Tauscher
Tauzin
Taylor (MS)
Taylor (NC)
Terry
Thomas
Thompson (CA)
Thompson (MS)
Thornberry
Thune
Thurman
Tiahrt
Tierney
Toomey
Towns
Traficant
Turner
Udall (CO)
Udall (NM)
Upton
Velazquez
Visclosky
Vitter
Walden
Walsh
Wamp
Watkins
Watt (NC)
Watts (OK)
Waxman
Weiner
Weldon (FL)
Weldon (PA)
Weller
Wexler
Weygand
Whitfield
Wicker
Wilson
Wise
Wolf
Woolsey
Wu
Wynn
Young (AK)
Young (FL)

NAYS—1

Paul

NOT VOTING—21

Baird
Bonior
Brown (OH)
Callahan
Campbell
Capps
Clay
Cummings
DeFazio
Graham
Hinojosa
Kasich
LaTourette
Lowey
Martinez
McCollum
Moakley
Mollohan
Pelosi
Vento
Waters

☐ 1240

So (two-thirds having voted in favor thereof) the rules were suspended and the bill was passed.

The result of the vote was announced as above recorded.

A motion to reconsider was laid on the table.

☐

ANNOUNCEMENT BY THE SPEAKER PRO TEMPORE

The SPEAKER pro tempore (Mr. HANSEN). Pursuant to clause 8 of rule XX, the Chair will reduce to 5 minutes the minimum time for electronic voting on the additional motion to suspend the rules on which the Chair has postponed further proceedings.

☐

PRESENTING CONGRESSIONAL GOLD MEDAL TO CHARLES M. SCHULZ

The SPEAKER pro tempore. The pending business is the question of suspending the rules and passing the bill, H.R. 3642.

The Clerk read the title of the bill.

The SPEAKER pro tempore. The question is on the motion offered by the gentleman from Oklahoma (Mr. LUCAS) that the House suspend the rules and pass the bill, H.R. 3642, on which the yeas and nays are ordered.

This is a 5-minute vote.

The vote was taken by electronic device, and there were—yeas 410, nays 1, not voting 24, as follows:

[Roll No. 19]

YEAS—410

Abercrombie
Ackerman
Aderholt
Allen
Andrews
Armey
Baca
Bachus
Baker
Baldacci
Baldwin
Ballenger
Barcia
Barr
Barrett (NE)
Barrett (WI)
Bartlett
Barton
Bass
Bateman
Becerra
Bentsen
Bereuter
Berkley
Berman
Berry
Biggert
Bilbray
Bilirakis
Bishop
Blagojevich
Bliley
Blumenauer
Blunt
Boehlert
Boehner
Bonilla
Bono
Borski
Boswell
Boucher
Boyd
Brady (PA)
Brady (TX)
Brown (FL)
Bryant
Burr
Burton
Buyer
Calvert
Camp
Canady
Cannon
Capuano
Cardin
Carson
Castle
Chabot
Chambliss
Chenoweth-Hage
Clayton
Clement
Clyburn
Coble
Coburn
Collins
Combest
Condit
Conyers
Cook
Cooksey
Costello
Cox
Coyne
Cramer
Crane
Crowley
Cubin
Cunningham
Danner
Davis (FL)
Davis (IL)
Davis (VA)
Deal
DeGette
Delahunt
DeLauro
DeLay
DeMint
Deutsch
Diaz-Balart
Dickey
Dicks
Dingell
Dixon
Doggett
Dooley
Doolittle
Doyle
Dreier
Duncan
Dunn
Edwards
Ehlers
Ehrlich
Emerson
Engel
English
Eshoo
Etheridge
Evans
Everett
Ewing
Farr
Fattah
Filner
Fletcher
Foley
Forbes
Ford
Fossella
Fowler
Frank (MA)
Franks (NJ)
Frelinghuysen
Frost
Gallegly
Ganske
Gejdenson
Gekas
Gephardt
Gibbons
Gilchrest
Gillmor
Gilman
Gonzalez
Goode
Goodlatte
Goodling
Gordon
Goss
Granger
Green (TX)
Green (WI)
Greenwood
Gutierrez
Gutknecht
Hall (OH)
Hall (TX)
Hansen
Hastert
Hastings (FL)
Hastings (WA)
Hayes
Hayworth
Hefley
Herger
Hill (IN)
Hill (MT)
Hilleary
Hilliard
Hobson
Hoeffel
Hoekstra
Holden
Holt
Hooley
Horn
Hostettler
Houghton
Hoyer
Hulshof
Hunter
Hutchinson
Hyde
Inslee
Isakson
Istook
Jackson (IL)
Jackson-Lee (TX)
Jefferson
Jenkins
John
Johnson (CT)
Johnson, E. B.
Johnson, Sam
Jones (NC)
Jones (OH)
Kanjorski
Kaptur
Kelly
Kennedy
Kildee
Kilpatrick
Kind (WI)
King (NY)
Kingston
Kleczka
Klink
Knollenberg
Kolbe
Kucinich
Kuykendall
LaFalce
LaHood
Lampson
Lantos
Largent
Larson
Latham
LaTourette
Lazio
Leach
Lee
Levin
Lewis (CA)
Lewis (GA)
Lewis (KY)
Linder
Lipinski
LoBiondo
Lofgren
Lucas (KY)
Lucas (OK)
Luther
Maloney (CT)
Maloney (NY)
Manzullo
Markey
Mascara
Matsui
McCarthy (MO)
McCarthy (NY)
McCrery
McDermott
McGovern
McHugh
McInnis
McIntosh
McIntyre
McKeon
McKinney
McNulty
Meehan
Meek (FL)
Meeks (NY)
Menendez
Mica
Millender-McDonald
Miller (FL)
Miller, Gary
Miller, George
Minge
Mink
Moore
Moran (KS)
Moran (VA)
Morella
Murtha
Myrick
Nadler
Napolitano
Neal
Nethercutt
Northup
Norwood
Nussle
Oberstar
Obey
Olver
Ortiz
Ose
Owens
Oxley
Packard
Pallone
Pascrell
Pastor
Payne
Pease
Peterson (MN)
Peterson (PA)
Petri
Phelps
Pickering
Pickett
Pitts
Pombo
Pomeroy
Porter
Portman
Price (NC)
Pryce (OH)
Quinn
Radanovich
Rahall
Ramstad
Rangel
Regula
Reyes
Reynolds
Riley
Rivers
Rodriguez
Roemer
Rogan
Rogers
Rohrabacher
Ros-Lehtinen
Rothman
Roukema
Roybal-Allard
Royce
Rush
Ryan (WI)
Ryun (KS)
Sabo
Salmon
Sanchez
Sanders
Sandlin
Sanford
Sawyer
Saxton
Scarborough
Schaffer
Schakowsky
Scott
Sensenbrenner
Serrano
Sessions
Shadegg
Shaw
Shays
Sherman
Sherwood
Shimkus
Shows
Shuster
Simpson
Sisisky
Skeen
Skelton
Slaughter
Smith (MI)
Smith (NJ)
Smith (TX)
Smith (WA)
Snyder
Souder
Spence
Spratt
Stabenow
Stark
Stearns
Stenholm
Strickland
Stump
Stupak
Sununu
Sweeney
Talent
Tancredo
Tanner
Tauscher
Tauzin
Taylor (NC)
Terry
Thomas
Thompson (CA)
Thompson (MS)
Thornberry
Thune
Thurman
Tiahrt
Tierney
Toomey
Towns
Traficant
Turner
Udall (CO)
Udall (NM)
Upton
Velazquez
Visclosky
Vitter
Walden
Walsh
Wamp
Waters
Watkins
Watt (NC)
Watts (OK)
Waxman
Weiner
Weldon (FL)
Weldon (PA)
Weller
Wexler
Weygand
Whitfield
Wicker
Wilson
Wise
Wolf
Woolsey
Wu
Wynn
Young (AK)
Young (FL)

NAYS—1

Paul

NOT VOTING—24

Archer
Baird
Bonior
Brown (OH)
Callahan
Campbell
Capps
Clay
Cummings
DeFazio
Graham
Hinchey
Hinojosa
Kasich
Lowey
Martinez
McCollum
Metcalf
Moakley
Mollohan
Ney
Pelosi
Taylor (MS)
Vento

☐ 1250

So (two-thirds having voted in favor thereof) the rules were suspended and the bill was passed.

The result of the vote was announced as above recorded.

A motion to reconsider was laid on the table.

☐

NETWORKING AND INFORMATION TECHNOLOGY RESEARCH AND DEVELOPMENT ACT

Mr. HASTINGS of Washington. Mr. Speaker, by direction of the Committee on Rules, I call up House Resolution 422 and ask for its immediate consideration.

The Clerk read the resolution, as follows:

H. RES. 422

Resolved, That at any time after the adoption of this resolution the Speaker may, pursuant to clause 2(b) of rule XVIII, declare the House resolved into the Committee of the Whole House on the state of the Union for consideration of the bill (H.R. 2086) to authorize funding for networking and information technology research and development for fiscal years 2000 through 2004, and for other purposes. The first reading of the bill shall be dispensed with. General debate shall be confined to the bill and shall not exceed one hour equally divided and controlled by the chairman and ranking minority member of the Committee on Science. After general debate the bill shall be considered for amendment under the five-minute rule. It shall be in order to consider as an original bill for the purpose of amendment under the five-minute rule the amendment in the nature of a substitute recommended by the Committee on Science now printed in the bill, modified by striking section 8 (and redesignating succeeding sections accordingly). Each section of that amendment in the nature of a substitute shall be considered as read. During consideration of the bill for amendment, the Chairman of the Committee of the Whole may accord priority in recognition on the basis of whether the Member offering an amendment has caused it to be

printed in the portion of the Congressional Record designated for that purpose in clause 8 of rule XVIII. Amendments so printed shall be considered as read. The Chairman of the Committee of the Whole may: (1) postpone until a time during further consideration in the Committee of the Whole a request for a recorded vote on any amendment; and (2) reduce to five minutes the minimum time for electronic voting on any postponed question that follows another electronic vote without intervening business, provided that the minimum time for electronic voting on the first in any series of questions shall be 15 minutes. At the conclusion of consideration of the bill for amendment the Committee shall rise and report the bill to the House with such amendments as may have been adopted. Any Member may demand a separate vote in the House on any amendment adopted in the Committee of the Whole to the bill or to the amendment in the nature of a substitute made in order as original text. The previous question shall be considered as ordered on the bill and amendments thereto to final passage without intervening motion except one motion to recommit with or without instructions.

The SPEAKER pro tempore (Mr. HANSEN). The gentleman from Washington (Mr. HASTINGS) is recognized for 1 hour.

Mr. HASTINGS of Washington. Mr. Speaker, for the purpose of debate only, I yield the customary 30 minutes to the gentleman from Texas (Mr. FROST), pending which I yield myself such time as I may consume. During consideration of this resolution, all time yielded is for the purpose of debate only.

(Mr. HASTINGS of Washington asked and was given permission to revise and extend his remarks.)

Mr. HASTINGS of Washington. Mr. Speaker, H. Res. 422 would grant H.R. 2086, the Network and Information Technology Research and Development Act, an open rule. The rule provides 1 hour of general debate, equally divided between the chairman and ranking minority member of the Committee on Science.

The rule provides that it shall be in order to consider as an original bill, for the purpose of amendment, the amendment in the nature of a substitute recommended by the Committee on Science now printed in the bill, modified by striking Section 8. The amendment in the nature of a substitute as modified shall be open for amendment by section.

The rule allows the chairman of the Committee of the Whole to accord priority in recognition to Members who have preprinted their amendments in the CONGRESSIONAL RECORD and provides that those amendments shall be considered as read.

The rule also allows the chairman of the Committee of the Whole to postpone votes during consideration of the bill and to reduce voting time to 5 minutes on a postponed question if the vote follows a 15-minute vote. Finally, the rule provides for one motion to recommit, with or without instructions.

Mr. Speaker, the Networking and Information Research and Development Act, H.R. 2086, amends the High-Performance Computing Act of 1991 to authorize funding for networking and information technology research and development programs of the National Science Foundation, National Aeronautics and Space Administration, the Department of Energy, the National Institute of Standards and Technology, the National Oceanic and Atmospheric Administration, and the Environmental Protection Agency for fiscal years 2000 through 2004. The bill was reported favorably by the Committee on Science by unanimous vote of 41 to 0.

Mr. Speaker, the Federal Government has an enormous task in maintaining its position as the global leader in the information-technology field. This bill serves to reiterate our commitment to this agenda by emphasizing basic research and information-technology funding levels. This research has played an essential role in fueling the Information Revolution, advancing national security, and bolstering the U.S. economy by creating new industries and millions of new jobs. Information-technology now represents one of the fastest growing sectors of our economy, growing at an annual rate of 12 percent between 1993 and 1997 and generating over $300 billion of U.S. revenue in 1998.

In order to maintain the economic growth the U.S. is currently experiencing, we must maintain our role as a technological leader. Although the private sector provides the bulk of information-technology research funding, the Federal Government has a responsibility to support long-term basic research to the private sector, but that is ill-suited to pursue. H.R. 2086 recognizes this by providing adequate funds for such activities.

Specifically, over the next 5 years the bill would authorize $2.2 billion for the National Science Foundation, $602 million for the Department of Energy, $1.4 billion for NASA, $73 million for the National Institutes of Standards and Technology, $71 million for the National Oceanic and Atmospheric Administration, and $22.3 million for EPA.

Finally, the Congressional Budget Office estimates that appropriating the amounts authorized in H.R. 2086 would result in discretionary spending totaling $3.7 billion over the 5-year period.

The Committee on Rules was pleased to grant the request of the gentleman from Wisconsin (Chairman SENSENBRENNER) for an open rule on H.R. 2086, and accordingly I encourage my colleagues to support H. Res. 422 and the underlying bill.

Mr. Speaker, I reserve the balance of my time.

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

Mr. Speaker, today the United States leads the world in information-technology, and, because of our global dominance in this field, we continue to lead in the fields of science and engineering, our economy is stronger and growing faster than any other, working Americans are more productive than ever, and our future is bright with promise.

But if we are to maintain this dominance, we cannot sit back and rest on our laurels. For, just as the Federal Government has been responsible for much of the basic and follow-on research that has made this technology revolution possible, it is necessary that the Federal Government now refocus its efforts on long-term fundamental research, while continuing its spectacularly successful partnership with private industry and academia.

It is also critically important that we find ways to continue to encourage students to enter the fields of science and information-technology in order that we can be assured in the future we will have the highly skilled workers we need to continue our dominance in these fields.

H.R. 2086, Mr. Speaker, seeks to address those questions in a comprehensive manner by authorizing nearly $4.8 billion available over 4 years for a variety of research and development projects, as well as for grants to colleges and universities for the creation of for-credit internship programs at IT companies and grants to 2-year colleges to improve programs in education related to IT. This Networking and Information Technology Research and Development Act is an important legislative proposal for what surely is a national, not a partisan, priority.

Mr. Speaker, the fact that this bill was reported from the Committee on Science on a vote of 41 to 0 certainly demonstrates that the promotion of research and information-technology is not a partisan issue. The rule providing for the consideration of the Networking and Information Technology Research and Development Act is an open rule which will allow any Member to offer germane amendments to this important bill.

I urge my colleagues to support both the rule and the bill so that the House may act quickly on this proposal that will reap benefits for every American for years to come.

Mr. Speaker, I reserve the balance of my time.

Mr. HASTINGS of Washington. Mr. Speaker, I am pleased to yield 2 minutes to the gentleman from California (Mr. CALVERT).

Mr. CALVERT. Mr. Speaker, I would like to thank my chairman, the gentleman from Wisconsin (Mr. SENSENBRENNER), for introducing this visionary piece of legislation. It was passed out of the Committee on Science with unanimous bipartisan support.

I would also like to honor our former colleague, the Honorable George Brown, who put a lot of work into this bill, and the continuation of George's work by the gentleman from the great State of Texas (Mr. HALL), our ranking member.

The Networking and Information Technology Research and Development Act, H.R. 2086, is truly a visionary

piece of legislation. I am proud to stand here today with my colleagues as an original cosponsor.

H.R. 2086 is about one simple thing, access to information. A major component of access to information is the continued development and expansion of information-technology.

□ 1300

I find it distressing today that we are forced to bring people in from outside of the United States to fill the employment needs of our IT companies. The average annual wage of technology workers in the Silicon Valley is $72,000 a year.

Quite simply, our work force pool lacks the experience and knowledge to fill a lot of these high-paying jobs. We must begin to focus on this problem, and this IT bill does just that.

The businesses in my home State of California exported $105 billion in products in 1998. Twenty-eight percent of those exports were in the electrical and electronics realm alone.

Mr. Speaker, in 1999 California had the largest State economy with an estimated gross State product of over $1 trillion.

The importance of H.R. 2086 to California alone is enormous. This bill ensures the United States and California continue to lead the way in information technology way into the 21st century.

Mr. Speaker, I urge my colleagues to support the rule and strongly encourage my colleagues on both sides of the aisle to support our future in the global economy, support the generation's participation and the information technology community.

Mr. LINDER. Mr. Speaker, I am pleased to yield 3 minutes to the gentleman from Minnesota (Mr. GUTKNECHT).

