

The CHAIRMAN pro tempore (Mr. JEFF MILLER of Florida). The question is on the amendment offered by the gentlewoman from Texas (Ms. JACKSON-LEE).

The amendment was agreed to.

The CHAIRMAN pro tempore. Are there any further amendments?

If not, 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 pro tempore. Under the rule, the committee rises.

Accordingly, the Committee rose; and the Speaker pro tempore (Mrs. BIGGERT) having assumed the chair, Mr. JEFF MILLER of Florida, Chairman pro tempore 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. 2486), to authorize the National Weather Service to conduct research and development, training, and outreach activities relating to tropical cyclone inland forecasting improvement, and for other purposes, pursuant to House Resolution 473, 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 the 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 committee amendment in the nature of a substitute.

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

The SPEAKER pro tempore. The question is on the engrossment and third reading of the bill.

The bill was ordered to be engrossed and read a third time, and was read the third time.

The SPEAKER pro tempore. The question is on the passage of the bill.

The question was taken; and the Speaker pro tempore announced that the ayes appeared to have it.

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

The yeas and nays were ordered.

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

GENERAL LEAVE

Mr. EHLERS. Mr. Speaker, I ask unanimous consent that all Members may have 5 legislative days in which to revise and extend their remarks and to include extraneous material in the RECORD on the bill just considered, H.R. 2486.

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

There was no objection.

ENTERPRISE INTEGRATION ACT OF 2002

The SPEAKER pro tempore. Pursuant to House Resolution 474 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. 2733.

□ 1210

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. 2733) to authorize the National Institute of Standards and Technology to work with major manufacturing industries on an initiative of standards development and implementation for electronic enterprise integration, with Mr. JEFF MILLER of Florida 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 Michigan (Mr. EHLERS) and the gentleman from Texas (Mr. HALL) each will control 30 minutes.

The Chair recognizes the gentleman from Michigan (Mr. EHLERS).

Mr. EHLERS. Mr. Chairman, I yield myself such time as I may consume; and I rise in support of the Enterprise Integration Act of 2002.

Much has changed about the manufacturing industry during the past 30 years. In the 1970s and 1980s, our manufacturing sector was in trouble. Plagued by quality problems and inefficiency, our domestic manufacturing sector was on the decline, and it was costing U.S. workers their jobs. I saw this firsthand in my home State of Michigan, when one observer noted in a national column how much Michigan's auto manufacturing sector had fallen and asked for, in print, "The last person to leave the State to please turn off the lights."

This decline served as a wake-up call not only for State and Federal governments but especially for domestic manufacturers, and they have worked hard over the past three decades to become leaner and more competitive in the global marketplace. Automation, outsourcing, efficiency, and quality became the buzzwords of this effort, as manufacturers made fundamental changes to their business models. When these changes were coupled with the information technology revolution, manufacturers were able to unleash the untapped potential of American workers.

Over the past 10 years, our workers increased their productivity as never before in the modern era. These gains led to one of the greatest economic expansions in U.S. history and made a bold statement that U.S. domestic manufacturing was ready to compete in the global marketplace.

Domestic manufacturing industries are now beginning to undertake new steps to ensure that they stay globally

competitive. Our manufacturing industries are moving away from the traditional models where products are mass produced and consumer preferences are aggregated at the end of a manufacturing chain. The new model is marked by a commitment to flexibility, networked supply chains, just-in-time inventories, and responsiveness to changes and customers' preferences. Underpinning all these elements is the need to be able to exchange information quickly, reliably, and without fear that the information contains errors or is incomplete.

The purpose of the legislation before us today is to support this critical component. H.R. 2733 will establish an enterprise integration initiative within the National Institute of Standards and Technology, better known as NIST. At the heart of this initiative is what modern manufacturing industry craves—the ability to exchange information up and down the supply chain without error or loss.

For example, with a fully integrated supply chain, if Ford were to design a change for a bumper, every one of the suppliers that contributes parts to Ford for that bumper would be able quickly and easily to see how the new specifications would affect the component they manufacture. Each supplier would be able to redesign the component knowing that the information used does not have errors and has not lost data along the way.

As I said earlier, the new manufacturing model requires industry to respond to consumer choices quickly and with a high degree of quality and reliability. This flexibility can only be achieved with a fully integrated supply chain.

Two of Michigan's key industries, automotive and furniture, can derive tremendous benefits from this legislation. A 1999 study by NIST found that General Motors, Ford and Chrysler together could save \$1 billion per year if they fully integrated their supply chains. West Michigan's worldwide office furniture suppliers, Steelcase, Herman Miller, and Haworth, are facing significant challenges both as a result of the economic downturn and stiff foreign competition. Information technology is a powerful tool for bringing together the various elements of design, manufacturing, and delivery of furniture, and the U.S. furniture industry is beginning to utilize this tool to better integrate these elements.

□ 1215

All three firms, and others, can realize huge benefits through better linkage with their suppliers, which will lead to reductions in inventory, fewer manufacturing slow downs, lower purchasing costs, and higher quality.

Achieving this level of integration, however, is complex and requires a substantial amount of research regarding what information exchange standards need to be developed and implemented for different supply changes. H.R. 2733

will allow NIST to capitalize on its existing knowledge in this field by authorizing the agency to work with major manufacturing sectors, such as automotive, aerospace, electronics, shipbuilding, and furniture, to reach a consensus on what standards are needed to integrate supply chains, support the development of those standards, and help smaller businesses in those industries integrate fully into their respective supply chain.

