

testing of improved guidance systems. Computer simulation, wind tunnel models, and production engineering tests can all be carried out clandestinely under the present inspection regime. It is possible that Iraq could develop dummy or operational high explosive warheads with shapes and weight distribution of a kind that would allow it to test concepts for improving its warheads for weapons of mass destruction. The testing of improved bombs using simulated agents would be almost impossible to detect as would be testing of improved spray systems for biological warfare.

Iraq has had half a decade in which to improve its decoys, dispersal concepts, dedicated command and control links, targeting methods, and strike plans. This kind of passive warfare planning is impossible to forbid and monitor, but ultimately is as important and lethal as any improvement in hardware.

There is no evidence that Iraq made an effort to develop specialized chemical and biological devices for covert operations, proxy warfare, or terrorist use. It would be simple to do so clandestinely and they would be simple to manufacture. ●

#### THE NEXT GENERATION INTERNET

● Mr. INOUE. Mr. President, the Internet is transforming every aspect of how a university performs research, teaches its students and reaches out to the public. In Hawaii and Alaska, the importance of the Internet is multiplied even more by the vast distances that separates us from the other 48 states, as well as the unique internal geography of our states which separate our citizens from each other by water, mountains or long distances.

In October 1996, the Clinton Administration unveiled its Next Generation Internet (NGI) initiative, emphasizing that the Internet is the biggest change in human communication since the printing press. The initiative proposed a \$100 million per year federal program to create the foundation for the networks of the 21st century. Approximately \$95 million is being appropriated this year for the NGI.

One of the initial NGI project goals is to connect at least 100 universities and national labs at speeds 100 to 1,000 times faster than today's Internet. The University of Hawaii and University of Alaska, along with many other institutions, have joined the Internet2 initiative which shares this objective.

Unfortunately, high-speed connectivity comparable to what the NGI project is bringing to research universities throughout the country is not even available, much less affordable, for the universities of our most remote states of Alaska and Hawaii. These are the states where telecommunications is most needed to counteract the isolation that is imposed by our remoteness.

It must be noted first and foremost that our public universities in Alaska and Hawaii have already dug deep to pay their own fair share to obtain Internet connectivity. These two institutions already allocate more internal funding for Internet connections than any other university, yet they receive far less capacity for their dollars im-

portance on the Internet, these universities are faced with urgent needs that cannot be reasonably accommodated through the commercial marketplace or federal grant mechanisms currently in place.

For example, as part of the Internet2 project, major research universities are now planning increases in speed from 45 Mbps (million bits per second) to 150 Mbps and even 600 Mbps. According to the founding project director for Internet2, the expected cost for a 150 Mbps connection will average about \$300,000 per year for mainland research universities.

The University of Hawaii already pays much more than this—\$448,000 per year—and this buys only a 6 Mbps connection from Hawaii to the mainland. The University of Alaska now pays \$324,000 per year for a 4.5 Mbps connection. In other words, compared to the average that other universities are expected to pay for their NGI-capable connections, Hawaii is already paying 50 percent more for  $\frac{1}{25}$  of the capacity, and Alaska is paying nearly 10 percent more for  $\frac{1}{33}$  of the capacity.

The rural states on the mainland found that their connection costs were higher than in urban areas and appealed for assistance. The National Science Foundation (NSF) recognized that the maximum \$350,000 3-year grant to assist in establishing connections to its Very High Speed Backbone Network Service was not adequate to meet the costs in these rural states. In response, the NSF agreed to make 18 rural states, not including Alaska and Hawaii, eligible for special supplements of up to \$200,000 over and above the \$350,000 maximum grant.

These rural mainland universities can obtain 45 Mbps connections for prices in the range of \$150,000 to \$360,000 per year. In comparison, the quoted prices for these connections to Alaska and Hawaii are \$2.8 million and \$2.5 million respectively, escalating to \$6 million or more a year to meet future requirements. Further, even if funds were available within the states to pay these costs on an ongoing basis, the capacity is not readily available or even in place on an ongoing basis, the capacity is not readily available or even in place on the existing saturated fiber optic systems that connect Hawaii and Alaska to the rest of the country.

Our research universities in Alaska and Hawaii need the same level of connectivity as their counterparts in California, Massachusetts, North Dakota and Colorado. Our remote universities are already paying much more and getting much less for their limited internal funding.