Mr. GUTKNECHT. Mr. Speaker, I thank the gentleman for yielding me time.

Mr. Speaker, I want to thank the gentleman from Wisconsin (Chairman SENSENBRENNER), first of all, and congratulate him. I appreciate the exceptional work that he and the committee has done on H.R. 2086, the Networking and Information Technology Research and Development Act.

I also want to commend my colleagues, including the gentleman from Michigan (Chairman SMITH), who heads the Subcommittee on Basic Research and the rest of the Committee on Science, Democrats and Republicans, for unanimous support of this important piece of legislation.

No single field of study or research is so vitally important to our future from academia to industry, from the CEO, to the high school student. Information technology is the cutting edge of American and global economies in the next century.

Mr. Speaker, this bill represents over $5 billion of investment that will be made over the next 5-year period. Congress often talks about raising the standard of living for Americans. H.R. 2086 will bring about positive change and new high-tech jobs which now pay 50 percent more than the average wage.

This bill would create jobs not just through the funding of research but also by creating whole new industries. Recently there has been concern about the demand and subsequent shortage of information technology workers in the United States.

This bill provides funding for both improved education in the information technology fields and grants to partner colleges with companies to train today's students to be tomorrow's leaders.

Most importantly, H.R. 2086 provides long-term basic information technology research that has largely been neglected by the private sector and other Federal programs and uses a peer review system to make sure that the money is spent where it will produce the best results.

Mr. Speaker, this bill will create information technology research centers where multi-discipline research can be combined for the greatest results.

It will allow the National Science Foundation to produce new state-of-the-art computer systems through a competitive bidding process that will help fight disease, track and predict weather and allow grant recipients access to the computer hardware they need to carry out their research at a new level of excellence.

In the 20th century, Federal research money brought us the Internet, which has revolutionized computing and information technology for all of us. H.R. 2086 will help make the United States the leader for the next generation and the next century in the information revolution and will continue to lead the world in information technology far into the next century.

Mr. Speaker, I hope that my colleagues will join me in supporting the rule and the bill.

Mr. LINDER. Mr. Speaker, I am pleased to yield 4 minutes to the gentleman from Michigan (Mr. EHLERS), a leader in the technology age in this Congress.

(Mr. EHLERS asked and was given permission to revise and extend his remarks.)

Mr. EHLERS. Mr. Speaker, I rise to speak in favor of the rule and of the bill. I also wish to commend the gentleman from Wisconsin (Mr. SENSENBRENNER), the chairman of the Committee on Science, for taking what was submitted to the Science Committee last year as a very flawed piece of work and which he developed into an excellent bill which will serve this Nation well.

As was mentioned I have been in the technical field of computers and the Internet, but I am also of an age that allows me to recognize the importance of what went on many, many years ago. Too often our citizens do not appreciate the value of basic research, even though it takes a very long time to pay off. Let me explain.

During World War II, a group of scientists working together developed the first computers. It is interesting that some very knowledgeable people in the field at that time predicted that the world probably would never need more than 10 of those huge computers. Today, on every desk in every office in this Congress and this country, we have computers that are far more powerful and faster than those huge computers that were developed back then. It is a rapidly growing field and a very important field, with a multi, multibillion dollar industry that has developed out of this.

Similarly, with the Internet, today we have many people who claim to have developed or invented the Internet. That always happens after an invention, but when we look back at history, there is only a small handful of physicists and computer scientists who developed the basic ideas of the Internet. No one at the time really appreciated the future benefits. It was intended simply to allow our national laboratories to communicate information and data very rapidly.

However, once the Interenet was commercialized, it developed into a another multibillion dollar industry. Fundamental research in information technology has contributed to the creation of new industries and high-paying jobs that today pay about 80 percent above the average in the private sector. Today, we have 7.4 million people working in high-tech jobs.

What this bill does is prioritize the basic information technology research of the Nation, and this is extremely important to us. It funds basic IT research that will provide a real payoff in the next generation of innovations and it will set the framework for our economy for 10, 20, even 30 years from today. We cannot rely on industry to do the basic research; they have to deal with the bottom line every quarter. But the government has an appropriate role here and this bill recognizes that.

In addition to that, the bill will help produce the next generation of highly-skilled information technology workers. We need more students in this field. We have a grave shortage, as evidenced by the number of H1B visas that this Nation issues ever year. The internship program in the bill will help meet the need for those new employees.

This bill will also meet the need for state of the art computing systems for the civilian research community, a need that will grow in the future, and it provides for a terascale computing competition at the National Science Foundation. Most people do not realize that the Japanese supercomputers have now surpassed ours and they have a huge market they are developing internationally. We must, as a Nation, catch up to that and develop equally good computers, and preferably better computers.

This is bipartisan legislation. It passed the Committee on Science on a 41 to zero vote, and I congratulate the

chairman on getting that agreement within our committee. It demonstrates a real commitment to upholding our Nation's preeminence in information technology. It has been endorsed by dozens of organizations and clearly is a good piece of work that is going to serve this Nation well.

Mr. Speaker, I urge all Members of this Congress to support this legislation and to recognize the importance of basic research, not only in this field, but in other fields. I urge my colleagues to vote for this bill.

Mr. HASTINGS of Washington. Mr. Speaker, I yield 3 minutes to the gentleman from Pennsylvania (Mr. WELDON).

(Mr. WELDON of Pennsylvania asked and was given permission to revise and extend his remarks.)

Mr. WELDON of Pennsylvania. Mr. Speaker, we are in the middle of a revolution right now in America, only the second such revolution in the history of our country. The first was when America transitioned from an agrarian society to an industrial society. Many of our colleagues and citizens did not want to make that change, but we had no choice because the economy of the world was going to be driven by that Nation that could lead the industrial age. We rose to the occasion, and we were successful.

The revolution we are going through today is an information revolution. We are changing from an industrial society to an information society. Therefore, we have to change. If we are going to lead the world's economy, we have to lead the information revolution. Therefore, it presents to us a challenge, a challenge to have the best educated, the best equipped, and the best technology available to make sure that we are leading the information revolution.

As the chairman of the Subcommittee on National Security Research, I am extremely concerned about the security implications of this challenge. In fact, information dominance, the threat of cyber terrorism, and the use of information technology is one of our three greatest threats in the 21st century. We have to be prepared.

The kind of battle that will be fought in the 21st century will probably not be one fought on soil or on the water, but will be fought through computer systems and cyber terrorism acts. We must make sure that we have the tools, the people, the training necessary to meet that challenge. In the military, we are attempting to establish a program to develop young people who go through ROTC programs to gain the skills that are necessary. This legislation does the same thing in the civilian community.

The greatest challenge we have in this century and the greatest factor for improving our quality of life is the use of information technology. I submit to our colleagues it is also the greatest vulnerability we have in this society, because those adversaries of America who wish to take us down, understand that if they can take out our information capabilities, they could disrupt not just our military, but our civilian quality of life. We have to be prepared, and that means we have to put billions of dollars into the R&D investment for the military, for information dominance and for protection against cyber terrorism and in the private sector, to encourage those technologies to allow us to build the systems to use data mining, to do the rapid speed transmission of data that is going to be so necessary in the 21st century economy.

So for all of those reasons, I join with my colleagues in supporting this legislation. I commend the chairman of the Committee on Science. We on the Committee on Armed Services have pledged to work closely with the Committee on Science so that both our military establishment and our civilian establishment are working hand in hand to make sure that America leads the world in the 21st century in this information revolution.

Mr. FROST. Mr. Speaker, I yield 3 minutes to the gentleman from Virginia (Mr. MORAN).

Mr. MORAN of Virginia. Mr. Speaker, I thank the gentleman from Texas (Mr. FROST), the distinguished member of the Committee on Rules, for yielding me this time.

Mr. Speaker, I rise in very strong support of this legislation and the critical investment that it makes in the future of information technology research. At a time when our Nation is enjoying unlimited economic growth and prosperity, we should use this opportunity to invest in scientific research and development, especially in the area of information technology.

This legislation would authorize $3 billion for the National Science Foundation over the next 5 years, of which nearly two-thirds of this funding would be designated for long-term, basic research grants to support research on a variety of IT projects. The authorization represents a 92 percent increase in information technology funding, which is a badly needed boost in a field that really has been defining our economy.

We can attribute much of our economic prosperity today to the Federal investments we made in the National Science Foundation and the Defense Advanced Research Projects Agency in terms of their development of the Internet. That research investment was basic and has given us a multi-fold return, more return than we can calculate or imagine, really, in addition to the other basic research programs that are taken for granted but really fuel the engine of growth for America's economy.

Who would have thought that such an investment in DOD and the National Science Foundation would have permeated every sector of our economy and our way of life, but they have. The National Science Foundation has been performing amazing work toward establishing the next generation Internet, as well as fostering the pursuit of science, math, engineering, and other technical sciences in this country. So by investing in R&D and these programs today, we are investing in our future economic potential as a Nation. Unless we increase the flat budgets which basic research has experienced in the past several years, we cannot expect to continue to yield the kind of scientific advances that will ensure that the United States remains at the forefront of our global economy.

So, Mr. Speaker, I urge my colleagues to vote for H.R. 2086 and to support these critical investments in information technology research. I also urge my colleagues on the Committee on Appropriations to support the necessary funding in the fiscal year 2001 bills to carry out the activities of this legislation.

☐ 1315

Mr. FROST. Mr. Speaker, I urge adoption of the rule, and I yield back the balance of my time.

Mr. HASTINGS of Washington. Mr. Speaker, I yield back the balance of my time, and I move the previous question on the resolution.

The previous question was ordered.

The resolution was agreed to.

A motion to reconsider was laid on the table.

The SPEAKER pro tempore. Pursuant to House Resolution 422 and rule XVIII, the Chair declares the House in the Committee of the Whole House on the State of the Union for the consideration of the bill, H.R. 2086.

☐ 1315

IN THE COMMITTEE OF THE WHOLE

Accordingly, the House resolved itself into the Committee of the Whole House on the State of the Union for the consideration of the bill (H.R. 2086) to authorize funding for networking and information technology research and development for fiscal years 2000 through 2004, and for other purposes, with Mr. GILLMOR in the chair.

The Clerk read the title of the bill.

The CHAIRMAN. Pursuant to the rule, the bill is considered as having been read the first time.

Under the rule, the gentleman from Wisconsin (Mr. SENSENBRENNER) and the gentleman from Texas (Mr. HALL) each will control 30 minutes.

The Chair recognizes the gentleman from Wisconsin (Mr. SENSENBRENNER).

Mr. SENSENBRENNER. Mr. Chairman, I yield myself such time as I may consume.

(Mr. SENSENBRENNER asked and was given permission to revise and extend his remarks.)

Mr. SENSENBRENNER. Mr. Chairman, the United States stands as the global leader in computing, communication, and information technology. This $500 billion a year industry accounted for one-third of our Nation's economic growth since 1992 and created new industries and millions of new high-paying jobs. This staggering success, however, is predicated on Federal

research conducted over the last 3 decades.

Fundamental IT research played an essential role in the information revolution. However, maintaining the Nation's global leadership in information technology is not a given. The congressionally-chartered President's Information Technology Advisory Committee, called PITAC, stated that the ''current boom in information technology is built on basic research in computer science carried out more than a decade ago. There is an urgent need to replenish the knowledge base.''

Although the private sector conducts most of the IT research, that spending has focused on short-term applied work. As our Nation's economy becomes more dependent upon the Internet and IT in general, current Federal programs and support for fundamental research and IT must be revitalized.

To accomplish this, I, along with George Brown, the late ranking minority member of the Committee on Science, and 24 other Members introduced H.R. 2086, the Networking and Information Technology Research and Development Act, a 5-year authorization bill. The committee subsequently passed this bill by a vote of 41 to nothing, showing rare bipartisan unanimity on an important piece of legislation facing this Congress.

H.R. 2086 provides comprehensive authorization for the Federal government's civilian basic information technology research efforts at the six agencies under the jurisdiction of the Committee on Science, the National Science Foundation, NASA, the Department of Energy, the National Institute of Standards and Technology, the National Oceanic and Atmospheric Administration, and the EPA.

This bill fundamentally will alter and greatly enhance the way information technology research is supported and conducted. Its centerpiece is the Networking and Information Technology Research and Development Program, which will be managed primarily through NSF and which will focus on long-term peer-reviewed basic research of the kind in which the NSF excels.

While funding for individual investigators remains an important aspect of IT research, funding for research teams and centers can also lead to dramatic progress. Therefore, this bill authorizes $130 million for large grants of up to $1 million each for high-end computing, software, and networking research, and $220 million for information technology research centers that are comprised of research teams of six or more members.

To attract more students to science and to careers in IT, the bill also authorizes $95 million for universities to establish for-credit internship programs for IT-related research at private high-tech companies. Both 2-year and 4-year schools will be eligible for these grants, which will operate on a 50–50 cost-sharing basis.

To help meet the need for state-of-the-art computing systems for the civilian research community, H.R. 2086 authorizes $385 million for a terascale computing competition at NSF. The bill requires that the funds be allocated on a competitive, peer-reviewed basis, and that awardees be required to connect to the Partnership for Advanced Computational Infrastructure network.

Finally, the bill authorizes the Next Generation Internet program through completion in fiscal year 2002.

Mr. Chairman, our future global influence lies in the hands of our young people, the education and training they receive, and the new scientific breakthroughs they produce. This bill combines increased authorizations for research funding with important policy changes that will keep the Nation at the cutting edge of information technology and produce the next generation of highly-skilled IT workers. It offers opportunities for all by providing open competition for IT grant funding, as well as benefiting diverse groups ranging from 2-year community colleges through the largest universities.

This bipartisan legislation demonstrates a commitment to upholding our Nation's preeminence in information technology. It has been endorsed by dozens of organizations, including the 1999 co-chairs Bill Joy and Ken Kennedy of PITAC, the Technology Network, the Computing Research Association, the Big Ten universities, and the U.S. Chamber of Commerce.

I believe that H.R. 2086's widespread support stems from the realization that information technology research assists all fields of science. Indeed, the research funded under this bill will help physicists, mathematicians, engineers, meteorologists, and computer scientists alike.

I ask my colleagues to join me in maintaining our world leadership in information technology by supporting H.R. 2086.

Mr. Chairman, I reserve the balance of my time.

Mr. HALL of Texas. Mr. Chairman, I yield myself such time as I may consume.

Mr. Chairman, I rise, of course, in support of H.R. 2086, the Networking and Information Technology Research and Development Act. It is a bill to support a coordinated basic research initiative in information technology. The chairman of the committee covered that very well.

I think it was introduced, of course, by the chairman of the Committee on Science, with bipartisan cosponsorship. I am pleased that the committee acted in a spirit of cooperation to perfect the bill. Some improvements have come from both sides of the aisle and were accepted during the markup of the measure.

H.R. 2086, as reported, enjoys, as the gentleman from Wisconsin (Chairman SENSENBRENNER) reported, broad bipartisan support. I congratulate the gentleman for his leadership in moving the bill forward for consideration of the House. I thank the late George Brown for his input.

Mr. Chairman, I also want to knowledge the efforts of the gentleman from Michigan (Mr. SMITH) and my colleague, the gentlewoman from Texas (Ms. EDDIE BERNICE JOHNSON), the chairman and the ranking member, respectively, of the Subcommittee on Basic Research, for their contributions to the development of the bill.

Information technology is transforming the way people live, the way people learn, the way people work, and the way people play. It has been estimated that information technology is responsible for at least one-third of the Nation's economic growth since 1995.

I would also submit that H.R. 2086 will help to ensure that the advances that we have referred to here in information technology continue. This will in turn, I think, create new infrastructure for business, new infrastructure for scientific research and personal communication. This will go hand-in-hand with the next 5 years of what I believe are going to be the greatest years and era of prosperity certainly since I have been in this Congress. It is the first time that we expect, we reasonably expect, that we are going to have a surplus to work with to do the things that we really ought to do to push this country forward.

The bill supports research needed to underpin the technological advances that are going to emerge even 20 years from now. I think it will take up some of the slack that this Congress lost when we killed the super collider. My goodness, how destructive we were of finding our place in the field of technology when we cast that vote.

Put another way, the initiative is focused on the long-term high-risk research that industry itself cannot fund, for a lot of reasons. Due to intense competitive pressures, the computer and communications companies are forced to concentrate their resources on near-term development that is necessary to bring products to market rapidly, so we understand that.

But in addition to generating the new ideas that will form the basis for future products and services, the programs authorized by H.R. 2086 will train the next generation of scientists and engineers who are essential to ensure continued U.S. leadership in information technology. The bill will accomplish this valuable outcome through its focus on university-based research. They are waiting with bated breath for this support, this new support, which combines leading edge research with graduate student education.

I will offer an amendment, Mr. Chairman, at the appropriate time to increase the authorization level for the National Science Foundation program to align the bill with the fiscal year 2001 request.

The bill has received very strong support, not only from the academic and industrial research communities, but from a wide range of computer, software, and communication companies.

It has also been endorsed by broad industry groups such as the U.S. Chamber of Commerce and the National Association of Manufacturers.