Under this legislation, NIST will work with major manufacturing industries to identify current enterprise integration standardization and implementation activities within the United States and abroad and assess the current state of these activities within any given industry.

NIST will also work with individual industries to develop goals and milestones for fully integrating the industry's supply chains. Additionally, NIST will support the development, testing, promulgation, integration, adoption and upgrading of standards related to enterprise integration efforts.

I want to note that this legislation has strong bipartisan and industry support. The gentleman from Michigan (Mr. BARCIA) and I have introduced this legislation, and we have worked together every step of the way as it moved to the House floor. The legislation also unanimously passed the Committee on Science. In addition, industry groups such as the National Association of Manufacturers and the National Coalition for Advanced Manufacturing support the legislation.

If our manufacturing sector is to remain competitive in the global marketplace, and if it is going to continue to provide jobs for American workers, it must undertake the efforts envisioned by this legislation. I urge Members to support the Enterprise Integration Act so we can meet this goal.

Let me also comment to explain this in a very simple fashion, using the words that the gentleman from Minnesota (Mr. GUTKNECHT) used earlier during discussion on the rule, and that is if we do not talk the same language with each other, we cannot communicate and we cannot get the job done. The whole purpose of this bill is to ensure that the computers and the officials of the companies involved can talk the same language using the Internet, and that through that common language the whole system will work much more efficiently, the manufacturers will benefit through increased profits, the workers of the companies will benefit through higher pay and more jobs. This is a good bill, and I urge all Members to support this bill.

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 in support of the Enterprise Integration Act of 2002. I rise to commend the gentleman from

Michigan (Mr. BARCIA) for his vision in creating this legislation, and I thank the gentleman from New York (Mr. BOEHLERT) and the gentleman from Michigan (Mr. EHLERS) for their efforts in moving this bill through the legislative process.

Manufacturing has been and must continue to be one of the pillars of the American economy. Federal Government support for U.S. small businesses engaged in manufacturing is not a new thing. It dates way back to the early days of our century when Alexander Hamilton led efforts to help United States manufacturers adjust to the industrial revolution. We understood even then, while we are first and foremost a Nation of free enterprise, that free enterprise works best when our manufacturers are equipped to compete on a level playing field and acceptable to American industry.

As H.R. 2733 clearly points out, we have entered a period that could be just as wrenching to today's manufacturers as the industrial revolution was to Alexander Hamilton's contemporaries. Even a decade ago, it was still possible to think of small manufacturers as independent businessmen and women who made products for consumers and other companies. Now the business environment is changing rapidly, with the advent of the Internet and business-to-business software. Companies which cannot function as close partners of other companies at every step of the manufacturing process risk being left behind.

Products are now designed in weeks rather than in months. Products become out of date in months rather than years. Suppliers now deliver what they call "just in time." In this new time frame, all waste time must be squeezed from the manufacturing process. Manufacturers and their suppliers must design products together. They must exchange manufacturing data electronically. The day when virtual manufacturing arrives and it becomes difficult to tell where one company ends and its suppliers begin seems just around the corner. Our job is to ensure we, the government, do not force them offshore like they have done to the chemical companies in Texas, Louisiana, and Arkansas.

Mr. Chairman, I just comment that both software and standards that are driving this process, advanced software that knows everything happening on a factory floor, are becoming more and more common; and as new Internet software will soon make it possible to transmit three-dimensional data anywhere in the world, this is helpful only if the receiving computer system can understand and use what is sent. Unfortunately, the millions of legacy computer systems are more like an electronic Tower of Babel than a seamless communication system.

This will change. Work on product data exchange international standards that will now solve this problem is ongoing in Europe as well as in the

United States. However, the European Union is investing much more money and much more heavily than in the United States. It is funding product data exchange standards, industry by industry, from autos and aerospace to textiles and furniture. If we do not match these efforts, we run the risk of an international standard being promulgated that favors European manufacturers over our own.

I am pleased that the bill is supported by the trade associations for several of these manufacturing sectors, as well as the National Association of Manufacturers and the National Coalition for Advanced Manufacturing.

Mr. Chairman, we cannot afford to let our small businesses fall behind as the world moves toward Internet-based manufacturing. I urge Members to support America's smaller manufacturers, and their larger partners as well, by voting for H.R. 2733.

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

Mr. EHLERS. Mr. Chairman, I yield such time as he may consume to the gentleman from Michigan (Mr. CAMP).

Mr. CAMP. Mr. Chairman, I rise in support of the Enterprise Integration Act. This bill authorizes the National Institute of Standards and Technology to promote best practice standards and facilitate understanding between industry and government.

Approximately 90 percent of U.S. manufacturing companies are small and medium-sized businesses. Quick and easy access to information in the supply chain is critical for small businesses to be competitive. Suppliers without the capability to collect and exchange data electronically run the risk of being replaced by other suppliers who can.

The last decade has seen a dramatic shift in the way information and data are exchanged. This is due to the emergence of the Internet and the movement toward electronically integrated supply chains.

Enterprise integration permits a group of manufacturers and suppliers to operate as a single virtual company, without time delays and data loss or corruption. Manufacturers must be flexible, efficient, and responsive to changes in customer preference.

NIST will work with industry and small business to improve the way they share product and standard information. With over 20 years of experience in data integration, NIST has the experience to accelerate efforts to develop industry standards and integration techniques that are necessary to increase efficiency and lower costs. Connecting enterprise together will streamline the manufacturing process, break down communication barriers, improve knowledge sharing, and connect information systems.