This is not just a problem for our universities, but is fundamental to the overall economic development of our states. Ensuring high-speed Internet access to the only public institutions of higher education in Hawaii and Alaska also supports K-12 education, state government, and many other education, research and public sector orga-

nizations to which our universities provide technological leadership, support and services as the intellectual cornerstones of our communities.

It is imperative that the federal government ensure fair access across the nation to the Internet and to our own federal initiatives such as the NGI. Just as a 32-cent stamp provides the same service anywhere in the country, so too must we consider ways to equalize access to the information superhighway. Further, we must solve this structural problem not just for the short term, but on a permanent basis.

We urge the federal agencies which are receiving \$95 million for the NGI this year, and which are planning on additional funding in the years to come, to take upon themselves the responsibility to ensure that the NGI reaches not just to those places that can be reached cheaply and easily, but to all fifty states. Technical staff at each university have been working long and hard to identify any possible means of achieving affordable high speed connectivity for their state. We ask that, as a nation, we reach out to find a stable and lasting solution to this urgent problem.

Mr. STEVENS. Mr. President, I concur with Senator INOUE that this is a critical problem for Alaska and Hawaii. I would suggest that it is in the interest of all States to ensure that no State is left behind as we enter the digital age.

Researchers in Alaska and Hawaii must have the same access to resources that their colleagues in other areas of the country have—without compatible access our universities will be left behind in the race to secure research funding and they will not be able to compete when it comes to attracting top researchers and professors.

There is another side to the problem. Just as our universities will be cut off from their colleagues—universities in the continental United States will be cut off from the expertise and resources that are housed in the universities of Alaska and Hawaii.

Senator INOUE laid out our concerns with respect to participation in the next generation Internet project, I would like to take what he said one step further.

The technology—the high speed access to the Internet that is the goal of the next generation Internet project—is currently being slated to be developed on top of the existing Internet infrastructure.

The existing Internet infrastructure can be visualized as a series of pipes, of varying capacity. The main conduit of the pipe system connects the West Coast to the East Coast—essentially through the middle of the United States.

Those States that host the main conduit are fortunate—they have low cost access to relatively high capacity. Those States that are not close to the main conduit face increasing costs the further they are from the main conduits.

The NGI project has agreed to include some States—like Montana that face challenges connecting to the main conduits. However, our States—Alaska and Hawaii—have been essentially written off.

This isn't just a question of our universities being left behind. It is a question of our entire states being left behind as we enter the new millennium when high speed connectivity will be essential to every aspect of life.

We are already witnessing mass scale technological convergence. From my computer here in the Senate I can make telephone calls, I can listen to the radio, I can watch television—all over the Internet. This is not possible from most of Alaska and Hawaii—the connections are simply too poor.

Currently data traffic is growing at a much faster pace than telephone traffic—if this continues, early in the next century data traffic will surpass telephone traffic. Where will that leave Alaska and Hawaii if we don't have the infrastructure in place to send data?

Right now many villages in rural Alaska can only access the Internet by dialing a 1-800 number which connects them to an Internet service provider in Anchorage. They are connected to the Internet at speeds of around 1200 BAUD. Not only is this access slow—considering that most Americans now normally connect at at least 28,800 BAUD—but it is also costly.

I join Senator INOUE in asking that those universities and agencies who receive part of the \$95 million that we have provided for the next generation Internet project use the funds in a manner that will advance the interests of our country as a whole.

I also ask for the assistance of private industry in helping us to solve the technical problems that our States face in obtaining connectivity levels that are comparable to the rest of the country. As one of the witnesses said earlier this week at the NGI hearing before the Science, Technology, and Transportation Subcommittee, it will take an innovative solution to provide Alaska with good connectivity.

Conventional solutions, such as laying high capacity fiber to every village are simply not feasible economically at this time.

I am committed to finding a solution to these problems—I know that Senator INOUE is too—I hope that our colleagues will join us and that this will be viewed as a national problem and not just as a competition for Federal research funds.●

#### J. GARY MATTSON

● Mr. GRASSLEY. Mr. President, I would like to acknowledge the accomplishments of J. Gary Mattson, of Waterloo, IA. Gary is an individual who has shown a great dedication to supporting people with disabilities, strengthening families, and serving his community.