Mr. Chairman, H.R. 2086 is a bipartisan bill that will lead to many societal benefits. It will help ensure that this Nation continues to maintain economic growth and international competitiveness in the information economy of the 21st century. I ask for the support of my colleagues for the passage of this bill.

Mr. Chairman, I reserve the balance of my time.

Mr. SENSENBRENNER. Mr. Chairman, I yield 3 minutes to the gentleman from Michigan (Mr. SMITH), who is the Chair of the Committee on Science's Subcommittee on Basic Research, which has jurisdiction over NSF.

Mr. SMITH of Michigan. Mr. Chairman, first, I would thank the gentleman from Wisconsin (Chairman SENSENBRENNER) and the gentleman from Texas (Mr. HALL), who have done such great service to further the efforts of science and research in this country. I would also compliment the ranking member of the Subcommittee on Basic Research, the gentlewoman from Texas (Ms. EDDIE BERNICE JOHNSON).

This legislation I think gives the emphasis needed to move us ahead in information technology, and certainly we should remind ourselves that information technology research has been instrumental in bringing about the information revolution, which some have compared to the industrial revolution in its size and in its scope.

This revolution has spawned new businesses, created millions of good high-paying jobs, advanced the sciences, and certainly improved the health and welfare of the citizens of the country and people all over the world.

However, as the President's Information Technology Advisory Committee recently noted, the current boom in information technology is based on the basic research in computer science carried out more than 15 years ago. There is an urgent need to replenish the knowledge base. The advisory committee advocated a 5-year initiative to boost basic research funding significantly and help maintain the Nation's lead in this critical area. This bill, H.R. 2086, was designed to carry through on PITAC's recommendations.

In testimony before the Subcommittee on Basic Research last year, university researchers and members of the private sector were very supportive. Dr. Lazowska, a professor at the University of Washington and chair of the Computer Research Association, praised this bill, saying that it exemplifies a sound approach to making research policy by responding to clear national needs with recognizable objectives and a well-defined program for meeting those objectives.

□ 1330

In addition, Dr. Roberta Katz, president and CEO of the Technology Network, noted favorably that the 5-year authorizations in the bill demonstrate a commitment to a continued strong Federal investment in basic IT research to move information technology ahead.

In today's fast-paced science and technology environment, resting on our past successes is not enough if we are going to keep ahead in a world where other countries are dedicated to matching our productivity and taking away our customers. H.R. 2086 will help ensure that America stays at the cutting edge of new information technologies that will stimulate economic growth, improve our lives, and push forward the frontiers of science.

I am pleased to have been a cosponsor of this bill, because it is this kind of initiative that is going to help assure a good future for the citizens of the United States.

Mr. HALL of Texas. Mr. Chairman, I yield 6 minutes to the gentlewoman from Texas (Ms. EDDIE BERNICE JOHNSON).

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Chairman, I rise in support of H.R. 2086. The bill authorizes a major new research investment in information technology, which is consistent with the President's information technology for the 21st century initiative. This research initiative is very important to the Nation's future and its well-being, and I am pleased that the measure has now come before the House for its consideration; and I give my thanks and respect to the chairman, and the chairman of the subcommittee and the ranking member of the committee.

Information technology is a major driver of economic growth. It creates high-wage jobs, provides for rapid communication throughout the world, and provides the tools for acquiring knowledge and insight from information. Advances in computering and communications will make the workplace more productive, improve the quality of health care, and make government more responsive and accessible to the needs of our citizens.

Vigorous long-term research is essential for realizing the potential of information technology. The technical advances that led to today's computers and the Internet evolved from past federally sponsored research, in partnership with industry and universities.

H.R. 2086 will ensure that the store of basic knowledge is replenished and thereby enable the development of future generations of information-technology products and services.

H.R. 2086 has received the bipartisan cosponsorship of many Members, and I would like to acknowledge the collegial manner in which the bill was developed by the Committee on Science.

I want to thank the chairman of the committee, the gentleman from Wisconsin (Mr. SENSENBRENNER), for his efforts in crafting the bill and further thank the chairman, and the ranking Democratic Member, the gentleman from Texas (Mr. HALL), for their efforts in moving the bill to the floor.

H.R. 2086 will establish a multiagency research initiative that responds to the recent findings and recommendations of the President's information-technology advisory committee. This committee, which was established through statute, is composed of distinguished representatives from computer and communication companies and from academia. It reached its conclusions following a comprehensive assessment of current federally funded information-technology research.

The President's advisory committee found that Federal funding for information-technology research has tilted too much toward support for near-term, mission-focused objectives. They discovered a growing gap between the power of high performance computers available to support agency mission requirements versus support for the general academic research community. They identified the need for socio-economic research on the impact on society of the rapid evolution of information technology, and they judged that the annual Federal research investment is inadequate by more than $1 billion.

I believe that H.R. 2086, as reported from the Committee on Science, addresses each of the deficiencies identified by the advisory committee and will effectively implement its recommendations. I am particularly pleased by the inclusion of a provision that I offered in committee to explicitly authorize research to identify, understand, anticipate, and address the potential social and economic cost and benefits from the increasing pace of information technology-based transformations.

In addition to support for research, H.R. 2086 will also contribute to providing the highly trained workers needed by the information industry. My district knows about this all too well. The bill would expand the human resources pool through two principal mechanisms. First, as a part of their training, graduate students will participate in most of the individual research projects supported by the bill; and, secondly, special provision is made for student internships in industry to help recruit individuals for careers and information-based companies.

I sponsored the provision in the bill that opened such internships to students participating in the Louis Stokes Alliances for Minority Participation program administered by the National Science Foundation.

Research discoveries in information technology over the past 30 years have resulted in new commercial enterprises that now constitute a major fraction of the economy. Businesses that produce computers, semiconductors, software and communications equipment have accounted for a third of the total growth in the United States economic production since 1992.

Clearly, there is ample evidence of the value of past Federal investments

in information-technology research. A 1995 study by the National Academy of Sciences documented several billion-dollar-per-year companies that had their genesis from discoveries resulting from government-sponsored research.

H.R. 2086 will provide the basic research needed to underpin the technological advances in the future. Because of the wide recognition of the importance of the research and education components of H.R. 2086, many organizations have expressed their support for the bill's passage. Among the industrial organizations that have endorsed 2086 are the U.S. Chamber of Commerce, the Association for Manufacturing Technology, the National Association of Manufacturers, the Business Software Alliance, and the Computing Technology Industry Association.

In addition, many academic institutions and technical societies have expressed support for the bill, including the Association of American Universities, the National Association of State Universities Land Grant Colleges, and the Computer Research Association.

Mr. Chairman, I believe that H.R. 2086 is an important investment in the future prosperity of this Nation and in the well-being of our fellow citizens. I commend the measure to all of my colleagues and ask for their support for its passage.

Mr. SENSENBRENNER. Mr. Chairman, I yield 4 minutes to the gentlewoman from Maryland (Mrs. MORELLA), who is the Chair of the Subcommittee on Technology of the Committee on Science.

Mrs. MORELLA. Mr. Chairman, I thank the chairman, the gentleman from Wisconsin (Mr. SENSENBRENNER), for yielding to me this time.

Mr. Chairman, as an original cosponsor, I am very pleased to rise in support of H.R. 2086, the Networking and Information Technology Research and Development Act. I want to commend the chairman of the full Committee on Science, the gentleman from Wisconsin (Mr. SENSENBRENNER); and the ranking member, the gentleman from Texas (Mr. HALL); and all of the cosponsors and those who are involved in the various subcommittees who helped to craft this bipartisan piece of legislation.

As Chair of the Committee on Science's Subcommittee on Technology, I realize that today's rapid advancement in technology development has opened up to all of us a new and exciting world that has forever changed the way that we live, the way that we work, the way that we learn.

If we are to maintain our global preeminence in IT, it is clear that we must prioritize and increase our investment in fundamental information-technology research, and that is why the Committee on Science has introduced this bill.

H.R. 2086 is an innovative 5-year authorization bill aimed at returning this Federal Government's funding emphasis on information technology to basic research.

I am pleased that the legislation authorizes funding for cutting-edge research at the National Institute of Standards and Technology in the critical areas of computer security and wireless technology. Every day, we hear more and more about the need for that.

In addition to increasing IT research funding, H.R. 2086 seeks to improve the information-technology workforce by providing college students the opportunity to get hands-on experience in the information-technology workforce.

Specifically, it authorizes $95 million over 5 years to establish an internship program which will award grants to colleges, including community colleges, for students to intern at IT companies. Throughout my many meetings and hearings involving the information-technology industry, I have heard time and time again there is a shortage of IT workers to meet the needs of both government and industry. Well, this internship program takes important steps to actively train and recruit U.S. workers to fill these high-tech jobs.

I am also concerned that we need to do more to draw women and minorities into the IT workforce. Women represent nearly 50 percent of all U.S. workers, and yet they only comprise about 22 percent of the science and engineering workforce. So I think the internship program that is proposed in this legislation can also go a long way in helping to engage and involve those who are currently underrepresented in the science and engineering fields to explore careers in information technology.

Finally, the bill directs the National Science Foundation to conduct a study on the availability of encryption technologies in foreign countries. While the administration recently approved regulations that helped to ease some of the export restrictions on encryption products for certain sectors, many in the United States high-tech industry argue they did not go far enough. I am hopeful that the study conducted by NSF will allow the administration and Congress to make informed decisions on criteria for exporting U.S. encryption products and will help us to ensure that U.S. companies remain competitive in the international marketplace. This is a win/win piece of legislation.

Mr. Chairman, I applaud the efforts of the chairman of the Committee on Science, the gentleman from Wisconsin (Mr. SENSENBRENNER), and the gentleman from Texas (Mr. HALL), the ranking member, to advance this important legislation. I urge all of my colleagues to support H.R. 2086 here today.

Mr. HALL of Texas. Mr. Chairman, I yield 3 minutes to the gentlewoman from California (Ms. WOOLSEY), a senior Member from California.

(Ms. WOOLSEY asked and was given permission to revise and extend her remarks.)

Ms. WOOLSEY. Mr. Chairman, I rise today in support of H.R. 2086. As a Member of the Committee on Science and as a representative from the North Bay of the San Francisco Bay area, I am acutely aware of the enormous contributions information-technology research has made for the economies of my district and its positive impact on our State of California and the national economy in total.

Mr. Chairman, I would like to take this opportunity to share with my colleagues an amendment offered to this bill that was accepted by the full Committee on Science that is now part of the bill we are debating right now. As we all know, computer and information-technology know-how will be essential to our children's success in the 21st century.

As I look at the limited use of technology in our classrooms, I wonder and have asked myself over and over, who is taking care of our children? Who is giving today's students the tools they need to be tomorrow's high-tech contributors and tomorrow's high-tech leaders? To help answer these questions, H.R. 2086 now contains an amendment that I wrote and creates a research program at the National Science Foundation to look at exactly how schools can better use available technology.

Through the assistance of NSF, we will now be able to assess and develop ways to increase the use of computer technology in elementary and secondary schools. This provision links academic researchers and teachers who will be developing materials and teaching methods. It requires that demonstrations be conducted in a broad range of educational settings to assess the effectiveness of computer materials and methods, to gain evidence about which methods and programs work and which work better than others.

Lastly, the program includes a provision to establish electronic libraries with access to this information in order to disseminate best practices and materials.

We all know the first step is to wire our schools, Mr. Chairman; but until we develop meaningful ways to incorporate that technology into our children's education, the technical infrastructure will be of little benefit to most of them.

Mr. Chairman, I urge my colleagues to support research and development. Vote for H.R. 2086.

□ 1345

Mr. HALL of Texas. Mr. Chairman, I yield 4 minutes to the gentlewoman from Texas (Ms. JACKSON-LEE), a very valued member of the committee.

(Ms. JACKSON-LEE of Texas asked and was given permission to revise and extend her remarks.)

Ms. JACKSON-LEE of Texas. Mr. Chairman, I thank the gentleman for yielding me this time. I rise in support of H.R. 2086, and applaud our chairman,

the gentleman from Wisconsin (Mr. SENSENBRENNER), as well as the ranking member, the gentleman from Texas (Mr. HALL), the gentlewoman from Maryland (Mrs. MORELLA), and the gentlewoman from Texas (Ms. EDDIE BERNICE JOHNSON).

Mr. Chairman, I also applaud the fact that the Committee on Science was able to capture the moment as we entered the 21st century and focus, now moving from the superhighway to the concept of networking and information technology research and development.

I was elected in 1994 and had the pleasure of starting to serve on the Committee on Science in 1995. For some reason, I began to coin a phrase in most of my opening statements in the Committee on Science, which was to emphasize that science would be the work of the 21st century. At that time, even in 1995, the 21st century seemed to be enormously distant. It is not that at this point, we are here in the 21st century.

So we must continue to provide substantial resources for the American people in the 21st century, and the support of technological research and development will ensure that the United States continues to be at the forefront of the information age. Moreover, great strides in information technology will allow the economy to sustain its expansion over all of our sectors.

Though we had a guru in Dr. John Koskinen, I believe, who handled our Y2K, and certainly, unless we were all imagining, we seemed to have done very well with getting through the Y2K effort, or the Y2K journey. But I would add in my compliments a sense of caution and reservation. For even as we worked to get through Y2K, there was a noticeable missing element of outreach to all segments of our population. Low income, minorities, and nonprofits all seemed to be at the short end of receiving the kind of information that would help enhance their progress into this next century and this new technological society.

The Networking and Information Technology Research and Development Act, I believe, will take a decisive act in providing grants necessary to adequately fund and equip those agencies and groups that are dedicated to ensuring America's technological hegemony. In particular, this act grants the National Science Foundation with $1.8 billion for long-term research grants.

These grants would support research on high-end computing software, the social and economic consequences of information technology, and I will add to that by focusing on some of our low-income population and women in this, network stability, and security issues involving privacy. Furthermore, $385 million is provided for computing equipment that can process information at a rate of at least 1 trillion operations per second.

I am most gratified, as has already been stated, by the opportunity to provide and ensure monies to colleges and universities, but in particular to create internship programs.

I also raise the issue, although we are not discussing it at this time, and the gentleman from Wisconsin (Mr. SENSENBRENNER) joins me as a member of the Committee on the Judiciary, that there will be many things happening with this Internet. The world opens to us. We are proud of the technology, but we are also cognizant of many sort of negative influences. Although we do not discuss that today, we will be facing in the years to come the whole issue of Internet gambling. We will be discussing, as many victims groups have come to me and brought to my attention, the idea of utilizing the Internet in a sort of morbid auctioning of the belongings of victims of heinous crimes. So we will, in this research, I hope, be able to expand technology but, at the same time, be cognizant of the need to be cautious about technology.

Mr. Chairman, H.R. 2086 provides Information Technology Education and Training Grants authorizing $95 million for colleges and universities helping to create internship programs in information technology research along with private sector companies. Additionally, this bill also requires private companies to offer at least half of the funding for internships. H.R. 2086 grants $56 million for the NSF to establish a research program to develop and analyze information technology application to elementary and secondary education. NASA, the Energy Department, NIST, NOAA, and the EPA will also participate and support the NSF.

This Act will improve the Internet by funding the Next Generation Internet (NGI) Program with $111 million in FY 2000 and FY 2001; $30 million to the Energy Department; $50 million to NSF; $20 million for NASA; and $11 million for NIST.

Moreover, $1 million is earmarked for the NSF, to work in concert with the National Research Council, to study Internet privacy issues. These privacy issues touch privacy research and policy, laws and best practices in other countries.

This bill will offer prosperity to all and provide and educational opportunities for all Americans, especially those in the lower economic strata. I urge all my colleagues to support this Act for the good of the country.

Mr. Chairman, this is a very good bill. I hope to speak more about it as I put forth an amendment to ensure that some of those issues that I have discussed have been raised.

Mr. HALL of Texas. Mr. Chairman, I yield 3 minutes to the gentleman from Colorado (Mr. UDALL).

(Mr. UDALL of Colorado asked and was given permission to revise and extend his remarks.)

Mr. UDALL of Colorado. Mr. Chairman, I rise today in support of H.R. 2086. There is a clear need for this legislation. Last year's report by the President's Information Technology Advisory Committee pointed out that Federal programs in information technology research are insufficient. The committee stressed that if we were to continue to make advances in education, manufacturing, medicine, and communications, this country needs a long-term plan to replenish Federal investment in basic IT research.

While information technology as a sector of the economy has grown at an annual rate of 12 percent between 1993 and 1997, Federal funding for IT research has grown only at the rate of inflation. In fact, appropriation levels for information technology initiatives and for all coordinated IT research programs for this fiscal year were well below the President's request.

H.R. 2086 authorizes dramatically increased government-funded research in long-term basic information technology and networking, an increase mainly directed at the National Science Foundation and NASA, but also benefiting DOE, NIST, NOAA and the EPA.

I wanted to call the attention of the House to the part of our committee's report on H.R. 2086 that stresses the importance of including physics, mathematics, chemistry, engineering, and other fields of science in the IT research efforts. This language is intended to ensure that the NSF and other agencies that participate in the research initiative authorized by the bill tap into the expertise and capabilities of other disciplines.