In my home State of Michigan, small businesses are vital to the State economy. Over 45 percent of Michigan small businesses are in the manufacturing sector and enterprise integration is extremely important to ensure that the

manufacturing industry in Michigan and around the Nation remain strong.

The investment in enterprise integration is essential for U.S. industry to remain competitive with overseas companies, many of which are already heavily investing in electronic standards development.

I thank the gentleman from Michigan (Mr. BARCIA) for developing this important legislation and the gentleman from Michigan (Mr. EHLERS) of the Committee on Science for bring this to the floor. I appreciate their hard work on behalf of the small business community, and I urge Members to join me in supporting the Enterprise Integration Act.

Mr. HALL of Texas. Mr. Chairman, I yield 4 minutes to the gentleman from Michigan (Mr. BARCIA), the creator of this legislation.

Mr. BARCIA. Mr. Chairman, I rise in support of H.R. 2733, the Enterprise Integration Act of 2002; and I thank the chairman of the Committee on Science, the gentleman from New York (Mr. BOEHLERT), and ranking member, the gentleman from Texas (Mr. HALL), for recognizing the importance of this bill and taking the steps necessary for this bill to be considered here today. I also want to thank the gentleman from Michigan (Mr. EHLERS), the subcommittee chairman and lead cosponsor, for the gentleman's efforts over the past year. His suggested changes have enhanced the legislation, and his legislative efforts have contributed significantly to the progress we have made on this legislation.

I just want to take a couple of minutes to outline the need and purpose of the Enterprise Integration Act of 2002 and say I appreciate the comments of my colleagues who have spoken before me on the need for this legislation to become law, to not only help small and medium-sized businesses throughout the Midwest, but across the country. And also to say that as impressive as the growth of Internet companies has been, its impact pales in significance to the impact that the Internet is having on how businesses work together. Changes already under way in the manufacturing sector will permit a manufacturer and its suppliers to function as one virtual company. Companies will be able to exchange information of all types with their suppliers at the speed of light.

This will dramatically shorten design-cycle times and reduce the costs of manufacturing complex products. Information on design flaws will be instantly transmitted from repair shops to manufacturers and their supply chains.

However, to exchange this information, each company's computers have to speak the same language. Sometimes the document can be converted, other times someone has to reenter the information. The problems get much more severe when the information being exchanged is three-dimensional engineering drawings or complex data

from the manufacturing process. How companies address this basic question of data exchange will determine how quickly enterprise integration occurs in the United States.

This legislation tasks the National Institute of Standards and Technology to help nine key industries stay competitive in the electronic enterprise age, if those industries want the help. The legislation instructs the director of NIST, through various NIST programs, to support the auto, aerospace, furniture, shipbuilding, textile, apparel, electronics, home building, and major construction industries in the establishment of an industry-led effort on enterprise integration. If an industry has not yet begun an effort, NIST would be asked to help convene companies and trade associations in the industry to develop a strategy for developing and implementing a unified vision for supply chain integration.

If efforts are already under way and the industry wants NIST's help, NIST is to support the ongoing efforts. NIST is asked to look at the suite of standards now in place and to help fill the holes such as compatibility of older standards with emerging Internet standards.

With the continued assistance of the gentleman from New York (Mr. BOEHLERT), the gentleman from Texas (Mr. HALL), and the gentleman from Michigan (Mr. EHLERS), I am hopeful that this legislation will become the catalyst to allow American businesses to successfully compete with our European counterparts.

The bill authorizes appropriations of \$10 million for fiscal year 2003 and \$15 million for fiscal year 2004, and \$20 million in fiscal year 2005.

Enterprise integration has the potential to be the most important innovation in manufacturing since Henry Ford's assembly line. I urge a "yes" vote on this bill because H.R. 2733 will give U.S. industry the opportunity to be a leader in this innovation.

□ 1230

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

Mr. Chairman, I regret that my next speaker, the gentlewoman from Maryland, had to leave for the Committee on Government Reform to present an amendment there. I particularly regret it because she is such an outstanding Member of Congress and an extremely conscientious member of the committee and has worked very hard on this bill. But her comments will be entered into the RECORD.

Mr. Chairman, I also want to at this time thank the gentleman from Michigan (Mr. BARCIA) for his work on this bill and his work on the Committee on Science. He has been an outstanding ranking member to work with on this subcommittee and we have accomplished a great deal this year by sharing ideas and working together on bills.

I have shared a legislative career with the gentleman from Michigan

(Mr. BARCIA) longer than most people in this Congress have. We served together in the State House of Michigan and the State Senate of Michigan. He preceded me to this Congress by 11 months and 7 days, but we have worked together since then in this Congress.

I am very sorry to see him leave this Congress, even though he will be returning to the State of Michigan and will continue to make his contributions there. But it has been an outstanding partnership on this committee. We have produced some really good work together with a minimum of strife because both of us are interested in results and not in seeking partisan advantage on an issue. I just want to publicly state how much I have enjoyed working with the gentleman, how much I appreciate his work and his person and his ethical standards, and just state my regret that he will be leaving us at the end of this year.

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

Mr. HALL of Texas. Mr. Chairman, I yield 4 minutes to the gentlewoman from Michigan (Ms. RIVERS), a member of our committee.

