uniform testing procedures suitable
17 for determining the conformance of commercially
18 available and Federal healthcare information tech-
19 nology products with the guidelines and standards;
20 (3) support and promote the testing of elec-
21 tronic healthcare information technologies utilized by
22 Federal agencies;
23 (4) provide protection and privacy profiles;

1 (5) establish a core set of interoperability speci-
2 fications in transactions between Federal agencies
3 and their transaction partners; and
4 (6) include validation criteria to enable Federal
5 agencies to select healthcare information tech-
6 nologies appropriate to their needs.
7 (c) REPORTS.—Not later than 18 months after the
8 date of enactment of this Act, and annually thereafter,
9 the Director shall transmit to the Congress a report that
10 includes a description and analysis of—
11 (1) the level of interoperability, privacy, and se-
12 curity of technologies for sharing healthcare infor-
13 mation among Federal agencies; and
14 (2) the problems Federal agencies are having
15 with, and the progress such agencies are making to-
16 ward, ensuring interoperable, secure, and private
17 healthcare information systems and electronic
18 healthcare records.
19 (d) SENIOR INTERAGENCY COUNCIL ON FEDERAL
20 HEALTHCARE INFORMATION TECHNOLOGY INFRASTRUC-
21 TURE.—The Undersecretary of Commerce for Technology
22 shall establish a Senior Interagency Council on Federal
23 Healthcare Information Technology Infrastructure. The
24 responsibilities of the Council are to—

1 (1) coordinate the development and deployment
2 of healthcare information technology solutions across
3 all Federal departments and agencies, with emphasis
4 on interoperability, privacy, and security issues;
5 (2) coordinate the associated technology trans-
6 fer to and from the private sector; and
7 (3) coordinate Federal funding and participa-
8 tion in private, voluntary standards development or-
9 ganizations, as related to electronic healthcare
10 records systems.

11 **SEC. 4. RESEARCH AND DEVELOPMENT PROGRAMS.**

12 (a) HEALTHCARE INFORMATION ENTERPRISE INTE-
13 GRATION RESEARCH CENTERS.—
14 (1) IN GENERAL.—The Director of the National
15 Institute of Standards and Technology, in consulta-
16 tion the Director of the National Science Foundation
17 and other appropriate Federal agencies, shall estab-
18 lish a program of assistance to institutions of higher
19 education (or consortia thereof) that enter into part-
20 nerships with for-profit entities or nonprofit entities
21 to establish multidisciplinary Centers for Healthcare
22 Information Enterprise Integration. The partner-
23 ships may also include government laboratories.

1 (2) REVIEW; COMPETITION.—Grants shall be
2 awarded under this subsection on a merit-reviewed,
3 competitive basis.
4 (3) PURPOSE.—The purposes of the Centers
5 shall be—
6 (A) to generate innovative approaches to
7 healthcare information enterprise integration by
8 conducting cutting-edge, multidisciplinary re-
9 search on the systems challenges to healthcare
10 delivery; and
11 (B) the development and use of informa-
12 tion technologies and other complementary
13 fields.
14 (4) RESEARCH AREAS.—Research areas may in-
15 clude—
16 (A) the interfaces between human informa-
17 tion and communications technology systems;
18 (B) voice-recognition systems;
19 (C) software that improves interoperability
20 and connectivity among systems;
21 (D) software dependability in systems crit-
22 ical to healthcare delivery;
23 (E) measurement of the impact of informa-
24 tion technologies on the quality and productivity
25 of healthcare;

1 (F) healthcare information enterprise man-
2 agement; and
3 (G) information technology security and
4 integrity.
5 (5) APPLICATIONS.—An institution of higher
6 education (or a consortium thereof) seeking funding
7 under this subsection shall submit an application to
8 the Director at such time, in such manner, and con-
9 taining such information as the Director may re-
10 quire. The application shall include, at a minimum,
11 a description of—
12 (A) the research projects that will be un-
13 dertaken by the Center and the respective con-
14 tributions of the participating entities;
15 (B) how the Center will promote active col-
16 laboration among scientists and engineers from
17 different disciplines, such as information tech-
18 nology, biologic sciences, management, social
19 sciences, and other appropriate disciplines;
20 (C) technology transfer activities to dem-
21 onstrate and diffuse the research results, tech-
22 nologies, and knowledge; and
23 (D) how the Center will contribute to the
24 education and training of researchers and other

1 professionals in fields relevant to healthcare in-
2 formation enterprise integration.
3 (b) NATIONAL INFORMATION TECHNOLOGY RE-
4 SEARCH AND DEVELOPMENT PROGRAM.—The National
5 High-Performance Computing Program established by
6 section 101 of the High-Performance Computing Act of
7 1991 (15 U.S.C. 5511) shall coordinate Federal research
8 and development programs related to the development and
9 deployment of health information technology, including ac-
10 tivities related to—
11 (1) computer infrastructure;
12 (2) data privacy and security;
13 (3) development of large-scale, distributed, reli-
14 able computing systems;
15 (4) wired, wireless, and hybrid high-speed net-
16 working;
17 (5) development of software and software-inten-
18 sive systems;
19 (6) human-computer interaction and informa-
20 tion management technologies; and
21 (7) the social and economic implications of in-
22 formation technology.