As author of this part of the report, I appreciate the support of the chairman, the gentleman from Wisconsin (Mr. SENSENBRENNER), the ranking member, the gentleman from Texas (Mr. HALL), and the committee for this statement. It will send a message that the planning process should reflect an inclusive attitude.

I also want to take a moment to talk about a few of the amendments being offered today. The amendments offered by my colleagues, the ranking member, the gentleman from Texas (Mr. HALL), and the gentleman from Oregon (Mr. WU) would make a good bill better by boosting authorization levels for the National Science Foundation, and I urge its support.

Another amendment by my colleague, the gentleman from Connecticut (Mr. LARSON), would require the NSF and other agencies to prepare a report that would address key issues relating to the digital divide. More than half of the U.S. classrooms are connected to the Internet today, compared to less than 3 percent in 1993. But students in schools without Internet access are quickly falling behind the Internet. The amendment of the gentleman from Connecticut (Mr. LARSON) would help meet this challenge.

Finally, I wanted to speak in support of the amendment offered by my colleague, the gentleman from Pennsylvania (Mr. HOEFFEL), who will address the issue of Internet access for seniors. In 1998, the number of people aged 50 to 74 using the Internet doubled from the year before. It is estimated by the end of this year there will be 100 million citizens over the age of 50 on line. I can count my mother as one of those people, and I am soon to be one of those people over 50 as well. The gentleman

from Pennsylvania (Mr. HOEFFEL) would make sure that the benefits of the Internet are available to senior citizens.

So all in all these amendments are important in their emphasis on making the benefits of these newest technologies available to all Americans. I support these amendments and support H.R. 2086.

Mr. HALL of Texas. Mr. Chairman, I yield 2 minutes to the gentlewoman from New York (Mrs. MALONEY).

Mrs. MALONEY of New York. Mr. Chairman, I thank the gentleman for yielding me this time, and I rise in favor of H.R. 2086.

Investment in long-term fundamental information technology research is critical to the continued evolution of the Internet and to the economy of New York City and the country.

Mr. Chairman, I believe this investment in IT research will benefit the country many times over. As the economy becomes increasingly global in nature, the U.S. must continue to invest in developing safer and faster information technology.

While the press has largely concentrated on the incredible wealth that has accumulated in high-tech stocks, the most substantial impact of IT on the economy can be measured in productivity gains and in job growth.

In New York City, the power of IT as a job creator has been stunning. According to a November report in Craine's New York Business, New York's Silicon Alley has created 56,000 jobs since 1994. When peripheral jobs that work with Silicon Alley companies are included, the total is well over 100,000 jobs, twice the number that neighboring Wall Street has added during the unprecedented Bull market.

Research projects funded by the bill include the development of the next generation Internet and ''terascale'' computing equipment. Funding will also go to information technology education and training grants that will be jointly funded with the private sector.

Mr. Chairman, I applaud the chairman of the committee, the gentleman from Wisconsin (Mr. SENSENBRENNER) and the gentleman from Texas (Mr. HALL) for their hard work and leadership in this important bill. I would also like to thank President Clinton and Vice President Gore for their 8-year commitment to technology issues.

Mr. HALL of Texas. Mr. Chairman, I yield 2 minutes to the gentleman from Oregon (Mr. BLUMENAUER).

Mr. BLUMENAUER. Mr. Chairman, I thank the gentleman for yielding me this time. I too would like to add my voice in appreciation as a member of this chamber for the leadership from the committee in terms of making sure that the United States' leadership in the area of information technology will be assured with the enactment of this legislation. This is an important step in the right direction.

I wanted to reference simply two points that are of special interest to me.

I appreciate the language in this legislation that would require the study of the encryption technologies that are available in foreign countries. I have often been concerned that our encryption policy in the United States in terms of export restrictions verged on the ludicrous.

□ 1400

We were in danger having the potential of some Gameboy platforms running athwart our restrictions until recently by action of the administration. And having a rational study of what is available overseas, compare that to what is available here, trying to make this something that makes sense in the broader world stage is important, I think, for our constituents who are engaged ultimately in ways to make sure that we have maximum benefit of encryption technology in the United States and we do not put American companies at a disadvantage.

Second, I appreciate and applaud the leadership of this committee trying to focus the need on having permanent research and development tax credit. This is something that makes a huge difference to industry in the long term looking over the long haul, something that industry can use to be able to make its research and development decisions.

I hope that the legislative leadership in both Chambers will take seriously the message that has been delivered by the committee to make sure that this is made permanent so that industry can count upon it.

I look forward to having a clean vote on this item before we adjourn. I think it would be overwhelmingly approved, it would be an important signal for our industry, and I think it is something that we no longer need to delay.

Mr. HALL of Texas. Mr. Chairman, as is usual in the courtroom, we save the best for the last. I yield 3 minutes to the gentleman from New York (Mr. NADLER).

Mr. NADLER. Mr. Chairman, I rise in strong support of this legislation. I want to congratulate the chairman and the ranking member of the committee and the other members of the committee for bringing the bill to the floor today.

It is critical that we continue to invest in basic research and technology and support the Next Generation Internet. The Government can play and has played a critical role in stimulating science and in improving people's lives. Government investment in basic research was essential to the creation and the development of the Internet we know today. We must continue to invest in cutting-edge technology and basic science to develop the Internets of the future. We must do everything we can to support this type of research.

I support this bill specifically because it continues to fund the Next Generation Internet. This initiative focuses on developing revolutionary applications and networking capabilities that will dramatically increase the speed and efficiency of the Internet.

The Next Generation Internet will be capable of operating at what we today would call incredible speeds. Imagine downloading data not at 56k, but at 622 megabits per second or even 2.4 gigabits per second or even 9.9 gigabits per second. That is what the future holds for Internet users if we continue to fund this.

These types of networks will enable bandwidth-intensive applications, such as telemedicine, video-conferencing, advanced engineering, and virtual-learning environments. The Internet of the future ought to be able to transmit voice, date, and video quickly and efficiently. If we invest wisely and support continued funding, then it will do so.

The National Science Foundation has played a central role in steering and providing seed money for this new national network. The bill recognizes the critical importance of strong Federal investment in basic research and science and specifically in the Next Generation Internet.

The research of today will stimulate future economic development as the research of yesterday has stimulated our current economic boom, and the research of today will further benefit our economy and our country in future years.

Again, I congratulate the committee; and I urge all my colleagues to support this bill.

Mr. EWING. Mr. Chairman, I rise today in strong support of H.R. 2086, the Networking and Information Technology Research and Development Act. This legislation supports the vital funding of basic information technology research in the high-Performance Computing and Communications, Next Generation Internet, and additional NITRD programs.

I am particularly proud to support this legislation because of the instrumental role my own constituents at the University of Illinois have played in information technology research. While many in Washington are talking about making the Internet more accessible, but it has been researchers at the university of Illinois' National Computational Science Alliance (NCSA) that have made it happen. It was these researchers that pioneered the effort to create Mosaic, the browser which has the allowed the public access to the World Wide Web and the Internet. Without the National Science Foundation's support of this research, access to the Internet may still be only reserved for the few.

By devoting $130 million to the NSF for high-end computing, software, and networking research, H.R. 2086 will continue to support such important endeavors as those in my district to ensure that America's technological revolution leaves no one behind. Events of the past 10 years are evidence that any costs we incur today will be far outweighed by the rewards we reap tomorrow.

It is my hope that my colleagues on both sides of the aisle will join the bipartisan coalition of Science Committee members who passed H.R. 2086 by a unanimous 41–0 vote at Full Committee. Please support H.R. 2086 and support real efforts to make the information super-highway available to all.

Ms. LOFGREN. Mr. Chairman, I rise today in support of H.R. 2086, the Networking and Information Technology Research and Development Act, because I believe that this legislation provides funding for internet and computing research that is essential to maintaining our status as a world leader in information technologies. Last week's hacker attacks on some of the foremost e-commerce web sites indicates the degree to which the development of the internet and our understanding of all of its possibilities and pitfalls, is still in its infancy. Just as buying stock in information technology companies has been a successful investment, dedicating funds to basic research into internet privacy, security, and stability, and helping to develop the technologies that will drive the next-generation internet, is as worthwhile an investment as we can make.

The federal government played a founding role in the growth of the internet, helping to develop and build both the infrastructure that carries the internet and the computers that power it. This bill continues that tradition of our role in the growth of this technology, technology that has the power to benefit so many people. H.R. 2086 provides nearly half a billion dollars to the National Science Foundation, hundreds of millions of dollars to NASA and the Department of Energy, and millions more to the National Institute of Standards and Technology, National Oceanic and Atmospheric Administration, and Environmental Protection Agency. The money is dedicated to long-term basic research on networking and information technology, and involves universities and the private sector in this collective research effort through grants for development and study.

This bill is truly legislation that everyone, particularly everyone involved in the growth of our new high-tech economy, can support. And most everyone already has. The Science Committee approved this bill unanimously, and a tremendous coalition of business, university, and government groups from across the country have voiced their support for this extremely important legislation. This bill will be a boon to the people of Silicon Valley, the area that I represent, and companies and trade associations that have been at the forefront of the development of the newest generation of information technology. But this is hardly a local phenomenon. The University of Washington, the Big Ten Universities, MIT, the National Association of Manufacturers, and the Co-Chairs of the President's Information Technology Advisory Council all have endorsed this legislation. Little wonder that internet technology, which has connected people from across the country and across the world like nothing before it, could also connect people in support of this legislation assisting in its development.

Mr. Chairman, basic research into new internet technologies drove the development of the world wide web and the incredible system of networks that now traverse the globe. Decades of basic research into computers and information technology were the catalyst for the internet economic boom that is now sweeping the country with a broad swath of prosperity in its wake. This bill provides hundreds of millions of dollars of extremely well-spent investment into further basic research to continue there geometric advances in information technologies, and I hope that the rest of my colleagues will join the 41 Members of the Science Committee in supporting it wholeheartedly.

Mr. HALL of Texas. Mr. Chairman, I have no further requests for time, and I yield back the balance of my time.

Mr. SENSENBRENNER. Mr. Chairman, I also have no further requests for time, and I yield back the balance of my time.

The CHAIRMAN. All time for general debate has expired.

The committee amendment in the nature of a substitute consisting of the bill, modified by striking section 8 and redesignating succeeding sections accordingly, shall be considered by sections as an original bill for the purpose of amendment, and pursuant to the rule, each section is considered read.

During consideration of the bill for amendment, the Chair may accord priority in recognition to a Member offering an amendment that he has printed in the designated place in the CONGRESSIONAL RECORD. Those amendments will be considered read.

The Chairman of the Committee of the Whole may postpone a request for a recorded vote on any amendment and may reduce to a minimum of 5 minutes the time for voting on any postponed question that immediately follows another vote, provided that the time for voting on the first question shall be a minimum of 15 minutes.

Mr. SENSENBRENNER. Mr. Chairman, I ask unanimous consent that the committee amendment in the nature of a substitute be printed in the RECORD and open to amendment at any point.

The CHAIRMAN. Is there objection to the request of the gentleman from Wisconsin?

There was no objection.

The text of the committee amendment in the nature of a substitute, as modified, is as follows:

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

SECTION 1. SHORT TITLE.

This Act may be cited as the ''Networking and Information Technology Research and Development Act''.

SEC. 2. FINDINGS.

The Congress makes the following findings:

(1) Information technology will continue to change the way Americans live, learn, and work. The information revolution will improve the workplace and the quality and accessibility of health care and education and make government more responsible and accessible.

(2) Information technology is an imperative enabling technology that contributes to scientific disciplines. Major advances in biomedical research, public safety, engineering, and other critical areas depend on further advances in computing and communications.

(3) The United States is the undisputed global leader in information technology.

(4) Information technology is recognized as a catalyst for economic growth and prosperity.

(5) Information technology represents one of the fastest growing sectors of the United States economy, with electronic commerce alone projected to become a trillion-dollar business by 2005.

(6) Businesses producing computers, semiconductors, software, and communications equipment account for one-third of the total growth in the United States economy since 1992.

(7) According to the United States Census Bureau, between 1993 and 1997, the information technology sector grew an average of 12.3 percent per year.

(8) Fundamental research in information technology has enabled the information revolution.

(9) Fundamental research in information technology has contributed to the creation of new industries and new, high-paying jobs.

(10) Our Nation's well-being will depend on the understanding, arising from fundamental research, of the social and economic benefits and problems arising from the increasing pace of information technology transformations.

(11) Scientific and engineering research and the availability of a skilled workforce are critical to continued economic growth driven by information technology.

(12) In 1997, private industry provided most of the funding for research and development in the information technology sector. The information technology sector now receives, in absolute terms, one-third of all corporate spending on research and development in the United States economy.

(13) The private sector tends to focus its spending on short-term, applied research.

(14) The Federal Government is uniquely positioned to support long-term fundamental research.

(15) Federal applied research in information technology has grown at almost twice the rate of Federal basic research since 1986.

(16) Federal science and engineering programs must increase their emphasis on long-term, high-risk research.

(17) Current Federal programs and support for fundamental research in information technology is inadequate if we are to maintain the Nation's global leadership in information technology.

SEC. 3. AUTHORIZATION OF APPROPRIATIONS.

(a) NATIONAL SCIENCE FOUNDATION.—Section 201(b) of the High-Performance Computing Act of 1991 (15 U.S.C. 5521(b)) is amended—

(1) by striking ''From sums otherwise authorized to be appropriated, there'' and inserting ''There'';

(2) by striking ''1995; and'' and inserting ''1995;''; and

(3) by striking the period at the end and inserting ''; $439,000,000 for fiscal year 2000; $468,500,000 for fiscal year 2001; $493,200,000 for fiscal year 2002; $544,100,000 for fiscal year 2003; and $571,300,000 for fiscal year 2004. Amounts authorized under this subsection shall be the total amounts authorized to the National Science Foundation for a fiscal year for the Program, and shall not be in addition to amounts previously authorized by law for the purposes of the Program.''.

(b) NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.—Section 202(b) of the High-Performance Computing Act of 1991 (15 U.S.C. 5522(b)) is amended—

(1) by striking ''From sums otherwise authorized to be appropriated, there'' and inserting ''There'';

(2) by striking ''1995; and'' and inserting ''1995;''; and

(3) by striking the period at the end and inserting ''; $164,400,000 for fiscal year 2000; $201,000,000 for fiscal year 2001; $208,000,000 for fiscal year 2002; $224,000,000 for fiscal year 2003; and $231,000,000 for fiscal year 2004.''.

(c) DEPARTMENT OF ENERGY.—Section 203(e)(1) of the High-Performance Computing Act of 1991 (15 U.S.C. 5523(e)(1)) is amended—

(1) by striking ''1995; and'' and inserting ''1995;''; and

(2) by striking the period at the end and inserting ''; $106,600,000 for fiscal year 2000; $103,500,000 for fiscal year 2001; $107,000,000 for fiscal year 2002; $125,700,000 for fiscal year 2003; and $129,400,000 for fiscal year 2004.''.

(d) NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.—(1) Section 204(d)(1) of the High-Performance Computing Act of 1991 (15 U.S.C. 5524(d)(1)) is amended—

(A) by striking ''1995; and'' and inserting ''1995;''; and

(B) by striking ''1996; and'' and inserting ''1996; $9,000,000 for fiscal year 2000; $9,500,000

for fiscal year 2001; $10,500,000 for fiscal year 2002; $16,000,000 for fiscal year 2003; and $17,000,000 for fiscal year 2004; and''.

(2) Section 204(d) of the High-Performance Computing Act of 1991 (15 U.S.C. 5524(d)) is amended by striking ''From sums otherwise authorized to be appropriated, there'' and inserting ''There''.

(e) NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION.—Section 204(d)(2) of the High-Performance Computing Act of 1991 (15 U.S.C. 5524(d)(2)) is amended—

(1) by striking ''1995; and'' and inserting ''1995;''; and

(2) by striking the period at the end and inserting ''; $13,500,000 for fiscal year 2000; $13,900,000 for fiscal year 2001; $14,300,000 for fiscal year 2002; $14,800,000 for fiscal year 2003; and $15,200,000 for fiscal year 2004.''.

(f) ENVIRONMENTAL PROTECTION AGENCY.—Section 205(b) of the High-Performance Computing Act of 1991 (15 U.S.C. 5525(b)) is amended—

(1) by striking ''From sums otherwise authorized to be appropriated, there'' and inserting ''There'';

(2) by striking ''1995; and'' and inserting ''1995;''; and

(3) by striking the period at the end and inserting ''; $4,200,000 for fiscal year 2000; $4,300,000 for fiscal year 2001; $4,500,000 for fiscal year 2002; $4,600,000 for fiscal year 2003; and $4,700,000 for fiscal year 2004.''.

SEC. 4. NETWORKING AND INFORMATION TECHNOLOGY RESEARCH AND DEVELOPMENT.