Ms. RIVERS. Mr. Chairman, I rise in support of the Enterprise Integration Act of 2002. This bill directs the National Institute of Standards and Technology, NIST, to establish a program to help major manufacturing industries, especially small businesses, standardize and better integrate exchange of data between manufacturers, assemblers and suppliers.

H.R. 2733 is a timely and smart piece of legislation. Small manufacturers are the backbone of our economy. However, they do not operate in a vacuum. Manufacturers, large and small, work together along a vertical supply chain, making a seamless flow of information critical to their success.

Currently, many small businesses do not have the knowledge or ability to access the type of electronic media large manufacturers use to integrate purchases. In other cases, compatibility issues between different computer networks, software and hardware make it difficult, and sometimes impossible, for the full benefits of virtual manufacturing environments to be realized.

This lack of compatibility in computer hardware, software and their interfaces with machinery makes it difficult for these supply chain firms to supply the goods and services to their traditional clients in an efficient manner, and makes it even harder to develop relationships with new clients.

As we move forward into an international economy, our domestic producers must be able to keep up with suppliers and manufacturers overseas. The European Union is already investing substantially in ensuring that its companies will be able to perform in the emerging virtual business environment, where the Internet will permit companies anywhere in the world to exchange data and function as a single virtual company.

H.R. 2733 addresses this need and establishes an enterprise integration initiative at the National Institute of Standards and Technology. This will allow NIST to work with industry to develop road maps that outline the steps a given industry must take to become more integrated electronically and also help industry develop volunteer consensus standards and agreements on protocols for information exchange which will provide assistance to conduct pilot projects to support the initiative.

The Enterprise Integration Act of 2002 takes the necessary steps to get standards in place to create the first truly virtual companies. When industries become fully integrated electronically, information can flow freely along the entire supply chain without corruption or loss of important data. All types of manufacturers, from automobiles to furniture to shipbuilding, will stand to benefit from the efficiency gains that this legislation will help usher in. I stand in support of this legislation.

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

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

Mr. Chairman, I just want to conclude by saying that this is a very worthwhile bill which, even though I gave all the examples as benefiting Michigan industry, it will benefit the industry of every State in this Union, and, for that matter, every territory. It is a good thing for us to do, to help create more jobs and to make sure that we are more competitive in the world marketplace. I urge passage of this bill.

Mrs. MORELLA. Mr. Chairman, it is with great pleasure that I rise in support of H.R. 2733, the Enterprise Integration Act of 2002. I want to commend Chairman EHLERS and Ranking Member BARCIA for their bipartisan efforts in bringing this bill before us today.

Enterprise integration is quickly becoming one of the most important business concepts of the electronic age. Developing a seamless exchange of information along a vertical supply chain is essential to maintaining production in our new, fast-paced, just-in-time-manufacturing economy. Companies are increasingly interconnected and must rely on one another in ways never before imagined. Standardization of their means of communication is imperative for their continued success.

Enterprise integration allows a group of businesses to act as a single "virtual" company. Design or management changes are immediately transmitted throughout the supply chain, allowing real time integration into the various components. The result is a leaner and more efficient manufacturing process. Implementation of such a plan has been projected to save the auto industry over \$1 billion/year. Similarly dramatic savings are possible in a host of other manufacturing industries as well. Any industry that relies on a series of companies efficiently working together would benefit.

However, there are significant challenges. Significant numbers of incompatible design, engineering and manufacturing systems

abound within a typical supply chain. Various vendors have been selling management systems to individual companies for years without incorporating concern for future interconnectivity. Even new development causes problems. New software packages with greater functionality create difficulties for small companies at the bottom of the supply chain, since they can ill-afford to keep up with the latest technology.

One promising solution is in data exchange standards. The creation of standard protocols for the exchange of information between systems could alleviate the difficulties associated with inter-company communication. NIST has over 20 years experience in this critical area and is well positioned to take the lead for enterprising integration in the United States. NIST has a long track record and a close and trusted relationship among industry leaders. It has obtained this reputation by working with industry and including them in the standards setting process rather than imposing one on them. In addition, NIST already has a number of programs designed at improving the role of small businesses and is aware of their particular needs.

Standards are essential to enterprise integration and traditionally it has been the role of government to foster their development. NIST has all of the expertise and experience required and is the ideal agency to lead this effort. I want to thank the leadership for recognizing the importance of this issue to the small business community and I urge my colleagues to support this bill.

Mr. EHLERS. Mr. Chairman, I yield back the balance of my time.

The CHAIRMAN. All time for general debate has expired.

Pursuant to the rule, the amendment in a nature of a substitute printed in the bill shall be considered by sections as an original bill for the purpose of amendment and 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 Clerk will designate section 1.

The text of Section 1 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 "Enterprise Integration Act of 2002".

Mr. EHLERS. Mr. Chairman, I ask unanimous consent that the remainder of the bill be printed in the RECORD and open to amendment at any point.

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

There was no objection.

The text of the remainder of the bill is as follows:

SEC. 2. FINDINGS.

The Congress makes the following findings:

(1) *Over 90 percent of United States companies engaged in manufacturing are small and medium-sized businesses.*

(2) *Most of these manufacturers produce goods for assemblage into products of large companies.*

(3) *The emergence of the World Wide Web and the promulgation of international standards for*

product data exchange greatly accelerated the movement toward electronically integrated supply chains during the last half of the 1990's.