Gary is a leader in the field of helping people with disabilities, especially

during his 29 years of service with Exceptional Persons, Inc. Exceptional Persons is a private, nonprofit organization in Waterloo, IA that provides a wide range of services to those with disabilities including residential and family services, as well as child care. For the last 14 years, Gary has served as its executive director.

Gary brings a deep passion to his work, reflected by the fact that the people served by Exceptional Persons always come first.

Black Hawk County and its communities and people, especially those who have disabilities and their families, have benefited from his caring commitment. I salute the work Gary has done on behalf of disabled individuals and his community. I wish him the best and I encourage those who know Gary to use his years of dedication as a role model for public service.●

#### TRIBUTE TO GARY SAUTER

● Mr. KENNEDY. Mr. President, December 6 marks the 50th birthday of one of the Nation's finest labor leaders. Gary Sauter has been a member of the United Food and Commercial Workers and its predecessor, the Retail Clerks International Association, for over 30 years, and he has done an outstanding job.

Gary comes from a hard-working union family. His father and mother were both members of the Retail Clerks Union in Baltimore. In fact, they became engaged after a labor dispute.

Following in their footsteps, Gary joined the Retail Clerks in 1965, as a cashier for Safeway Stores while he was attending the Baltimore College of Commerce. The union quickly recognized his ability and, in 1969, Gary became a department store organizer. He worked effectively to organize workers at the Hoshchields Kohn department store in Baltimore, and went on to become regional coordinator for the Retail Clerks' Southeastern Division.

Later, Gary became organizing director for Local 400 of the Retail Clerks in Landover, MD. In large part because of Gary's efforts, the local grew to one of the largest and most effective local unions in the Washington, DC area.

In 1988, after the Retail Clerks merged with the Amalgamated Meat Cutters to form the United Food and Commercial Workers' Union, Gary joined the new international as special assistant to the president. He continued to be a leader and, in 1994, was elected international vice president of the union. Later that year he was chosen to serve as director of the union's Legislative and Political Affairs Department, a position he holds today.

Throughout his distinguished career Gary has done a brilliant job for the workers he represents. He has never lost sight of the importance of their needs, and he has worked skillfully and tirelessly to improve the wages and working conditions of all Americans.

It is an honor to pay tribute to this impressive leader. I extend my best wishes to Gary, his wife Pat, and his children, Christopher and Amy, on this auspicious milestone. Well done, Gary, and keep up the great work.●

#### WOODROW WOODY

● Mr. ABRAHAM. Mr. President, I rise today to acknowledge an important event in the life of one of my dearest friends. On Saturday, November 15, 1997, Woodrow Woody will celebrate his 90th birthday. I am pleased and honored to send my heartfelt best wishes to him on this important day.

Woodrow Woody is someone that I truly admire. Not only is Woodrow a successful businessman in Detroit, MI, he is a man who is deeply committed to his wife, Anne and his community. Through his tireless dedication to his community and the many organizations to which he gives much of his time, he has and continues to touch the lives of many in the State of Michigan.

On this momentous day, I say thank you to Woodrow. He has inspired me and served as a second father to me throughout the years. His wisdom and integrity continue to motivate me and countless others. Again, I am honored to recognize Woodrow on the occasion of his 90th birthday in the U.S. Senate.●

#### OECD SHIPBUILDING AGREEMENT

● Mr. BREAUX. Mr. President, I strongly support passage of S. 1216, legislation to implement the OECD Shipbuilding Agreement. S. 1216 was favorably reported out of both the Senate Finance and Commerce Committees.

The issue of unfair foreign shipbuilding practices is very important to my State. Louisiana is one of the premier shipbuilding states in the country. Over 27,000 Louisiana jobs are impacted by constructing or repairing ships. We have almost every conceivable type and size shipyard, from a huge primarily defense oriented yard to smaller and medium sized strictly commercial yards. My interest in this issue spans the entire range of shipbuilding.

I believe it's important to state again for the record the historical context that surrounds the OECD Shipbuilding agreement and this implementing legislation. If nothing else, we should learn from history. 1974-1987, saw worldwide overall demand for ocean going vessels decline 71%. United States merchant vessel construction went from an average of 72 ships/year in the 1970's to an average of 21 ships/year in the 1980's. During this period, governments in all the shipbuilding nations, with the exception of the United States, dramatically stepped up aid to their shipyards with massive levels of subsidies in virtually every form.

In 1981, the U.S. government unilaterally terminated commercial construction subsidies to U.S. yards. At