○

SECTION-BY-SECTION ANALYSIS OF

H.R. 2406, TO AUTHORIZE THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY TO INCREASE ITS EFFORTS IN SUPPORT OF THE INTEGRATION OF THE HEALTH CARE INFORMATION ENTERPRISE IN THE UNITED STATES

Section 1. Findings

Section 2. Health Care Information Enterprise Integration Initiative

Directs NIST to establish an initiative to advance HIT enterprise integration nationally, building on existing efforts at NIST and other federal agencies, and involving government and industry consortia. Technical activities of this program will focus on technical standards and inter-operability analysis and the development of technical testbeds, software conformance and certification, security and privacy, medical device communication, data management and retrieval architecture, conformance testing infrastructure, and health care information usability and decision support. The initiative may also include assistance to outside organizations and federal agencies in developing technical roadmaps for HIT enterprise integration, relying on voluntary consensus standards where possible. The Director shall report to Congress annually on these activities.

Section 3. Federal Healthcare Information Technology Systems and Infrastructure

Directs NIST to develop new or adopt existing technology-neutral HIT guidelines and standards for use by federal agencies within six months of enactment. The guidelines and standards shall enable agencies to select HIT systems that provide security and privacy and are inter-operable. They shall promote the use of commercial HIT systems by federal agencies, include conformance-testing procedures, provide privacy profiles, establish inter-operability specifications, and include validation criteria to enable agencies to select appropriate HIT systems. NIST will report annually on the progress toward and barriers to adoption of inter-operable, secure and private HIT systems by federal agencies. Directs the Department of Commerce to establish a Senior Interagency Council on Federal Healthcare Information Technology Infrastructure, with responsibilities to coordinate development and deployment of HIT systems across the Federal Government, associated technology transfer, and federal funding for and participation in private standards-development organizations as related to HIT.

Section 4. Research and Development Programs

Directs NIST, in consultation with NSF, to establish a grant program for institutions of higher education partnering with businesses, non-profits and government laboratories to establish Centers for Healthcare Information Enterprise Integration. Grants shall be awarded on a competitive, merit-reviewed basis. The Centers will generate innovative approaches to HIT enterprise integration by conducting research on the interfaces between human information and communications technology systems, voice-recognition systems, inter-operability software, software dependability, metrics of the impact of information technology on health care, health care information enterprise management, and information technology security and integrity. Grant applications shall include descriptions of proposed projects, efforts to foster multi-disciplinary collaboration, and technology transfer and education activities. The National High-Performance Computing Program established by the *High-Performance Computing Act of 1991* shall coordinate federal R&D programs related to HIT.

COMMITTEE ON SCIENCE AND TECHNOLOGY
FULL COMMITTEE MARKUP
OCTOBER 24, 2007

AMENDMENT ROSTER

H.R. 2406, to authorize the National Institute of Standards and Technology to increase its efforts in support of the integration of the healthcare information enterprise in the United States

No.	Sponsor	Description	Results
1	Mr. Gordon	Manager's amendment clarifies that the healthcare IT efforts to be undertaken by NIST are intended to complement, not replace or conflict with, existing healthcare IT efforts in the Federal government that were established by Executive Order 13335; deletes the section that would have created a Senior Interagency Council on Federal Healthcare Information Technology Infrastructure; adds an authorization of $8 million for each of fiscal years 2009 and 2010, to be derived from funds authorized for NIST under the America COMPETES Act (P.L. 110-69); and notes that NIST's role in this bill is consistent with prior computer security legislation.	Passed by voice vote.
2	Mr. Hill	Amendment to Section 4 to require NIST, in consultation with NSF, to establish a task force comprised of Federal agency and industry group representatives to create a strategic plan with recommendations for developing common terminologies and classifications for use in health IT systems, and to submit that report to Congress.	Passed by roll call vote 21 – 13.
3	Mr. Gingrey	Second degree amendment to Mr. Hill's amendment would strike NSF from the amendment.	Defeated by roll call vote 20-13

#1

AMENDMENT TO H.R. 2406

OFFERED BY MR. GORDON OF TENNESSEE

Page 1, line 3, through page 7, line 11, redesignate sections 1 through 4 as sections 2 through 5, respectively.

Page 1, before line 3, insert the following new section:

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the "Healthcare Informa-
3 tion Technology Enterprise Integration Act".

Page 1, line 7, strike "technology, security, and privacy" and insert "technology and security".