(4) *European and Asian countries are investing heavily in electronic enterprise standards development, and in preparing their smaller manufacturers to do business in the new environment. European efforts are well advanced in the aerospace, automotive, and shipbuilding industries and are beginning in other industries including home building, furniture manufacturing, textiles, and apparel. This investment could give overseas companies a major competitive advantage.*

(5) *The National Institute of Standards and Technology, because of the electronic commerce expertise in its laboratories and quality program, its long history of working cooperatively with manufacturers, and the nationwide reach of its manufacturing extension program, is in a unique position to help United States large and smaller manufacturers alike in their responses to this challenge.*

(6) *It is, therefore, in the national interest for the National Institute of Standards and Technology to accelerate its efforts in helping industry develop standards and enterprise integration processes that are necessary to increase efficiency and lower costs.*

SEC. 3. ENTERPRISE INTEGRATION INITIATIVE.

(a) **ESTABLISHMENT.**—*The Director shall establish an initiative for advancing enterprise integration within the United States. In carrying out this section, the Director shall involve, as appropriate, the various units of the National Institute of Standards and Technology, including the National Institute of Standards and Technology laboratories (including the Building and Fire Research Laboratory), the Manufacturing Extension Partnership program established under sections 25 and 26 of the National Institute of Standards and Technology Act (15 U.S.C. 278k and 278l), and the Malcolm Baldrige National Quality Program. This initiative shall build upon ongoing efforts of the National Institute of Standards and Technology and of the private sector, shall involve consortia that include government and industry, and shall address the enterprise integration needs of each United States major manufacturing industry at the earliest possible date.*

(b) **ASSESSMENT.**—*For each major manufacturing industry, the Director may work with industry, trade associations, professional societies, and others as appropriate, to identify enterprise integration standardization and implementation activities underway in the United States and abroad that affect that industry and to assess the current state of enterprise integration within that industry. The Director may assist in the development of roadmaps to permit supply chains within the industry to operate as an integrated electronic enterprise. The roadmaps shall be based on voluntary consensus standards.*

(c) **REPORTS.**—*Within 180 days after the date of the enactment of this Act, and annually thereafter, the Director shall submit to the Committee on Science of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report on the National Institute of Standards and Technology's activities under subsection (b).*

(d) **AUTHORIZED ACTIVITIES.**—*In order to carry out this Act, the Director may work with industry, trade associations, professional societies, and others as appropriate—*

(1) *to raise awareness in the United States of enterprise integration activities in the United States and abroad, including by the convening of conferences;*

(2) *on the development of enterprise integration roadmaps;*

(3) *to support the development, testing, promulgation, integration, adoption, and upgrading of standards related to enterprise integration including application protocols; and*

(4) to provide technical assistance and, if necessary, financial support to small and medium-sized businesses that set up pilot projects in enterprise integration.

(e) **MANUFACTURING EXTENSION PROGRAM.**—The Director shall ensure that the Manufacturing Extension Program is prepared to advise small and medium-sized businesses on how to acquire the expertise, equipment, and training necessary to participate fully in supply chains using enterprise integration.

SEC. 4. DEFINITIONS.

For purposes of this Act—

(1) the term “automotive” means land-based engine-powered vehicles including automobiles, trucks, busses, trains, defense vehicles, farm equipment, and motorcycles;

(2) the term “Director” means the Director of the National Institute of Standards and Technology;

(3) the term “enterprise integration” means the electronic linkage of manufacturers, assemblers, suppliers, and customers to enable the electronic exchange of product, manufacturing, and other business data among all partners in a product supply chain, and such term includes related application protocols and other related standards;

(4) the term “major manufacturing industry” includes the aerospace, automotive, electronics, shipbuilding, construction, home building, furniture, textile, and apparel industries and such other industries as the Director designates; and

(5) the term “roadmap” means an assessment of manufacturing interoperability requirements developed by an industry describing that industry’s goals related to enterprise integration, the knowledge and standards including application protocols necessary to achieve those goals, and the necessary steps, timetable, and assignment of responsibilities for acquiring the knowledge and developing the standards and protocols.

SEC. 5. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated to the Director to carry out functions under this Act—

(1) \$2,000,000 for fiscal year 2002;

(2) \$10,000,000 for fiscal year 2003;

(3) \$15,000,000 for fiscal year 2004; and

(4) \$20,000,000 for fiscal year 2005.

AMENDMENT NO. 1 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. 1 offered by Ms. JACKSON-LEE of Texas:

Page 5, line 6, insert “, including awareness by businesses that are majority owned by women, minorities, or both,” after “in the United States”.

Ms. JACKSON-LEE of Texas. As a Member of the House Committee on Science, I remember having the pleasure of joining this committee when I first was elected and I started out by saying science is the work of the 21st century. This legislation epitomizes that thought.

I want to thank the gentleman from Michigan (Mr. BARCIA) for his long-standing leadership on this issue to recognize that it is our job in this Congress to help create jobs and to make a better pathway for those jobs to be created and for the products to be the best product that you can produce here in the United States. This legislation does that. I do thank him for that.

I thank the gentleman from Michigan (Mr. EHLERS) again for his leader-

ship and the bipartisan spirit that this legislation has moved, and the ranking member, the gentleman from Texas (Mr. HALL), and the gentleman from New York (Mr. BOEHLERT), the chairman of the committee, for putting forward H.R. 2733, the Enterprise Integration Act of 2002.

I believe that this country loses when we lose the opportunity to manufacture. We lose the opportunity to have that kind of technology and expertise, because I agree with the chairman of this subcommittee and, of course, the ranking member, that computers are very important in allowing their language to be the same. We speak now in computers. We use computers almost for everything that we can think of. We use it in our consumer life and in our nonbusiness life, but we certainly do use it in our business life, and it is important for computers of all companies, of all size companies, to be able to communicate. That means that the language must be the same, the whole system must be integrated and they must understand each other.