(a) NATIONAL SCIENCE FOUNDATION.—Section 201 of the High-Performance Computing Act of 1991 (15 U.S.C. 5521) is amended by adding at the end the following new subsections:

''(c) NETWORKING AND INFORMATION TECHNOLOGY RESEARCH AND DEVELOPMENT.—(1) Of the amounts authorized under subsection (b), $310,000,000 for fiscal year 2000; $333,000,000 for fiscal year 2001; $352,000,000 for fiscal year 2002; $390,000,000 for fiscal year 2003; and $415,000,000 for fiscal year 2004 shall be available for grants for long-term basic research on networking and information technology, with priority given to research that helps address issues related to high end computing and software; network stability, fragility, reliability, security (including privacy), and scalability; and the social and economic consequences of information technology.

''(2) In each of the fiscal years 2000 and 2001, the National Science Foundation shall award under this subsection up to 20 large grants of up to $1,000,000 each, and in each of the fiscal years 2002, 2003, and 2004, the National Science Foundation shall award under this subsection up to 30 large grants of up to $1,000,000 each.

''(3)(A) Of the amounts described in paragraph (1), $40,000,000 for fiscal year 2000; $40,000,000 for fiscal year 2001; $45,000,000 for fiscal year 2002; $45,000,000 for fiscal year 2003; and $50,000,000 for fiscal year 2004 shall be available for grants of up to $5,000,000 each for Information Technology Research Centers.

''(B) For purposes of this paragraph, the term 'Information Technology Research Centers' means groups of 6 or more researchers collaborating across scientific and engineering disciplines on large-scale long-term research projects which will significantly advance the science supporting the development of information technology or the use of information technology in addressing scientific issues of national importance.

''(d) MAJOR RESEARCH EQUIPMENT.—(1) In addition to the amounts authorized under subsection (b), there are authorized to be appropriated to the National Science Foundation $70,000,000 for fiscal year 2000, $70,000,000 for fiscal year 2001, $80,000,000 for fiscal year 2002, $80,000,000 for fiscal year 2003, and $85,000,000 for fiscal year 2004 for grants for the development of major research equipment to establish terascale computing capabilities at 1 or more sites and to promote diverse computing architectures. Awards made under this subsection shall provide for support for the operating expenses of facilities established to provide the terascale computing capabilities, with funding for such operating expenses derived from amounts available under subsection (b).

''(2) Grants awarded under this subsection shall be awarded through an open, nationwide, peer-reviewed competition. Awardees may include consortia consisting of members from some or all of the following types of institutions:

''(A) Academic supercomputer centers.

''(B) State-supported supercomputer centers.

''(C) Supercomputer centers that are supported as part of federally funded research and development centers.

Notwithstanding any other provision of law, regulation, or agency policy, a federally funded research and development center may apply for a grant under this subsection, and may compete on an equal basis with any other applicant for the awarding of such a grant.

''(3) As a condition of receiving a grant under this subsection, an awardee must agree—

''(A) to connect to the National Science Foundation's Partnership for Advanced Computational Infrastructure network;

''(B) to the maximum extent practicable, to coordinate with other federally funded large-scale computing and simulation efforts; and

''(C) to provide open access to all grant recipients under this subsection or subsection (c).

''(e) INFORMATION TECHNOLOGY EDUCATION AND TRAINING GRANTS.—

''(1) INFORMATION TECHNOLOGY GRANTS.—The National Science Foundation shall provide grants under the Scientific and Advanced Technology Act of 1992 for the purposes of section 3(a) and (b) of that Act, except that the activities supported pursuant to this paragraph shall be limited to improving education in fields related to information technology. The Foundation shall encourage institutions with a substantial percentage of student enrollments from groups underrepresented in information technology industries to participate in the competition for grants provided under this paragraph.

''(2) INTERNSHIP GRANTS.—The National Science Foundation shall provide—

''(A) grants to institutions of higher education to establish scientific internship programs in information technology research at private sector companies; and

''(B) supplementary awards to institutions funded under the Louis Stokes Alliances for Minority Participation program for internships in information technology research at private sector companies.

''(3) MATCHING FUNDS.—Awards under paragraph (2) shall be made on the condition that at least an equal amount of funding for the internship shall be provided by the private sector company at which the internship will take place.

''(4) DEFINITION.—For purposes of this subsection, the term 'institution of higher education' has the meaning given that term in section 1201(a) of the Higher Education Act of 1965 (20 U.S.C. 1141(a)).

''(5) AVAILABILITY OF FUNDS.—Of the amounts described in subsection (c)(1), $10,000,000 for fiscal year 2000, $15,000,000 for fiscal year 2001, $20,000,000 for fiscal year 2002, $25,000,000 for fiscal year 2003, and $25,000,000 for fiscal year 2004 shall be available for carrying out this subsection.

''(f) EDUCATIONAL TECHNOLOGY RESEARCH.—

''(1) RESEARCH PROGRAM.—As part of its responsibilities under subsection (a)(1), the National Science Foundation shall establish a research program to develop, demonstrate, assess, and disseminate effective applications of information and computer technologies for elementary and secondary education. Such program shall—

''(A) support research projects, including collaborative projects involving academic researchers and elementary and secondary schools, to develop innovative educational materials, including software, and pedagogical approaches based on applications of information and computer technology;

''(B) support empirical studies to determine the educational effectiveness and the cost effectiveness of specific, promising educational approaches, techniques, and materials that are based on applications of information and computer technologies; and

''(C) include provision for the widespread dissemination of the results of the studies carried out under subparagraphs (A) and (B), including maintenance of electronic libraries of the best educational materials identified accessible through the Internet.

''(2) REPLICATION.—The research projects and empirical studies carried out under paragraph (1)(A) and (B) shall encompass a wide variety of educational settings in order to identify approaches, techniques, and materials that have a high potential for being successfully replicated throughout the United States.

''(3) AVAILABILITY OF FUNDS.—Of the amounts authorized under subsection (b), $10,000,000 for fiscal year 2000, $10,500,000 for fiscal year 2001, $11,000,000 for fiscal year 2002, $12,000,000 for fiscal year 2003, and $12,500,000 for fiscal year 2004 shall be available for the purposes of this subsection.

''(g) PEER REVIEW.—All grants made under this section shall be made only after being subject to peer review by panels or groups having private sector representation.''.

(b) OTHER PROGRAM AGENCIES.—

(1) NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.—Section 202(a) of the High-Performance Computing Act of 1991 (15 U.S.C. 5522(a)) is amended by inserting '', and may participate in or support research described in section 201(c)(1)'' after ''and experimentation''.

(2) DEPARTMENT OF ENERGY.—Section 203(a) of the High-Performance Computing Act of 1991 (15 U.S.C. 5523(a)) is amended by striking the period at the end and inserting a comma, and by adding after paragraph (4) the following:

''and may participate in or support research described in section 201(c)(1).''.

(3) NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.—Section 204(a)(1) of the High-Performance Computing Act of 1991 (15 U.S.C. 5524(a)(1)) is amended by striking ''; and'' at the end of subparagraph (C) and inserting a comma, and by adding after subparagraph (C) the following:

''and may participate in or support research described in section 201(c)(1); and''.

(4) NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION.—Section 204(a)(2) of the High-Performance Computing Act of 1991 (15 U.S.C. 5524(a)(2)) is amended by inserting '', and may participate in or support research described in section 201(c)(1)'' after ''agency missions''.

(5) ENVIRONMENTAL PROTECTION AGENCY.—Section 205(a) of the High-Performance Computing Act of 1991 (15 U.S.C. 5525(a)) is amended by inserting '', and may participate in or support research described in section 201(c)(1)'' after ''dynamics models''.

SEC. 5. NEXT GENERATION INTERNET.

Section 103 of the High-Performance Computing Act of 1991 (15 U.S.C. 5513) is amended—

(1) by amending subsection (c) to read as follows:

''(c) STUDY OF INTERNET PRIVACY.—

''(1) STUDY.—Not later than 90 days after the date of enactment of the Networking and Information Technology Research and Development Act, the National Science Foundation may enter into an arrangement with the National Research Council of the National Academy of Sciences for that Council to conduct a study of privacy on the Internet.

''(2) SUBJECTS.—The study shall address—

''(A) research needed to develop technology for protection of privacy on the Internet;

''(B) current public and private plans for the deployment of privacy technology, standards, and policies;

''(C) policies, laws, and practices under consideration or formally adopted in other countries and jurisdictions to protect privacy on the Internet;

''(D) Federal legislation and other regulatory steps needed to ensure the development of privacy technology, standards, and policies; and

''(E) other matters that the National Research Council determines to be relevant to Internet privacy.

''(3) TRANSMITTAL TO CONGRESS.—The National Science Foundation shall transmit to the Congress within 21 months of the date of enactment of the Networking and Information Technology Research and Development Act a report setting forth the findings, conclusions, and recommendations of the National Research Council.

''(4) FEDERAL AGENCY COOPERATION.—Federal agencies shall cooperate fully with the National Research Council in its activities in carrying out the study under this subsection.

''(5) AVAILABILITY OF FUNDS.—Of the amounts described in subsection (d)(2), $900,000 shall be available for the study conducted under this subsection.''; and

(2) in subsection (d)—

(A) in paragraph (1)—

(i) by striking ''1999 and'' and inserting ''1999,''; and

(ii) by inserting '', $15,000,000 for fiscal year 2001, and $15,000,000 for fiscal year 2002'' after ''fiscal year 2000'';

(B) in paragraph (2), by inserting '', and $25,000,000 for fiscal year 2001 and $25,000,000 for fiscal year 2002'' after ''Act of 1998'';

(C) in paragraph (4)—

(i) by striking ''1999 and'' and inserting ''1999,''; and

(ii) by inserting '', $10,000,000 for fiscal year 2001, and $10,000,000 for fiscal year 2002'' after ''fiscal year 2000''; and

(D) in paragraph (5)—

(i) by striking ''1999 and'' and inserting ''1999,''; and

(ii) by inserting '', $5,500,000 for fiscal year 2001, and $5,500,000 for fiscal year 2002'' after ''fiscal year 2000''.

SEC. 6. REPORTING REQUIREMENTS.

Section 101 of the High-Performance Computing Act of 1991 (15 U.S.C. 5511) is amended—

(1) in subsection (b)—

(A) by redesignating paragraphs (1) through (5) as subparagraphs (A) through (E), respectively;

(B) by inserting ''(1)'' after ''ADVISORY COMMITTEE.—''; and

(C) by adding at the end the following new paragraph:

''(2) In addition to the duties outlined in paragraph (1), the advisory committee shall conduct periodic evaluations of the funding, management, implementation, and activities of the Program, the Next Generation Internet program, and the Networking and Information Technology Research and Development program, and shall report not less frequently than once every 2 fiscal years to the Committee on Science of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate on its findings and recommendations. The first report shall be due within 1 year after the date of the enactment of the Networking and Information Technology Research and Development Act.''; and

(2) in subsection (c)(1)(A) and (2), by inserting '', including the Next Generation Internet program and the Networking and Information Technology Research and Development program'' after ''Program'' each place it appears.

SEC. 7. EVALUATION OF CAPABILITIES OF FOREIGN ENCRYPTION.

(a) STUDY.—The National Science Foundation shall undertake a study comparing the availability of encryption technologies in foreign countries to the encryption technologies subject to export restrictions in the United States.

(b) REPORT TO CONGRESS.—Not later than 6 months after the date of enactment of this Act, the National Science Foundation shall transmit to the Congress a report on the results of the study undertaken under subsection (a).

SEC. 8. STUDY OF APPROPRIATIONS IMPACT ON INFORMATION TECHNOLOGY RESEARCH.

Within 90 days after the date of the enactment of this Act, the Comptroller General, in consultation with the National Science and Technology Council and the President's Information Technology Advisory Committee, shall transmit to the Congress a report on the impact on information technology research of the fiscal year 2000 appropriations acts for the Departments of Veterans Affairs and Housing and Urban Development, and Independent Agencies; for the Departments of Commerce, Justice, and State, the Judiciary, and Related Agencies; and for Energy and Water Development.

AMENDMENT NO. 10 OFFERED BY MR. HALL OF TEXAS

Mr. HALL of Texas. Mr. Chairman, I offer an amendment.

The CHAIRMAN. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 10 offered by Mr. HALL of Texas:

Page 5, lines 12 through 15, strike ''$439,000,000'' and all that follows through ''$571,300,000'' and insert ''$520,000,000 for fiscal year 2000; $645,000,000 for fiscal year 2001; $672,000,000 for fiscal year 2002; $736,000,000 for fiscal year 2003; and $771,000,000''.

Page 6, lines 14 through 17, strike ''$106,600,000'' and all that follows through ''$129,400,000'' and insert ''$120,000,000 for fiscal year 2000; $108,600,000 for fiscal year 2001; $112,300,000 for fiscal year 2002; $131,100,000 for fiscal year 2003; and $135,000,000''.

Page 8, lines 14 through 17, strike ''$310,000,000'' and all that follows through ''$415,000,000'' and insert ''$350,000,000 for fiscal year 2000; $421,000,000 for fiscal year 2001; $442,000,000 for fiscal year 2002; $486,000,000 for fiscal year 2003; and $515,000,000''.

Page 9, line 1, strike ''20'' and insert ''25''. Page 9, line 4, strike ''30'' and insert ''35''. Page 9, lines 6 through 8, strike ''2000; $40,000,000'' and all that follows through ''$50,000,000'' and insert ''2000; $45,000,000 for fiscal year 2001; $50,000,000 for fiscal year 2002; $55,000,000 for fiscal year 2003; and $60,000,000''.

Mr. HALL of Texas. Mr. Chairman, the amendment I am offering with the gentleman from Oregon (Mr. WU) will adjust the funding authorized in the bill in response to the administration's budget request for fiscal year 2001. I would like to briefly describe the amendment and then turn to the gentleman from Oregon (Mr. WU) for a description of the value and impact of the amendment.

The purpose of H.R. 2086 is to authorize the portfolio of information technology research activities that are formally coordinated among the Federal R&D agencies. This includes the authorization for new programs to implement the recommendation of the President's Information Technology Advisory Committee for a major new initiative focused on long-term, high-risk research.

This amendment addresses the two funding issues raised by the President's fiscal year 2001 budget request for information-technology research.

First, the budget request changes the baseline for formally coordinated research activities. The baseline now includes projects that the various agencies have been conferring on but that were not reported to the Office of Management and Budget for fiscal year 2000 as part of the formal interagency program.

H.R. 2086, as reported, is below the fiscal year 2001 request partly because the bill assumes the lower baseline level in determining the authorization level for the fiscal years 2001 through the year 2004.

The second funding issue the amendment addresses is a significant increase that the fiscal year 2001 budget request provides for new research support. I support this proposed increase because it will reverse the 36 percent shortfall in the appropriations level for fiscal year 2000 for the information-technology research initiative, as well as the 13 percent shortfall for all coordinated information-technology research programs.

The amendment also adjusts the level of the Department of Energy authorization to reflect the fiscal year 2000 appropriations level.

Finally, the amendment adjusts the outyear authorizations for the two agencies to maintain the same total percentage funding growth between fiscal years 2001 and 2004 as provided by H.R. 2086, as reported.

This long-term focus of the bill, I think, also will provide support for an area of great importance for all of our citizens. Most important to me in the entire bill is the biomedical research. Information technology has become increasingly important to the medical sciences. It holds the key to harnessing the vast quantities of genomic data being gathered in order to understand the expression and control of genes.

Statistical analysis of large databases is central to the diagnosis and treatment of medical illnesses. Medical imaging techniques rely on complex software and algorithms.

Other research under this initiative will address fundamental studies of robotics that will revolutionize the practice of medicine. Advances in robotics will lead to applications, for example, to allow surgeons to manipulate and repair blood vessels. Devices at the micron scale will provide physicians with the capability to search out and destroy cancer cells at the earliest stages of the disease.

Mr. Chairman, this bill will help enable the future. I commend the measure to my colleagues and ask for their support.

Mr. Chairman, I yield to the gentleman from Oregon (Mr. WU).

Mr. WU. Mr. Chairman, I thank the gentleman from Texas (Mr. HALL), the ranking member, and the gentleman from Wisconsin (Chairman SENSENBRENNER) for working with me on this amendment, or allowing me to work

with them on this amendment, which would increase for fiscal year 2001 the NSF funding by $176 million and increase the outyear funding levels in conformance with that percentage increase. I believe that this adjustment enjoys bipartisan support, and it is also supported by the administration.

I am in receipt of a letter from the administration stating that the administration supports the amendment to be offered by the gentleman from Texas (Mr. HALL) and the gentleman from Oregon (Mr. WU) that would increase authorizations for FY 2001 for the National Science Foundation to the administration's budget request.

A few weeks ago, I had the opportunity to travel throughout my district with the gentleman from Wisconsin (Chairman SENSENBRENNER). We visited research universities, including Oregon Health Sciences University, Portland State University, and several high-tech companies where we were able to see firsthand the benefit of NSF grants.

At Portland State University, we learned about a unique collaboration between Oregon Health Sciences University, Oregon Graduate Institute, and the University of Washington to develop the State's highest speed access to Internet to facilitate research in areas such as biotechnology and medicine.

The CHAIRMAN. The time of the gentleman from Texas (Mr. HALL) has expired.

(At the request of Mr. WU, and by unanimous consent, Mr. HALL of Texas was allowed to proceed for 5 additional minutes.)

Mr. HALL of Texas. Mr. Chairman, I continue to yield to the gentleman from Oregon (Mr. WU).