Page 2, line 4, strike "address" and insert "complement the healthcare information technology implementation efforts as established by Executive Order 13335 of April 27, 2004, by addressing".

Page 2, line 9, strike "to develop standards" and insert "to participate in the development of technical standards".

Page 2, lines 17 and 18, strike ", and protects privacy".

Page 3, line 8, insert "These efforts shall complement ongoing activities occurring under Executive Order 13335 of April 27, 2004." after "enterprise integration.".

Page 3, line 14, insert "supporting the establishment of conformance testing infrastructure, including" after "(2)".

Page 3, line 15, strike "and privacy".

Page 3, line 18, insert "and" after "and retrieval;".

Page 3, lines 19 through 25, strike paragraphs (6) through (8) and insert the following new paragraph:

1 (6) information management including elec-
2 tronic health records management, health informa-
3 tion usability, and access and decision support.

Page 4, line 4, insert "technical" after "to ensure that".

Page 4, line 6, strike "and privacy".

Page 4, line 9, insert "consistent with Federal technology transfer laws" after "where possible".

Page 4, line 21, strike "6 months" and insert "12 months".

Page 4, line 24, strike "develop" and insert "report on development of".

Page 5, line 1, strike " adopt existing technology-neutral industry guidelines" and insert "the adoption of existing technology-neutral industry guidelines and private sector".

Page 5, lines 5 and 6, strike "and provides adequate privacy".

Page 5, line 6, insert "(as is consistent with the Computer Security Act of 1987, as amended, section 225 of the Homeland Security Act of 2002, and title III of the E-Government Act of 2002)" after "those agencies".

Page 5, line 7, strike "public; and" and insert "public;".

Page 5, line 9, strike the period and insert "; and".

Page 5, after line 9, insert the following new paragraph:

1 (3) inclusive of ongoing Federal efforts that
2 provide technical expertise to harmonize existing
3 standards and assist in the development of inter-
4 operability specifications.

Page 5, line 23, strike "privacy" and insert "security".

Page 6, line 11, strike ", privacy,".

Page 6, line 16, strike ", secure, and private" and insert "and secure".

Page 6, line 19, through page 7, line 10, strike subsection (d).

Page 7, line 19, insert "which may include nonprofit entities and Federal Government laboratories" after "consortia thereof".

Page 7, lines 19 and 20, strike "that enter into partnerships with for-profit entities or nonprofit entities".

Page 7, lines 22 and 23, strike "The partnerships may also include government laboratories.".

Page 10, line 12, strike "privacy and".

Page 10, after line 22, insert the following new section:

1 **SEC. 6. AUTHORIZATION OF APPROPRIATIONS.**

2 There are authorized to be appropriated to the Direc-
3 tor of the National Institute of Standards and Technology
4 for carrying out this Act $8,000,000 for each of the fiscal

1 years 2009 and 2010, to be derived from amounts author-
2 ized under section 3001 of Public Law 110–69.

AMENDMENT TO H.R. 2406

OFFERED BY MR. HILL OF INDIANA

Page 10, after line 22, insert the following new subsection:

1 (c) STRATEGIC PLAN FOR HEALTHCARE TECH-
2 NOLOGIES AND CLASSIFICATION.—
3 (1) IN GENERAL.—The Director of the National
4 Institute of Standards and Technology, in consulta-
5 tion with the Director of the National Science Foun-
6 dation, not later than 90 days after the date of en-
7 actment of this Act, shall establish a task force
8 whose membership includes representatives of other
9 Federal agencies and industry groups (such as the
10 American Health Information Management Associa-
11 tion and the American Medical Informatics Associa-
12 tion) to develop a strategic plan including rec-
13 ommendations for—
14 (A) the development, adoption, and main-
15 tenance of terminologies and classifications;
16 (B) gaining commitment of terminology
17 and classification stakeholders (such as devel-
18 opers, end users, and other service and tech-
19 nology suppliers) to principles and guidelines

for open and transparent processes to enable cost-effective interoperability and complete and accurate information;

(C) the design of a centralized authority or governance model, including principles for its operation and funding scenarios;

(D) United States participation in the International Health Terminology Standards Development Organization; and

(E) any other issues identified by the task force.

(2) TASK FORCE REPORT.—The task force shall report its findings and recommendations to the Committee on Science and Technology of the House of Representatives not later than [redacted] 18 months after the date of enactment of this Act. The task force shall terminate after transmitting such report.

(3) FEDERAL ADVISORY COMMITTEE ACT.—The task force established under this subsection shall not be subject to the Federal Advisory Committee Act (5 U.S.C. App.).

#3

2406

AMENDMENT OFFERED BY MR. GINGREY OF GEORGIA TO THE AMENDMENT OFFERED BY MR. HILL OF INDIANA

Page 1, lines 4 through 6, strike ", in consultation with the Director of the National Science Foundation,".