I believe that manufacturers in the United States will benefit, and I have a particular area in my district where there are small manufacturers and small businesses, and they depend upon producing a product that large manufacturers will buy. They need to have the right language to produce the safest and best product. I believe the workers will benefit because that small company will benefit, and, as well, I believe that we will have a better and more diverse product.

With that, Mr. Chairman, I am now submitting this amendment, as I said, in order to ensure that our women-owned and minority-owned businesses are likewise involved; that they have the same outreach, the same capacity, the same language, the same computer technology.

We said some few years ago, and it seems like it was a long time ago, that we must close the digital divide. The Committee on Science has worked diligently with many members of the Committee on Science to make sure the digital divide is closed and our schools are linked, our small businesses are linked, our communities are linked.

I might say there is work to be done in our rural areas and our urban areas and some of the schools across the Nation, I would say a large number. This is a step in the direction of ensuring that the manufacturing system, large and small, is integrated together. I know the gentleman from Michigan (Mr. BARCIA) has worked very long on this, and again I would like to say this is where Texas and Michigan are working together, because even though we are in different regions, we know that automation, technology and manufacturing speak in one voice and one language.

I would like to make sure that when we talk about these issues, we talk about the richness of the diversity of America and all businesses, small busi-

nesses, minority-owned businesses and women-owned businesses, have the ability to access H.R. 2733.

With that, Mr. Chairman, I would ask my colleagues to support this amendment.

Mr. Chairman, from the dawn of the computer age, integrated automation has been the Holy Grail of computing. Achieving full integrated automation remains elusive, despite huge investments in a wide array of technologies that promise integration—from database technologies to single-vendor application suites. The integration challenge is fundamentally twofold: (1) business process assets (programs and documentation) and (2) information assets (databases and files). A complete enterprise integration strategy must encompass both of these critically important asset classes.

The guiding philosophy behind integration at the data layer is that the real currency of the enterprise is its data and that the best path to this data is usually not through the original application. Additionally, the implied business logic in the data and metadata can be easily manipulated directly by applications in the new architecture of the enterprise. This premise is underscored by the fact that in both application integration and data integration, business logic is transferred and/or rewritten outside the original applications. The challenge is in actually getting to the data. Current business processes are critical to initiatives focused on the improved automation of internal workflow as well as interactions with suppliers, partners and distributors. Reusing the existing application packages is reasonable, because the focus is on improving the delivery mechanism or extending the system-level interfaces of the current processes. Data asset integration is critical to the success of externally focused initiatives that are driven by new business processes. For example, self-service initiatives are driven by the needs of new audiences to access existing information.

Today’s U.S. economy depends more than ever on the talents of skilled, high-tech workers. To sustain America’s preeminence we must take drastic steps to change the way we develop our technology landscape. The continually evolving nature of every business’s application landscape drives the need for easy-to-use automated information integration between application platforms. While the ideal is a single database infrastructure that supports all applications within a business, the evolutionary nature of technology investments makes this an unattainable goal for most.

To address these challenges, companies are devising integration architectures designed to leverage their data assets while insulating themselves from ongoing changes in technology. Unfortunately, there is no single strategy or product that addresses all the diverse integration challenges faced by most enterprises. Therefore, enterprise integration is not a one-size-fits-all problem, and there is no one-size-fits-all solution. The businesses need that drive to search for integration solutions that demand a mix of technologies. Understanding the dynamics of application-driven and data-driven integration solutions empowers technology to implement the right solution for the problem at hand.

By not tapping into the potential of all our groups, we are losing ground by not tapping into the potential of all our groups. We must take some bold steps today, for the rewards to

our country and our citizens will be great. Many minority people feel it's an impossible field to get into because they have had little or no knowledge about career choices in the field.

Changes are sweeping our computer-intertwined real lives in many different directions and our society is being further fragmented, not only by levels of education, financial status, and ethnic background, but also by accessibility to and knowledge of the world of the artificial. The world of interactions with computers has extended from programming to dialogs and navigation in virtual and simulated worlds of information that will further divide our children and adults into "haves and have-nots." The underrepresented minority population in the United States, while increasing in numbers, is decreasing in numbers of people entering the computer field at a time when the bounty of new opportunities seems to be rising without end in sight. Large segments of the population, on the basis of ethnicity and gender, are not participating in proportional numbers in supplying the information technology needs of the nation.

The lack of diversity of science, engineering and technology education and careers is nothing new. Stereotypes based on race, ethnicity, gender, and disability have long discouraged inquisitive minds whose bodies do not match the public image. This is why I have proposed these amendments, I believe that women and minorities should be included in this technology revolution. They should not be left behind.

I urge support of the amendments to H.R. 2733.

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

Mr. Chairman, it is a pleasure to rise and indicate my willingness to accept this amendment, just as we did in the previous bill.

Mr. Chairman, I have worked with the gentlewoman from Texas on many issues relating to this. I am very familiar with NIST and their work, and, I suspect, in fact, I believe it is correct to say that they are as color-blind and gender-blind as anyone I have known, largely because on issues such as this they are working primarily on the computer language rather than on other issues.

But, nevertheless, given the past history of our Nation and of some business practices, it never hurts to add the language that the gentlewoman from Texas has included in her amendment, and it certainly enhances the bill, does not detract from it, and I am very pleased to accept this amendment.