Mr. WU. Mr. Chairman, the research link between these institutions will provide access to unique laboratories and equipment located at each of these schools. At Oregon Health Sciences University this means access to information from the Museum of Health in Medicine to reconstruct hearts in order to find gene defects.

''Collaboration'' is the keyword to research in this bill and in this amendment. The new resources made available by this amendment will make a significant contribution to strengthening NSF's role as the lead agency for Federal multi-agency and information technology research efforts. This research encompasses advances in software design, wireless networking, high-end computing and mathematics.

In addition, it will enable application of computing and networking and technology in many fields of science and engineering that would not be possible with current technology. It will train the scientists and engineers needed to sustain the economic growth fueled by information technology. This investment will deliver tools and capabilities that will benefit every field of science and society broadly.

The resources made available by the amendment will be used by NSF for several focused efforts. Foremost, the funding will be used to support fundamental, long-term, high-risk research. This work will encompass investigation of computer system architectures, information storage and retrieval, scalable networks, and totally new approaches to computation.

Another particularly important use of the new funding will be for education programs in information technology. These include scholarships and fellowships, support for undergraduate participation, and research projects and development of new curriculum. New graduate students will obtain the skills necessary for future generations of researchers that are in high demand in the postindustrial economy.

At home, NSF-funded research provides support for important projects at Oregon's Urban University, Portland State University. The school has received nearly $5 million for funding for NSF projects this year that involve undergraduate and graduate students in research. Much of this research relates to community needs and priorities, including training American workers to fill high-tech, high-wage jobs. High-tech companies now constitute Oregon's largest private sector employer.

Finally, the increase in NSF funding will be used to establish a second terascale computing facility to support the academic research community. NSF is the principal access to high-performance computing for the academic research community. Access to the most powerful computers is essentially for leading-edge research, as well as educating the next generation of computer and computational scientists.

Mr. SENSENBRENNER. Mr. Chairman, I rise in support of the amendment.

Mr. Chairman, I thank the gentleman from Texas (Mr. HALL), and I support his constructive amendment. This amendment would expand the definition of ''information technology'' under the NSF account and change the NSF numbers accordingly.

This year the administration expanded the definition of programs deemed ''information technology'' within NSF's budget. This expanded definition is compatible with H.R. 2086, and I am pleased to include the new NSF numbers in the bill.

The administration prioritization of NSF in 2001 also demonstrates that they have accepted the committee's philosophy for IT spending. The committee believes that the NSF is the best agency to run open competitive and peer review IT grant programs.

With the adoption of this amendment, H.R. 2086 will incorporate the new expansive definition of IT at NSF within the same stable and sustainable rate of growth passed by the committee with a 41–0 vote last year. Thus, NSF IT spending in the Networking and Information Technology Research and Development Act will remain the same total growth rate over the 5 years of the bill after this amendment is adopted as it had been before the new expanded IT definition was proposed.

While this amendment accepts the aggregated definition of NSF IT spending, I would like to point out that this amendment does not rubber-stamp the President's request. This amendment does not plus up any other agencies to the President's request, nor does it reflect the decreases in overall NSF spending after fiscal year 2001 found in the administration's fiscal 2001 request. With the exception of NSF, the committee will review on a case-by-case basis the requested increases for IT and other agencies during the consideration of those agencies' authorization bills.

Mr. Chairman, this amendment reflects a bipartisan agreement on the part of the committee to a bill that has strong bipartisan support. I commend the ranking member from Texas (Mr. HALL) for offering this amendment, and I urge its adoption.

The CHAIRMAN. The question is on the amendment offered by the gentleman from Texas (Mr. HALL).

The amendment was agreed to.

AMENDMENT NO. 5 OFFERED BY MR. SMITH OF MICHIGAN

Mr. SMITH of Michigan. Mr. Chairman, I offer an amendment.

The CHAIRMAN. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 5 offered by Mr. SMITH of Michigan:

Page 16, after line 2, insert the following new paragraph:

(6) UNITED STATES GEOLOGICAL SURVEY.—Title II of the High-Performance Computing Act of 1991 (15 U.S.C. 5521 et seq.) is amended—

(A) by redesignating sections 207 and 208 as sections 208 and 209, respectively; and

(B) by inserting after section 206 the following new section:

''SEC. 207. UNITED STATES GEOLOGICAL SURVEY.

''The United States Geological Survey may participate in or support research described in section 201(c)(1).''.

Mr. SMITH of Michigan. Mr. Chairman, this amendment would have been put on yesterday by our Committee on Science meeting except it would have involved the possibility of re-referral to the Subcommittee on Research and Development. With the consent of Mr. Young as well as the chairman of the Subcommittee on Energy and Mineral Resources, and also the gentlewoman from Wyoming (Mrs. CUBIN) gave her support, we are offering this amendment at this time.

This amendment would allow the United States Geological Survey to participate in the Networking and Information Technology Research and Development Grant Program established by this bill.

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In doing so, the USGS would join with the National Science Foundation and other participating agencies in helping focus government funding on information technology research.

The United States Geological Survey has a simple mission, to describe and understand the Earth. When I was young, I traveled around the country with my dad who was a topographic engineer with the USGS. Dad helped meet the challenge of mapping this country by taking to the field with the old fashioned rod and compass in hand.

Today, the topographic maps my father helped create are digitized and the data they contain augmented by readings from satellites, sensors buried in the ground, and experiments run in the lab. Today, the current shuttle radar topography mission to map the world is in its 5th day of sending back billions of bytes of data.

The USGS has spent the last 121 years building a collection of these maps, images, and other information assets as a way of answering some of our fundamental questions about the Earth and its processes. These assets now include extremely large data sets requiring extraordinary technology challenges to maintain and use. That is why this amendment is important.

It is difficult to get a grasp on the size of the challenge without resorting to an analogy. For example, the USGS information assets include petabyte size data sets. A petabyte is 2 to the 50th power bytes, one million gigabytes, a thousand trillion bytes, a number that even someone used to dealing with the Federal budget has a hard time understanding. To describe the vastness of this information in another way, these databases are the equivalent of 20 million four-drawer legal-sized filing cabinets stuffed full of text. The computers and processors that deal with these data sets must be correspondingly capable and the network connections that feed them must be adequately quick.

The USGS continues to research these technologies as part of their research agenda. Allowing them to partner in the research funded under this bill will help ensure that their technology needs are met. It will also allow them to bring their considerable skills to the table and help focus this research into the areas where it is sure to do the most good.

I should point out, Mr. Chairman, that this amendment does not authorize any new funding. This simply recognizes the USGS in its role as a participant in IT research. I am pleased to offer this amendment with the support of the gentleman from Wisconsin (Mr. SENSENBRENNER) the chairman of the Committee on Science and the approval of the gentleman from Alaska (Mr. YOUNG) the chairman of the Committee on Resources and the gentlewoman from Wyoming (Mrs. CUBIN) the chairman of that committee's Subcommittee on Energy and Mineral Resources.

The CHAIRMAN. The time of the gentleman from Michigan (Mr. SMITH) has expired.

(On request of Mr. SENSENBRENNER, and by unanimous consent, Mr. SMITH of Michigan was allowed to proceed for 30 additional seconds.)

Mr. SENSENBRENNER. Mr. Chairman, will the gentleman yield?

Mr. SMITH of Michigan. I yield to the gentleman from Wisconsin.

Mr. SENSENBRENNER. Mr. Chairman, I am pleased to support the amendment offered by the gentleman from Michigan (Mr. SMITH). He correctly states that the only reason this was not included in the bill when it was considered by the Committee on Science is that it would have triggered a sequential referral to the Committee on Resources which would have resulted in a delay. I would like to thank the gentleman from Alaska (Mr. YOUNG) for signing off on this amendment. This simply integrates the efforts of the U.S. Geological Service into the type of research that is being done so that their mapping efforts can be much better digitalized and, thus, much more effective.

Mr. SMITH of Michigan. Mr. Chairman, I would conclude by requesting the support of my colleagues in the passage of this amendment.

Mr. HALL of Texas. Mr. Chairman, I rise in support, of course, of this amendment by the gentleman from Michigan (Mr. SMITH). It is entirely appropriate that the U.S. Geological Survey participate in the interagency information technology research program. I would also observe that the gentleman from Michigan learned this subject well at the feet of his father, a longtime member of the USGS team. We certainly support this amendment and urge its adoption.

The CHAIRMAN. The question is on the amendment offered by the gentleman from Michigan (Mr. SMITH).

The amendment was agreed to.

AMENDMENT NO. 14 OFFERED BY MRS. MORELLA

Mrs. MORELLA. Mr. Chairman, I offer an amendment.

The CHAIRMAN. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 14 offered by Mrs. MORELLA:

Page 8, after line 5, insert the following new subsection:

(g) NATIONAL INSTITUTES OF HEALTH.—Title II of the High-Performance Computing Act of 1991 (15 U.S.C. 5521 et seq.) is amended by inserting after section 205 the following new section:

"SEC. 205A. NATIONAL INSTITUTES OF HEALTH ACTIVITIES.

''(a) GENERAL RESPONSIBILITIES.—As part of the Program described in title I, the National Institutes of Health shall conduct research directed toward the advancement and dissemination of computational techniques and software tools in support of its mission of biomedical and behavioral research.

''(b) Authorization of Appropriations.—There are authorized to be appropriated to the Secretary of Health and Human Services for the purposes of the Program $223,000,000 for fiscal year 2000, $233,000,000 for fiscal year 2001, $242,000,000 for fiscal year 2002, $250,000,000 for fiscal year 2003, and $250,000,000 for fiscal year 2004.''.

Mrs. MORELLA. Mr. Chairman, H.R. 2086 will maintain our global leadership in information technology and prioritize our Nation's basic IT research by authorizing funding for six agencies that are undertaking civilian IT research and development initiatives. We have heard a lot about that.

These six lead agencies, NSF, NIST, NASA, NOAA, EPA and the Department of Energy, to use all those acronyms, all participate in programs involved with high-performance computing and communications and next generation Internet programs. One major agency, however, Mr. Chairman, the National Institutes of Health, is not among the group of agencies currently authorized in the bill.

My amendment would allow NIH to receive the funding authorization that it needs for vital information technology resources needed to map out the human genetic map, battle cancer and other life-threatening diseases, provide bioinformatic and molecular analysis, assist with telemedicine and advance computational medicine, among other efforts.

Mr. Chairman, let me provide just one example of the importance of cutting edge information technology for today's innovative medical research. The human genome project, overseen by NIH and the Department of Energy, is an international research program designed to construct detailed genetic maps and determine the complete sequence of human DNA and localize the estimated 50,000 to 100,000 genes within the human genome.

Later this year, researchers will complete the first draft of the entire human genome, the very blueprint of life. It is clear that the development and use of this genetic knowledge will have momentous implications for both individuals and society, potentially opening the doors to breakthrough medical discoveries that will allow all of us to live longer and improve our human condition. At the very heart of the human genome project are high speed, high performance computers that analyze and sequence the voluminous information collected by researchers. As more information is collected, these cutting edge computers must continually be advanced and upgraded to complete the job. In the past 6 years, Congress has made a priority of NIH research funding. Our wise investments in NIH research have already paved the way to a revolution in our ability to detect, treat, and prevent disease. Yet we must also ensure that the NIH is provided with the necessary information technology funds that are needed to conduct its very important medical research.

The amendment before us today would authorize $233 million in NIH information technology funding for fiscal year 2001, $242 million in fiscal year 2002, and $250 million in fiscal years 2003 and 2004. This funding level meets NIH's budget request for information technology and is consistent with an NIH letter requesting such funding sent to the gentleman from Virginia

(Mr. BLILEY) the chairman of the Committee on Commerce. I wish to thank the gentleman from Virginia for his collaborative efforts in preparing this amendment and indeed I want to thank the gentleman from Wisconsin (Mr. SENSENBRENNER) and the gentleman from Texas (Mr. HALL) for their support. I certainly urge all my colleagues to support this amendment.

Mr. SENSENBRENNER. Mr. Chairman, will the gentlewoman yield?

Mrs. MORELLA. I yield to the gentleman from Wisconsin.

Mr. SENSENBRENNER. Mr. Chairman, I thank the gentlewoman from Maryland for yielding. I support her amendment. The reason this amendment is before us today on the floor is the same reason why the previous amendment was before us, and, that is that the NIH is not under the jurisdiction of the Committee on Science. Had we added this money in during the Committee on Science consideration of the bill, it would have delayed the bill's consideration through a sequential referral to the Committee on Commerce.

What the gentlewoman from Maryland is doing is closing an important hole in this bill, and I am happy to note that the chairman, the members, and the staff of the Committee on Commerce support her efforts in doing so. So this has been worked out without any brouhaha over committee jurisdiction. This makes a good bill better; and it gets the NIH into developing better information technologies, to develop better ways of making sick people better and preventing them from getting sick in the first place.

Mrs. MORELLA. I thank the gentleman for his very eloquent comments on the amendment. It is a pleasure to be able to offer this amendment to close that loophole.

Mr. HALL of Texas. Mr. Chairman, I of course am privileged to congratulate the gentlewoman from Maryland and to recommend her amendment. It simply authorizes as the gentleman from Wisconsin has said the funding for National Institutes of Health. It formally funds the NIH contribution to the interagency research program. We urge the acceptance of this amendment.

The CHAIRMAN. The question is on the amendment offered by the gentlewoman from Maryland (Mrs. MORELLA).

The amendment was agreed to.

AMENDMENT NO. 4 OFFERED BY MR. LARSON

Mr. LARSON. Mr. Chairman, I offer an amendment.

The CHAIRMAN. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 4 offered by Mr. LARSON:

At the end of the bill, insert the following new section:

SEC. 10. REPORT TO CONGRESS.

Section 103 of the High-Performance Computing Act of 1991 (15 U.S.C. 5513), as amended by section 5 of this Act, is further amended by redesignating subsections (b), (c), and (d) as subsections (c), (d), and (e), respectively, and by inserting after subsection (a) the following new subsection:

''(b) REPORT TO CONGRESS.—

''(1) REQUIREMENT.—The Director of the National Science Foundation shall conduct a study of the issues described in paragraph (3), and not later than 1 year after the date of the enactment of the Networking and Information Technology Research and Development Act, shall transmit to the Congress a report including recommendations to address those issues. Such report shall be updated annually for 6 additional years.

''(2) CONSULTATION.—In preparing the reports under paragraph (1), the Director of the National Science Foundation shall consult with the National Aeronautics and Space Administration, the National Institute of Standards and Technology, and such other Federal agencies and educational entities as the Director of the National Science Foundation considers appropriate.

''(3) ISSUES.—The reports shall—

''(A) identify the current status of high-speed, large bandwidth capacity access to all public elementary and secondary schools and libraries in the United States;

''(B) identify how high-speed, large bandwidth capacity access to the Internet to such schools and libraries can be effectively utilized within each school and library;

''(C) consider the effect that specific or regional circumstances may have on the ability of such institutions to acquire high-speed, large bandwidth capacity access to achieve universal connectivity as an effective tool in the education process; and

''(D) include options and recommendations for the various entities responsible for elementary and secondary education to address the challenges and issues identified in the reports.''.

Mr. LARSON. Mr. Chairman, before I begin I would like to thank the gentleman from Wisconsin (Mr. SENSENBRENNER) our esteemed chairman of the Committee on Science for his guidance and thoughtfulness in helping me construct this very fine bill and amendment but more importantly I would like to join the chorus of those who have indicated his outstanding work, and I am proud to be a cosponsor of the bill to which we are going to amend this legislation. But I think the highest sense of praise comes not only from his colleagues but having been out in San Francisco this past year attending a convention, to hear Bill Joy from Sun Microsystems stand up and say that this bill that was put forward by our chairman is clearly the most outstanding IT bill of its kind ever put forward before the United States Congress. I think that is high praise from someone who clearly understands technology and its importance.

In addition, I would like to thank both the gentlewoman from Maryland (Mrs. MORELLA) and the gentleman from Michigan (Mr. SMITH) for their help as well as the gentleman from Michigan (Mr. BARCIA) and the gentlewoman from Texas (Ms. EDDIE BERNICE JOHNSON) for holding a joint hearing of the Subcommittees on Technology and Basic Research of the Committee on Science last year on this important topic. Finally, I would be remiss if I did not also thank the former ranking member of the Committee on Science, Mr. Brown. He collaborated with me on this piece of legislation, and indeed I am sad today that he is not here but again want to thank him as well. I would also like to thank Javier Gonzalez from my staff.

Mr. Chairman, this amendment is straightforward and it is practical, it is narrow and technical in its application, and very simply calls for the National Science Foundation to do a technological assessment of what is the most efficient and economical means of bringing forward the information superhighway to our public schools and our public libraries.

Here are the underpinnings, briefly. The Department of Commerce issued a study in July of last year citing that the digital divide in this country in fact is growing further apart. It is growing apart along the lines of race, gender, wealth, and geography. And so in order to look at closing that gap, it becomes important upon policy makers to make sure if we are going to provide universal, ubiquitous access to the information superhighway, that we have the best possible assessment available. This bill calls upon NSF in conjunction with NASA, the Department of Education, and other agencies it should so choose to make sure it brings this about in a timely manner so that we can make the best policy decisions as relates to this.

Mr. SENSENBRENNER. Mr. Chairman, will the gentleman yield?

Mr. LARSON. I yield to the gentleman from Wisconsin.

Mr. SENSENBRENNER. Mr. Chairman, I am happy to support this amendment. It is identical to a bill which he introduced and which I cosponsored earlier. We are talking about how to make information technology available in the cheapest possible way, particularly to our public schools and libraries. This is something that is timely and needed, and to make sure that the money we are authorizing under this bill is spent in the most efficient manner possible.

Mr. LARSON. Mr. Chairman, I would ask for my colleagues' support and move the adoption of this amendment.

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Mr. HALL of Texas. Mr. Chairman, I rise in strong support of the amendment.

Mr. Chairman, I thank the gentleman from Connecticut (Mr. LARSON) who is a very thoughtful and hard-working Member of the Committee on Science. As a matter of fact, since entering Congress, he has been in the forefront of publicized problems of the ''digital divide.''

He has proposed a series of legislative measures to focus on this situation, including this amendment. I strongly concur in the policy behind these legislative efforts, which is to ensure that all communities, including rural and inner city areas, have adequate access to advanced information technology.

One of the keys to maintaining a surging economy that offers opportunities for all of our citizens is to provide

the very best educational tools to all of our Nation's students.

Mr. Chairman, if, for no other reason, there are many other reasons to support it, but if for no other reason, this amendment is worthy of support, because the study at a minimum will identify the true present status of high-speed large band width capacity access to all public, elementary, and secondary schools and libraries throughout the country and, as the gentleman from Wisconsin (Chairman SENSENBRENNER) said, at a fair figure.

In conclusion, I strongly support and urge the adoption of this amendment.

Ms. WOOLSEY. Mr. Chairman, as one of the few members of both the Science and Education committees, I rise today in support of Mr. LARSON's amendment to H.R. 2086.

As a member of both committees, it's of particular importance to me that our children have the access to technology in order to succeed in school and in their future endeavors.

Congressman LARSON's amendment is a step in the right direction to ensure that students have access to information and internet technologies and also that schools can better use these available technologies.

However, as we strive to make technology more available and effective, let's not focus only on the physical barriers, but also consider the cultural and social barriers as well.

The emerging ''digital divide'' that we are all concerned about will not only break along economic lines, but social lines as well.

For instance, girls generally do not continue to use technology as they get older the way boys do.

It won't do us any good to procure the best computers, and completely wire our schools, if there is a group of students who aren't encouraged to use this technology.

We need to create education and outreach programs to promote opportunities for girls in high-tech futures.

In fact, I've authored legislation that tracks girls from the 4th grade through high school in order to find ways to increase their awareness of high-tech careers and provide them with mentoring and hands-on experience to help them succeed.

Like my colleague from Connecticut, I believe all our children deserve every opportunity to succeed as they face the challenges of the 21st century. It is time we focus on getting our children ready to learn and ready to succeed by making certain schools have the technological tools and equipment.

I urge my colleagues to support Congressman LARSON's amendment.

The CHAIRMAN. Are there further Members wishing to speak on the amendment?

The question is on the amendment offered by the gentleman from Connecticut (Mr. LARSON).

The amendment was agreed to.

AMENDMENT NO. 11 OFFERED BY MR. HOEFFEL

Mr. HOEFFEL. Mr. Chairman, I offer an amendment.

The CHAIRMAN. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 11 offered by Mr. HOEFFEL:

Page 2, line 13, insert ''It is important that access to information technology be available to all citizens, including elderly Americans and Americans with disabilities.'' after ''responsible and accessible.''.

At the end of the bill, insert the following new section:

SEC. 9. STUDY OF ACCESSIBILITY TO INFORMATION TECHNOLOGY.

Section 201 of the High-Performance Computing Act of 1991 (15 U.S.C. 5524), as amended by sections 3(a) and 4(a) of this Act, is amended further by inserting after subsection (g) the following new subsection:

''(h) STUDY OF ACCESSIBILITY TO INFORMATION TECHNOLOGY.—

''(1) STUDY.—Not later than 90 days after the date of enactment of the Networking and Information Technology Research and Development Act, the Director of the National Science Foundation, in consultation with the National Institute on Disability and Rehabilitation Research, shall enter into an arrangement with the National Research Council of the National Academy of Sciences for that Council to conduct a study of accessibility to information technologies by individuals who are elderly, individuals who are elderly with a disability, and individuals with disabilities.

''(2) SUBJECTS.—The study shall address—

''(A) current barriers to access to information technologies by individuals who are elderly, individuals who are elderly with a disability, and individuals with disabilities;

''(B) research and development needed to remove those barriers;

''(C) Federal legislative, policy, or regulatory changes needed to remove those barriers; and

''(D) other matters that the National Research Council determines to be relevant to access to information technologies by individuals who are elderly, individuals who are elderly with a disability, and individuals with disabilities.

''(3) TRANSMITTAL TO CONGRESS.—The Director of the National Science Foundation shall transmit to the Congress within 2 years of the date of enactment of the Networking and Information Technology Research and Development Act a report setting forth the findings, conclusions, and recommendations of the National Research Council.

''(4) FEDERAL AGENCY COOPERATION.—Federal agencies shall cooperate fully with the National Research Council in its activities in carrying out the study under this subsection.

''(5) AVAILABILITY OF FUNDS.—Funding for the study described in this subsection shall be available, in the amount of $700,000, from amounts described in subsection (c)(1).''

Mr. HOEFFEL. Mr. Chairman, I rise today to offer an amendment to the information technology research and development authorization bill that would require the National Academy of Sciences to conduct a study on what barriers exist to accessing information technologies for the elderly and for disabled Americans and to recommend ways to overcome those barriers.

I would like to thank the gentleman from Wisconsin (Chairman SENSENBRENNER) for his cooperation and the cooperation and assistance of his staff, as well as our ranking member, the gentleman from Texas (Mr. HALL), for his cooperation and assistance as well.

Thanks to advances in medical technology and research, Americans are living longer lives. There are more than 50 million Americans alive today over the age of 65. There are over 20 million Americans, 15 years of age or older who are living with disabilities that impair their ability to work.

Mr. Chairman, as we move forward with information technology, we have to make sure that all Americans can reap the rewards of a strong economy and a rapidly changing technological landscape. Information technology has an enormous potential to improve the quality of life for elderly Americans and those with disabilities.

People who have trouble leaving their homes can now do all of their grocery shopping online. People who are ill can research their condition online, interact with others who suffer from the same ailments, and contact medical experts online.

Specialized information technologies can help blind people access information over the Internet. Speech recognition software can help people who cannot use a computer keyboard or mouse. Despite all of these opportunities and all of these advances, studies have shown that the information-technology revolution is leaving elderly and disabled Americans behind.

Mr. Chairman, studies have shown that those with disabilities are less than half as likely as nondisabled people to have access to a computer at home. And the disabled are only about 30 percent to be likely to access the Internet from home, possibly because they are unaware of technologies that would help them do it, possibly because they cannot afford the technologies.

The point is, Mr. Chairman, you cannot go surfing on the Net if you cannot get to the ocean. We have to reduce barriers for the elderly and for the disabled. My amendment would assess these problems and pose some solutions by calling for the National Science Foundation, in consultation with the National Institute on Disability and Rehabilitation Research, to commission a study from the National Academies of Science that will identify current barriers to access to information technologies by individuals who are elderly, by individuals with disabilities; to identify research and development needed to remove those barriers; and to recommend any Federal legislative policy or regulatory changes needed to remove those barriers.

The digital divide that we are all concerned with may affect the elderly and disabled more than any other group of Americans.

I urge my colleagues to support this amendment and help ensure that advances in information technology are available to all Americans.

Mr. SENSENBRENNER. Mr. Chairman, I move to strike the last word.

Mr. Chairman, this amendment would authorize a $700,000 study by the National Research Council on IT accessibility by the disabled and elderly. I would note that there have been studies conducted by a number of different groups looking at similar issues, including the Federal Electronic and Information Technology Access Advisory

Committee, the University of Wisconsin Trace Research and Development Center, the California State University at Northridge Center on Disability, and the Worldwide Web Consortium Web Access Initiative have all taken or are taking a look at similar issues.

I had some misgivings about the amendment as it was originally drafted, but since the funding will now come out of the available funds and not as a separate authorization, I will not oppose this, and urge Members to adopt it.

Mr. COSTELLO. Mr. Chairman, I rise today in support of Mr. HOEFFEL's amendment to conduct a study to examine the accessibility to information technology for the elderly and persons with disabilities. This amendment will make certain that our seniors and individuals with disabilities are not left out of current technological advances that ensure easy access to our family and friends. Seniors and the disabled also stand to gain the most from medical information listed on the Internet. Information on nursing homes, health insurance and prescription drugs can easily be obtained within minutes.

As a cosponsor of this legislation, I am pleased to support this bill that will significantly increase our commitment to long-term research, information technology and networking. Not only will this bill help our universities in providing information technology research, it will also encourage further technological advances in elementary and secondary education, and move the nation forward in bringing technology into millions of American homes that do not have it today.

While this bill will greatly help our nation's researchers and students, adoption of this amendment will make certain that our nation's senior citizens and persons with disabilities are included in the benefits of accessible information technology. I encourage my colleagues to support passage of this amendment and final passage of this important legislation.

The CHAIRMAN. The question is on the amendment offered by the gentleman from Pennsylvania (Mr. HOEFFEL).

The amendment was agreed to.

AMENDMENT OFFERED BY MR. ANDREWS

Mr. ANDREWS. Mr. Chairman, I offer an amendment.

The Clerk read as follows:

Amendment offered by Mr. ANDREWS:

Page 8, line 22, insert ''and counterinitiatives'' after ''including privacy''.

Page 8, line 23, insert ''(including the consequences for healthcare)'' after ''social and economic consequences''.

Mr. ANDREWS. Mr. Chairman, this is an excellent piece of legislation that I am privileged to support. I think very rarely are we going to get more return on our investment than we are from this piece of legislation. I thank the gentleman from Wisconsin (Chairman SENSENBRENNER) and the gentleman from Texas (Mr. HALL), the ranking member, for bringing it forward.

The purpose of my amendment is to be sure that important research and development funds are invested in an event that I hope will never happen, and in an event I hope will happen.

The event to prevent something that I hope will never happen is the importance of providing information security, making sure what we refer to in the amendment as ''counter-initiatives'' are thwarted. The news media has been rife with reports in the last few days of what has been called cybervandalism, attacks on some well-known commercial Web sites throughout this country. It is very important that we stay more than one step ahead of those who would do us harm through cyber-terrorism or cyber-vandalism.

As my friend and colleague, the gentleman from Pennsylvania (Mr. WELDON), said in the general debate on this bill, those of us on the Committee on Armed Services are making a concerted effort in conjunction with the administration this year to be sure that our military cyber-defenses are prepared and ready.

I believe that this legislation, aided by this amendment, will be sure that we take the maximum steps to prevent this kind of cyber-terrorism in our civilian sector.

The event that I hope will happen will be the extension of high-tech medical technology, excellent medical technology to people all over the country and all over the world, through the initiative of telemedicine. My amendment directs and encourages that telemedicine research be one of the major priorities under this bill as well.

I am very privileged to have had the cooperation of the gentleman from Wisconsin (Mr. SENSENBRENNER) and his staff and that of the gentleman from Texas (Mr. HALL), and I urge support for the amendment.

Mr. SENSENBRENNER. Mr. Chairman, will the gentleman yield?

Mr. ANDREWS. I yield to the gentleman from Wisconsin.

Mr. SENSENBRENNER. Mr. Chairman, I think the amendment offered by the gentleman from New Jersey makes a very good bill even better, and I am pleased to support it and hope that the committee adopts it.

The CHAIRMAN. The question is on the amendment offered by the gentleman from New Jersey (Mr. ANDREWS).

The amendment was agreed to.

AMENDMENT NO. 12 OFFERED BY MS. JACKSON-LEE OF TEXAS

Ms. JACKSON-LEE of Texas. Mr. Chairman, I offer an amendment.

The CHAIRMAN. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 12 offered by Ms. JACKSON-LEE of Texas:

Page 21, after line 7, insert the following new section:

SEC. 9. COMPTROLLER GENERAL STUDY.

Not later than 1 year after the date of the enactment of this Act, the Comptroller General shall transmit to the Congress a report on the results of a detailed study analyzing the effects of this Act, and the amendments made by this Act, on lower income families, minorities, and women.

Ms. JACKSON-LEE of Texas. Mr. Chairman, again I want to thank the Committee on Science and the chairman and ranking member for the vision of this legislation and to reinforce one of the unique features of this legislation, the funding amounts for the National Science Foundation, in particular I think the notation of the 20 grants of up to $1 million each in FY 2000 and 2001, and 30 grants of up to $1 million each in FY 2002 through 2004.

I raise that and bring that to the attention, because my amendment is a study. My amendment involves dealing with some of the additional populations that may need further assessment as to how this legislation will impact them.

I hope that I will garner the support of the committee for this amendment, because I believe it fits very neatly into two features of the legislation. One in particular for the National Science Foundation will complete a study comparing the availability of encryption technology in foreign countries to encryption technologies in the United States that are subject to export restrictions. In addition, as I earlier noted, we will also be giving out grants more hopefully to universities to do other kinds of research.

Today's economy is spurred by the unprecedented advances of our society, and we are reaping the benefits of technology. Therefore, it is critical that all Americans share in the digital age.

Currently, low income families, minorities and women are not actively participating in the information age. The National Telecommunications and Information Administration within the Commerce Department reports in its study named ''Falling Through the Net, Defining the Digital Divide,'' that, one, households with incomes of $75,000 and higher are more than 20 times more likely to have access to the Internet than those at the lowest income levels and more than nine times as likely to have a computer at home.

Whites are more likely to have access to the Internet from home than blacks or Hispanics have from any location, and that black and Hispanic households are approximately one-third as likely to have home Internet access as households of Asian-Pacific Islander decent, and roughly two-fifths as likely as white households.

My amendment empowers the Comptroller General to submit a detailed reported analyzing the effects of this act on lower-income families, minorities and women. This amendment will enable Congress to assess the overall impact of this act upon groups desperately needing government assistance concerning technology. Moreover, a targeted study will then provide critical data on the economic and educational benefits to Americans affected by the digital divide that separates our society to those who have and have not.

As I indicated, Mr. Chairman, we successfully made it through Y2K. I am gratified for that. In the course of doing so, however, we heard from small

businesses, nonprofits, individuals, libraries, and schools that we still needed to assess the digital divide.

I believe that this legislation, in its ability to give grants to the National Science Foundation, which then will allow various groups to access those dollars in $1 million grants, is a positive. This study I think will add to our knowledge base and allow us to move into the 21st century and to effectively be able to ensure that all of our citizens have access to this wonderful technology.

Mr. Chairman, today I rise to offer an amendment to the Networking and Information Technology Research and Development Act (HR 2086). Today's economy is spurred by the unprecedented advances of the Information Age; however, not all members of our society are reaping the benefits of technology. Therefore, it is critical that all Americans share in the digital age.

Currently, low income families, minorities, and women are not actively participating in the Information Age. The National Telecommunication and Information Administration within the Commerce Department reports in its study named, ''Falling Through the Net: Defining the Digital Divide'' that: ''(1) Households with incomes of $75,000 and higher are more than twenty times more likely to have access to the Internet than those at the lowest income levels, and more than nine times as likely to have a computer at home; (2) whites are more likely to have access to the Internet from home than Blacks or Hispanics have from any location; and that Black and Hispanic households are approximately one-third as likely to have home Internet access as households of Asian/Pacific Islander descent, and roughly two-fifths as likely as White households.''

The Jackson-Lee Amendment to H.R. 2086 empowers the Comptroller General to submit a detailed report analyzing the effects of this Act on lower income families, minorities, and women. This Amendment will enable Congress to assess the overall impact of this Act upon groups desperately needing Government assistance concerning technology. Moreover, a targeted study will then provide critical data on the economic and educational benefits to Americans affected by the ''Digital Divide'' that separates our society to those that have and have not.

Mr. SENSENBRENNER. Mr. Chairman, will the gentlewoman yield?

Ms. JACKSON-LEE of Texas. I yield to the gentleman from Wisconsin.

Mr. SENSENBRENNER. Mr. Chairman, I thank the gentlewoman from Texas for yielding.

Mr. Chairman, let me say I am going to support the gentlewoman's amendment. Any Member can request a GAO study. Placing the language in the bill I think is a constructive addition because whether the GAO responds to the House as a whole or to an individual Member, this is an issue that has got to be addressed, and it has got to be resolved as we figure out how to make the rising tide of information-technology applications lift all of the boats in our society. So I thank the gentlewoman from Texas, and I hope the committee adopts her amendment.

Mr. HALL of Texas. Mr. Chairman, I rise in support of the amendment.

□ 1445

Mr. Chairman, I certainly join the gentleman from Wisconsin (Mr. SENSENBRENNER), the chairman of the Committee on Science, in recommending this amendment. It simply directs the GAO to conduct a study after 1 year of the effects of this bill on lower income families, minorities, and women.

This is one of many thoughtful and well-constructed amendments from the gentlewoman from Houston, Texas (Ms. JACKSON-LEE). I certainly support it and recommend that it be passed.

The CHAIRMAN. The question is on the amendment offered by the gentlewoman from Texas (Ms. JACKSON-LEE).

The amendment was agreed to.

AMENDMENT NO. 1 OFFERED BY MR. CAPUANO

Mr. CAPUANO. Mr. Chairman, I offer an amendment.

The CHAIRMAN. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 1 offered by Mr. CAPUANO: Page 20, line 21, through page 21, line 7, strike section 9.

Mr. CAPUANO. Mr. Chairman, this amendment I think is a very simple amendment. It actually strikes language that I put in in the committee at an earlier time when we were discussing this. I think the language is no longer relevant and no longer useful to this bill. It refers to a different fiscal year, and that is why I ask to strike it.

Mr. SENSENBRENNER. Mr. Chairman, will the gentleman yield?

Mr. CAPUANO. I yield to the gentleman from Wisconsin.

Mr. SENSENBRENNER. Mr. Chairman, heaven rejoices when a sinner repents, and this amendment strikes language that the gentleman from Massachusetts added to the bill in committee. I commented at the time that I thought it was ill-advised to get the GAO involved in what amounted to a political debate over the budget. I am glad that the gentleman from Massachusetts has seen the light, and I hope that his amendment is adopted.

The CHAIRMAN. The question is on the amendment offered by the gentleman from Massachusetts (Mr. CAPUANO).

The amendment was agreed to.

AMENDMENT NO. 9 OFFERED BY MR. CAPUANO

Mr. CAPUANO. Mr. Chairman, I offer an amendment.

The CHAIRMAN. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 9 offered by Mr. CAPUANO:
Page 8, after line 5, insert the following new subsection:

(g) AUTHORIZATION OF APPROPRIATIONS.—

(1) NATIONAL SCIENCE FOUNDATION.—Notwithstanding the amendment made by subsection (a)(3) of this section, the total amount authorized for the National Science Foundation under section 201(b) of the High-Performance Computing Act of 1991 shall be $580,000,000 for fiscal year 2000; $699,300,000 for fiscal year 2001; $278,150,000 for fiscal year 2002; $801,550,000 for fiscal year 2003; and $838,500,000 for fiscal year 2004.

(2) DEPARTMENT OF ENERGY.—Notwithstanding the amendment made by subsection (c)(2) of this section, the total amount authorized for the Department of Energy under section 203(e)(1) of the High-Performance Computing Act of 1991 shall be $60,000,000 for fiscal year 2000; $54,300,000 for fiscal year 2001; $56,150,000 for fiscal year 2002; $65,550,000 for fiscal year 2003; and $67,500,000 for fiscal year 2004.

Mr. CAPUANO. Mr. Chairman, what this amendment does is basically it takes half of the money it currently designated for the Department of Energy and shifts it over to the National Science Foundation.

The reason I offer this amendment is because I strongly believe that this money is best utilized as far out from government as we can get it into the private sector and to the universities, because I believe they do a better job in pushing along new technologies than does the government.

It is very interesting to note that though I have proposed this amendment now for a couple of days, I just literally 2 minutes ago got a communication from the Secretary of Energy that raises some serious and interesting questions about the amendment. Had I received it earlier, I would have been happy to discuss it at any time with the Secretary or any member of the Department, but I think it is a little late at this point in time.

However, I will say that if this amendment is adopted that I would be more than happy to work with the Secretary or any other member of the Department to discuss their concerns, and if appropriate, I would work with them to amend this amendment further or to reduce it or to strike it.

Nonetheless, having not received any communications of such note prior to this time, I still feel strongly that in concept, our money is best spent as close to the private sector as we can get it.

Mrs. TAUSCHER. Mr. Chairman, every dollar we spend on research and development, especially in high-technology, translates directly into growth for U.S. businesses and good, high-paying jobs for our working families.

For the same reasons I fervently support the Networking and Information Technology R&D Act, I rise in opposition to this Amendment that would shift R&D resources away from the Department of Energy and to the National Science Foundation.

As the ranking Member of the new Panel to oversee the Department of Energy's reorganization and as a Member with 2 National Laboratories in my district, I am intimately familiar with the Department of Energy's record on R&D. And it is superb. The Energy Department has been at the forefront of civilian science and computing for generations. They specialize in developing computing applications in areas ranging from material science to high-energy physics, and from atomic structure to biology.

For example, as early as the 1970's, the Energy Department developed the first interactive access to supercomputers via long-distance networks. And in the 1980's, the Department laid the groundwork for what became the

National Science Foundation's supercomputer centers. Over the years, Department scientists have won 70 Nobel prizes, discovered new heavy elements, advanced medical breakthroughs in breast cancer treatment and more.

Moreover, if this amendment becomes law, it will force the closure of the National Energy Research Scientific Computing Center at Lawrence Berkeley National Laboratory—the most powerful unclassified computer center available for civilian research in the nation. It also will force the Department to end its joint research efforts with major U.S. computer and telecommunications firms including IMB and Quest Communications.

The National Science Foundation is also a worthy organization. But the two agencies have different missions, different personnel and different strengths. By dividing our R&D dollars between the two, we are creating the best environment for scientific and high-technology breakthroughs that will continue to fuel our economy and create jobs for our working families.

Mr. Chairman, I urge my colleagues to oppose this amendment and pass the overall bill.

The CHAIRMAN. The question is on the amendment offered by the gentleman from Massachusetts (Mr. CAPUANO).

The amendment was agreed to.

AMENDMENT OFFERED BY MR. TRAFICANT

Mr. TRAFICANT. Mr. Chairman, I offer an amendment.

The Clerk read as follows:

Amendment offered by Mr. TRAFICANT:

Page 21, after line 7, insert the following new section:

SEC. 9. BUY AMERICAN.

(a) COMPLIANCE WITH BUY AMERICAN ACT.—No funds appropriated pursuant to this Act may be expended by an entity unless the entity agrees that in expending the assistance the entity will comply with sections 2 through 4 of the Buy American Act (41 U.S.C. 10a–10c).

(b) SENSE OF CONGRESS.—In the case of any equipment or products that may be authorized to be purchased with financial assistance provided under this Act, it is the sense of the Congress that entities receiving such assistance should, in expending the assistance, purchase only American-made equipment and products.

(c) NOTICE TO RECIPIENTS OF ASSISTANCE.—In providing financial assistance under this Act, the head of each Federal agency shall provide to each recipient of the assistance a notice describing the statement made in subsection (b) by the Congress.

Mr. TRAFICANT (during the reading). Mr. Chairman, I ask unanimous consent that the amendment be considered as read and printed in the RECORD.

The CHAIRMAN. Is there objection to the request of the gentleman from Ohio?

There was no objection.

Mr. TRAFICANT. Mr. Chairman, I would just like to say that our last quarterly trade deficit was $82 billion. Annualized, it will be over $328 billion for the year. For every $1 billion in trade deficit, the formula is a loss of 22,000 jobs.

I support this bill. I think the chairman has done a marvelous job, but I do not know if cyberspace is going to hire all of those workers who are losing manufacturing jobs. I sure hope they do.

The simple amendment says, abide by the Buy America Act; when possible, buy American-made products. Anybody getting any money under this bill should understand what the intent of Congress is, and in fact, get a notice so that they would know that they must comply with the Buy America Act.

Mr. Chairman, I yield to the gentleman from Wisconsin (Mr. SENSENBRENNER), our distinguished chairman.

Mr. SENSENBRENNER. Mr. Chairman, I thank the gentleman from Ohio for yielding. I have always supported Buy American provisions. I support his efforts again. Obviously the money that we are authorizing under this bill should, to the greatest extent possible, go to goods and services that are made in the USA and done by Americans, and I think the gentleman has emphasized that point. This amendment improves a very good bill.

Mr. TRAFICANT. Mr. Chairman, I yield to the gentleman from Texas (Mr. HALL), our distinguished ranking member.

Mr. HALL of Texas. Mr. Chairman, this is another of the gentleman's many efforts to urge buy American and to support and push this country. I urge the adoption of the amendment. I totally support it.

The CHAIRMAN. The question is on the amendment offered by the gentleman from Ohio (Mr. TRAFICANT).

The amendment was agreed to.

Mr. SENSENBRENNER. Mr. Chairman, I move to strike the last word.

Mr. Chairman, we have come to the conclusion of the debate on a bill which the Committee on Science sincerely believes will be one of the most important pieces of legislation enacted in the year 2000 by the 106th Congress. Should the other body agree and we send this bill to the President for his signature, America will have made a commitment to the information technology research that we need to continue our country as number 1 in this area.

The pipeline for Federal research breakthroughs has slowed to a trickle as a result of some changes that have occurred since 1986. This bill provides a 5-year commitment to steady increases in funding for civilian information technology programs in the health areas as well as in the areas of computer science and information technology, and roughly doubles the funding for these programs over the next 5 years.

The legislation before us, H.R. 2086, focuses Federal efforts on basic research. Federal basic research nicely complements private sector-applied research. In many cases, the basic research that is done under this bill and which has been done in the past has been too high risk for the private sector to prudently invest their own money in. So having a Federal Government-private sector partnership where the taxpayers pick up the basic research that the private sector cannot do, and then the private sector goes and commercializes the results of successful basic research, will mean that we will continue our nationwide preeminence which provides good jobs for Americans, and I think has made our economy the healthiest in the world.

Mr. Chairman, all I can say is look where information technology has brought this country during the decade of the 1990s. We have the longest peacetime sustained growth rate in the history of our country. Unemployment is at a 30-year low, and inflation has been kept in check. One only needs to compare this success for Americans with the double-digit unemployment that has plagued the major countries in Europe and a Japan that has been teetering on the brink of depression for the better part of the last 10 years shows that we have done it right. A lot of the reason for America doing it right is the breakthroughs in information technology.

We cannot predict where the research authorized under this bill will lead other than that basic research breakthroughs will lead to applications in disciplines from A to Z. It has happened in the past, and it will happen in the future.

The bill before us provides better coordination of civilian information technology programs. Grouping these programs under one legislative umbrella will lead to better coordination and thus give the taxpayers more value for their dollar. The National Science Foundation has an enhanced role as the lead agency in this undertaking. They spend their money through competitive peer-reviewed grant programs. We have expanded the grant programs, but we have also made the grant programs more relevant to the private sector by requiring at least one representative from the private sector on each of these peer review committees.

Mr. Chairman, I would like to thank the gentleman from Texas (Mr. HALL), the ranking member, and to all of the members of the Committee on Science for working on this cooperative effort. I think that 20 years from now, as historians look back at what the 106th Congress did in the year 2000, should this bill pass through the Senate and be enacted into law, they will view this as probably the most important single piece of legislation that the Congress considers.

So as this bill passes, we all look forward to working with the Senate to make sure that this investment in our Nation's future ends up becoming a reality.

The CHAIRMAN. The question is on the committee amendment in the nature of a substitute, as amended.

The committee amendment in the nature of a substitute, as amended, was agreed to.

The CHAIRMAN. Under the rule, the Committee rises.

Accordingly, the Committee rose; and the Speaker pro tempore (Mr. OSE) having assumed the chair, Mr.

GILLMOR, Chairman of the Committee of the Whole House on the State of the Union, reported that that Committee, having had under consideration the bill (H.R. 2086) to authorize funding for networking and information technology research and development for fiscal years 2000 through 2004, and for other purposes, pursuant to House Resolution 422, he reported the bill back to the House with an amendment adopted by the Committee of the Whole.

The SPEAKER pro tempore. Under the rule, the previous question is ordered.

Is a separate vote demanded on any amendment to the committee amendment in the nature of a substitute adopted by the Committee of the Whole? If not, the question is on the amendment.

The amendment was agreed to.

The bill was ordered to be engrossed and read a third time, was read the third time, and passed, and a motion to reconsider was laid on the table.

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GENERAL LEAVE

Mr. SENSENBRENNER. Mr. Speaker, I ask unanimous consent that all Members may have 5 legislative days within which to revise and extend their remarks on H.R. 2086, the bill just passed.

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

There was no objection.

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PRAISE FOR THE NETWORKING AND INFORMATION TECHNOLOGY RESEARCH AND DEVELOPMENT ACT

(Mr. BOEHLERT asked and was given permission to address the House for 1 minute and to revise and extend his remarks.)

Mr. BOEHLERT. Mr. Speaker, I just want to compliment the House on the action just completed. The Networking and Information Technology Research and Development Act is very important legislation. It will maintain the U.S. global leadership in information technology. When one is the first and one is the best, one has to work at maintaining that first place position, at securing the fact that one legitimately is the very best.

□ 1500

The $500 billion a year information technology industry has accounted for one-third of our Nation's economic growth since 1992, and created new industries and millions of new high-paying jobs. All across America people are benefiting from what has been done in information technology.

Once again, we are the leader, we are first, we are the best, and we have to work at maintaining that. We have to prioritize basic information technology research. There are a whole slew of very good ideas, but we have to have priorities. We have to go first with that which is most important. We have to produce the next generation of highly-skilled information technology workers.

This bill will help attract more students to science and to careers in information technology by providing grants for colleges and companies to create for-credit courses which include internships. Participating companies must commit to providing 50 percent of the cost of the program.

So for a whole host of very legitimate reasons, the Committee on Science and this House have done themselves proud. We are moving forward, we are not just satisfied to rest on our laurels. We are going forward. This is, indeed, the Information Age, and we are the leaders. We have to maintain that position.

I am a great unabashed baseball fan, and on the 17th of this month, just a couple of days hence, the pitchers and catchers will report to spring training. The one team that I am most interested in is the New York Yankees, because they are the world champions.

If I may draw an analogy, let me point out that the Yankees are not resting on their laurels, they are continuing to improve and invest in their club. That is why they are the world champions, and we cannot afford to rest on our laurels.

I thank my colleagues for their unrelenting support of this bill. I thank the gentleman from Wisconsin (Chairman SENSENBRENNER) for the leadership he has provided. I thank the ranking member, the gentleman from Texas (Mr. HALL) for his strong support and leadership.

This is truly bipartisan legislation serving the best interests of the American people.

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IN OPPOSITION TO CAPUANO AMENDMENT NO. 1 AND NO. 3 TO H.R. 2086, NETWORKING AND INFORMATION TECHNOLOGY RESEARCH AND DEVELOPMENT ACT

(Mrs. BIGGERT asked and was given permission to address the House for 1 minute and to revise and extend her remarks.)

Mrs. BIGGERT. Mr. Speaker, I rise today in strong opposition to the amendment that was just offered by my colleague, the gentleman from Massachusetts (Mr. CAPUANO) concerning the Department of Energy and National Science Foundation.

There is no doubt that the National Science Foundation should be commended for their fine work in making research funds, including those for information technology research. Their record of accomplishment is impressive, and certainly qualifies them for increased responsibilities. That is why I was a cosponsor of this bill that we are going to be considering later on, or voting on.

While I support the bill and the increased NSF funding, I nonetheless strongly oppose that amendment because, while very generous to NSF, much of the more than $3 billion provided by this bill is newly authorized funding, yet this provides no new funding for the Department of Energy's programs, and the amendment that was considered would further erode, if not eliminate, such programs.

Would we cut off funds for such research by the Department of Energy and the laboratories strictly by virtue of the agency that oversees it? It is unfortunate that neither I nor other Members of the Committee on Science were given the opportunity to discuss the IT research successes of the Department of Energy when the bill was marked up by the committee in September, but the sponsor of this amendment, my colleague on the Committee on Science, did not offer the amendment at that time.

This amendment seriously jeopardizes many of the basic research collaborations, and will ensure that DOE has no role in the future of information technology research. I do not believe that this is a prudent course for us to take today, and I am sorry that I was not here to speak against that amendment. I do want to voice my displeasure with that.

Mr. Speaker, I rise today in strong opposition to the amendment offered by my colleague from Massachusetts.

There is no doubt that the National Science Foundation should be commended for their fine work in managing research funds, including those for information technology research. Their record of accomplishment is impressive, and certainly qualifies them for increased responsibilities.

That's why I am a cosponsor of the legislation that would give the National Science Foundation the lead in this federal I.T. research initiative, and provide almost $3 billion for the NSF's information technology research activities.

While I support the bill and increased NSF funding, I nonetheless strongly oppose this amendment. The NSF's fine record of accomplishment is no excuse to cut in half the Department of Energy's information technology research programs. The two are not mutually exclusive; they are, in fact, complementary.

This bill is very generous to the NSF; much of the more than $3 billion provided by this bill is newly authorized funding. Yet this bill provides no new funding for the Department of Energy's programs, and the amendment we are considering right now would further erode—if not eliminate—such programs.

The DOE is engaged in significant computing research and development. DOE's research has led to important advances in the field of information technology, especially in the area of parallel computing. The DOE is also involved in the development of highly advanced computer ''technology tools'' which allow scientists to model and analyze complex scientific problems and collaborate with other researchers to meet national needs.

DOE-supported computational research provides many benefits to the broader research community. In my own district, computer scientists at Argonne National Laboratory developed an extremely high performance ''computational kernel'' for use in a wide range of