Ms. JACKSON-LEE of Texas. Mr. Chairman, will the gentleman yield?

Mr. EHLERS. I yield to the gentlewoman from Texas.

Ms. JACKSON-LEE of Texas. Mr. Chairman, let me thank the gentleman very much as well, because we have worked on the Committee on Science for a number of years and I believe he has consistently joined in on issues dealing with outreach to minorities and women. I thank the gentleman for accepting this particular amendment that adds to this very excellent bill on this issue.

Mr. HALL of Texas. Mr. Chairman, I move to strike the requisite number of words.

Mr. Chairman, this is a good amendment, and I want to thank the gentlewoman from Houston, Texas. It is an upgrading amendment. It is in the area of a housekeeping amendment, but it is much more than that.

This amendment actually accentuates awareness, delineates the requirement that all sectors are addressed. The gentlewoman included all businesses, including women and minorities. It is a good amendment. It certainly helps to close the digital divide, and I support the amendment and ask for its passage.

Mr. BARCIA. Mr. Chairman, I move to strike the requisite number of words.

Mr. Chairman, I simply want to thank the gentlewoman from Texas for her amendment, which strengthens the bill and sends the right signal that we all recognize here in Congress and across the country that the major growth of small- and medium-sized businesses in this country is at the behest of women entrepreneurs, as well as minority entrepreneurs. Certainly it is the intent of this legislation to include all of those risk-takers who create jobs and create growth in our economy. Obviously I think the bill is a better bill with the amendment offered by the gentlewoman from Texas (Ms. JACKSON-LEE). I am fully supportive of the amendment.

Mr. Chairman, I also want to thank the gentleman from Michigan (Chairman EHLERS) for his kind remarks and say that I have enjoyed serving on our subcommittee thoroughly with each and every member of that subcommittee who worked so diligently and in a bipartisan fashion each and every week throughout the year we are in session to produce a great quality of legislation and measures that will enhance competitiveness for our domestic business community, as well as strengthen science in business and our environmental regulations.

I am proud as a member of that subcommittee to say that we always approached these issues with a bipartisan approach, and I am very grateful to the chairman of the subcommittee as well as the members of the subcommittee and the full committee, along with the ranking member, the gentleman from Texas (Mr. HALL), and the gentleman from New York (Chairman BOEHLERT), for moving this legislation so expeditiously.

□ 1245

It will help, and I am grateful for their support.

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

AMENDMENT NO. 2 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. 2 offered by Ms. JACKSON-LEE of Texas:

OFFERED BY: MS. JACKSON-LEE OF TEXAS

AMENDMENT No. 2: Page 5, after line 25, insert the following new subsection:

(f) WOMEN AND MINORITY AWARENESS STUDIES.—

(1) BASELINE STUDY.—Not later than 1 year after the date of the enactment of this Act, the Director shall transmit to the Congress a report describing the extent of awareness of, and participation in, enterprise integration development activities by businesses that are majority owned by women, minorities, or both.

(2) PROGRAM EVALUATION.—Not later than 3 years after the date of the enactment of this Act, the Director shall transmit to the Congress a report evaluating the extent to which activities under this section, especially under subsection (d)(1), have increased the awareness of, and participation in, enterprise integration development activities by businesses that are majority owned by women, minorities, or both.

Ms. JACKSON-LEE of Texas. Mr. Chairman, let me frame my interest in this amendment, and that is that I believe to sustain America's preeminence we must take drastic steps to change the way we develop our technology landscape. The continually evolving nature of every business's application landscape drives the need for easy-to-use automated immigration between application platforms.

This is an excellent legislative initiative that we are now discussing. And I wanted to make sure that as we implemented this legislation, I encourage my colleagues to vote enthusiastically for H.R. 2733, that we would put in place a women-and-minority awareness study to ensure that we are reaching out to women-owned businesses as we do to all businesses and to minority businesses all over this country.

But I have had the opportunity to discuss with the distinguished ranking member of the subcommittee, the gentleman from Michigan (Mr. BARCIA), and I am very pleased with both the gentleman from Michigan (Mr. EHLERS) and his commitment to this issue, and I would like to work with them with the idea of working this legislation through its process as it works its will to ensure that these aspects of the legislation are included, and we will work together on that. And in that vein, Mr. Chairman, I am going to ask unanimous consent to withdraw this amendment.

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

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

Mr. BARCIA. I would like to thank the gentlewoman for withdrawing this amendment, but also pledge my support in work with her and other members of the subcommittee and Chairman EHLERS, as well as those officials at NIST, to accomplish the goals of this amendment, and I appreciate again the intent of what she is trying

Ryun (KS) Sensenbrenner Tancredo
Schaffer Stearns Toomey

NOT VOTING—15

Barrett Dunn Reyes
Becerra Goodlatte Roukema
Blagojevich Hastings (FL) Traficant
Bonior Lewis (GA) Velazquez
Collins Meehan Watkins (OK)

□ 1314

Messrs. DUNCAN, SCHAFFER, HEFLEY, AKIN, BURTON, and ROHR-ABACHER and Mrs. CUBIN changed their vote from “yea” to “nay.”

So the bill was passed.

The result of the vote was announced as above recorded.

A motion to reconsider was laid on the table.

INLAND FORECASTING IMPROVEMENT AND WARNING SYSTEM DEVELOPMENT ACT OF 2002

The SPEAKER pro tempore (Mr. SHIMKUS). The pending business is the question of the passage of the bill, H.R. 2486, on which further proceedings were postponed earlier today.

The Clerk read the title of the bill.

The SPEAKER pro tempore. The question is on the passage of the bill 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 413, nays 3, not voting 18, as follows:

[Roll No. 294]

YEAS—413

Abercrombie Cannon
Ackerman Cantor
Aderholt Capito
Akin Capps
Allen Capuano
Andrews Cardin
Armey Carson (IN)
Baca Carson (OK)
Bachus Castle
Baird Chabot
Baker Chambliss
Baldwin Clay
Ballenger Clayton
Barcia Clement
Barr Clyburn
Bartlett Coble
Barton Combest
Bass Condit
Becerra Conyers
Bentsen Cooksey
Bereuter Costello
Berkley Coyne
Berman Cramer
Berry Crane
Biggart Crenshaw
Billirakis Crowley
Bishop Cubin
Blumenauer Culberson
Blunt Cummings
Boehlert Cunningham
Boehner Davis (CA)
Bonilla Davis (FL)
Bono Davis (IL)
Boozman Davis, Jo Ann
Borski Davis, Tom
Boswell Deal
Boucher DeFazio
Boyd DeGette
Brady (PA) Delahunt
Brady (TX) DeLauro
Brown (FL) DeLay
Brown (OH) DeMint
Brown (SC) Deutsch
Bryant Diaz-Balart
Burr Dicks
Buyer Dingell
Callahan Doggett
Calvert Dooley
Camp Doolittle

Hart Hastings (WA)
Hayes
Hayworth
Hefley
Herger
Hill
Hilleary
Hilliard
Hinchey
Hinojosa
Hobson
Hoefel
Hoekstra
Holden
Holt
Honda
Hooley
Horn
Hostettler
Houghton
Hoyer
Hulshof
Hunter
Hyde
Inslee
Isakson
Israel
Issa
Istook
Jackson (IL)
Jackson-Lee (TX)
Jefferson
Jenkins
John
Johnson (CT)
Johnson (IL)
Johnson, E. B.
Johnson, Sam
Jones (NC)
Jones (OH)
Kanjorski
Kaptur
Keller
Kelly
Kennedy (MN)
Kennedy (RI)
Kildee
Kilpatrick
Kind (WI)
King (NY)
Kingston
Kirk
Kleczka
Knollenberg
Kolbe
Kucinich
LaFalce
LaHood
Lampson
Langevin
Lantos
Larsen (WA)
Larsen (CT)
Latham
LaTourette
Leach
Lee
Levin
Lewis (CA)
Lewis (KY)
Linder
Lipinski
LoBiondo
Lofgren
Lucas (KY)
Lucas (OK)
Luther
Lynch
Maloney (CT)
Maloney (NY)
Manzullo
Markey
Mascara
Matheson
Matsui
McCarthy (MO)
McCarthy (NY)
McCollum

NAYS—3

Flake
Kerns
Sensenbrenner

NOT VOTING—18

Baldacci
Barrett
Blagojevich
Bonior
Burton
Collins
Cox
Dunn
Evans
Goodlatte
Hastings (FL)
Lewis (GA)

Lowey
Meehan
Miller, George
Osborne
Roukema
Traficant

□ 1322

So the bill was passed.
The result of the vote was announced as above recorded.

The title of the bill was amended so as to read: “A bill to authorize the National Oceanic and Atmospheric Administration, through the United States Weather Research Program, to conduct research and development, training, and outreach activities relating to inland flood forecasting improvement, and for other purposes.”

A motion to reconsider was laid on the table.

Stated for:

Mr. BALDACCI. Mr. Speaker, on the last recorded vote, I was unable to get to the recorded vote. I would have voted “yea” if I had an opportunity to do that.

PERSONAL EXPLANATION

Ms. DUNN. Mr. Speaker, on Thursday, July 11, 2002, I was unable to be present for roll-call votes No. 293 and No. 294.

Had I been present, I would have voted “yea” on rollcall No. 293, in favor of H.R. 2733, the Enterprise Integration Act of 2002, and “yea” on rollcall No. 294, in favor of H.R. 2486, the Tropical Cyclone Inland Forecasting Improvement and Warning System Development Act of 2002.

COMMUNICATION FROM THE HON. EDOLPHUS TOWNS, MEMBER OF CONGRESS

The SPEAKER pro tempore laid before the House the following communication from the Honorable EDOLPHUS TOWNS, Member of Congress:

CONGRESS OF THE UNITED STATES,
HOUSE OF REPRESENTATIVES,
Washington, DC, July 1, 2002.

Hon. J. DENNIS HASTERT,
Speaker, House of Representatives, Washington, DC.

DEAR MR. SPEAKER: This is to formally notify you, pursuant to Rule VIII of the Rules of the House, that I have been served with a grand jury subpoena for documents issued by the U.S. District Court for the Eastern District of New York.

After consultation with the Office of General Counsel, I have determined that it is consistent with the precedents and privileges of the House to comply with the subpoena.

Sincerely,
EDOLPHUS TOWNS,
Member of Congress.

COMMUNICATION FROM WASHINGTON OPERATIONS DIRECTOR, OFFICE OF HON. TOM LATHAM, MEMBER OF CONGRESS

The SPEAKER pro tempore laid before the House the following communication from James D. Carstensen, Washington Operations Director, Office of the Honorable TOM LATHAM, Member of Congress: