

1997 HUMAN RELATIONS AWARD  
OF THE GREATER DETROIT  
INTERFAITH ROUND TABLE OF  
THE NATIONAL CONFERENCE

• Mr. LEVIN. Mr. President, I rise today to honor Alex Trotman and Mandell "Bill" Berman who will receive the 1997 Human Relations Award of the Greater Detroit Interfaith Round Table of the National Conference, on November 18, 1997. This important awards ceremony will take place during the Greater Detroit Interfaith Round Table's 50th Annual Dinner.

The Greater Detroit Interfaith Round Table was established in 1940 as the local chapter of the National Conference of Christians and Jews. The Detroit community quickly supported the NCCJ's goal of providing a forum where people of varied faiths could explore and celebrate their differences. During the last 57 years, the Interfaith Round Table has promoted such understanding through its many popular programs and fora.

The Human Relations Award recognizes leaders in the community "for moving us forward in building a city, State, and Nation committed to the ideals of dignity, justice, and respect for all people." This year's recipients have displayed a strong personal commitment to promoting understanding among all races, religions, and cultures. Their great efforts are an inspiration to us all.

Alex Trotman is chairman of the board of directors and chief executive officer of Ford Motor Co. He was born in Middlesex, England, and came to the United States in 1969. Since coming to America, Mr. Trotman has used his unique vantage point to promote understanding among different people. He is currently a member of several organizations which promote international exchange, such as the Chase International Advisory Committee, the America-China Society, and the United States-Japan Business Council.

Bill Berman is a Detroit native and, like me, a product of its public school system. After a distinguished career in industry, Mr. Berman is currently a member of the board of the Dreyfus Corp. He has also been closely involved with supporting his community. He has served in leadership positions of the Skillman Foundation, JESNA, and its Berman Research and Evaluation Center, Detroit Jewish Welfare Federation, and the United Way.

Mr. President, I know my Senate colleagues join me in congratulating Alex Trotman and Mandell "Bill" Berman on receiving the 1997 Human Relations Award of the Greater Detroit Interfaith Round Table. •

THE CURRENT CRISIS INVOLVING  
IRAQ

• Mr. MCCAIN. Mr. President, last week I submitted a statement for the record discussing my views on the situ-

ation in Iraq and the need for the United States to remain resolute in its dealings with the regime of Saddam Hussein.

Today, I would like to submit a paper on the subject written by Tony Cordesman, currently at the Center for Strategic and International Studies and formerly a member of my staff. Tony's paper offers an excellent summation of Iraqi intentions and capabilities as well as providing expert analysis of what is at stake for the United States and its interests in the Middle East as a result of this most recent crisis involving Iraq and the United Nations Special Commission.

I urge all of my colleagues in the Senate and the House to read this paper carefully. It offers insightful commentary on the potential ramifications of various policy alternatives that the United States and the United Nations may select in responding to Saddam's latest provocation. Toward that end, I respectfully request that Dr. Cordesman's paper be included in the RECORD, as well as this statement.

The paper follows:

WHAT IS AT STAKE IN THE CRISIS WITH IRAQ—  
THE THREAT OF IRAQI WEAPONS OF MASS  
DESTRUCTION AND U.S. MILITARY OPTIONS

(By Anthony H. Cordesman)

Iraq's process of proliferation is so complex that it is sometimes difficult to determine just how serious the violations that UNSCOM has discovered really are, or to put these violations in perspective relative to what UNSCOM has already accomplished. Attachment One provides a short summary of UNSCOM's most recent conclusions relating to Iraq's efforts to cheat the UN. Attachment Two describes Iraq programs before and during the Gulf War, what UNSCOM has accomplished in the seven years that have followed, and what remains unknown.

IRAQ'S CLANDESTINE BREAKOUT CAPABILITY

These attachments show that the issue is not one of sweeping up the details, but rather one of dealing with massive violations, some of which occurred as recently as August, 1997. At the same time, it is important to understand that many UNSCOM and US experts believe Iran has started completely separate new programs since the Gulf War, which are so secret and dispersed that they are almost impossible to detect. These programs may be largely at the research and development level, but they may give Iraq a major "break out" capability to rapidly produce and redeploy weapons of mass destruction the moment that sanctions are lifted.

Major possibilities that could be accomplished in small research facilities and which could be rapidly moved or dispersed include:

UNSCOM and the IAEA's success have created new priorities for Iraqi proliferation. The UN's success in destroying the large facilities Iraq needs to produce fissile materials already may well have led Iraq to focus on covert cell-like activities to manufacture highly lethal biological weapons as a substitute for nuclear weapons.

All of the biological agents Iraq had at the time of the Gulf War seem to have been "wet" agents with limited storage life and limited operational lethality. Iraq may have clandestinely carried out all of the research necessarily to develop a production capability for dry, storage micro-power weapons which would be far easier to clandestinely stockpile, and have much more operational lethality.

Iraq did not have advanced binary chemical weapons and most of its chemical weapons used unstable ingredients. Iraq has illegally imported specialized glassware since the Gulf War, and may well have developed advanced binary weapons and tested them in small numbers. It may be able to use a wider range of precursors and have developed plans to produce precursors in Iraq. It may have improved its technology for the production of VX gas.

Iraq is likely to covertly exploit Western analyses and critiques of its pre-war proliferation efforts to correct many of the problems in the organization of its proliferation efforts, its weapons design, and its organization for their use.

Iraq bombs and warheads were relatively crude designs which did not store chemical and biological agents well and which did a poor job of dispersing them. Fusing and detonation systems did a poor job of ensuring detonation at the right height and Iraq made little use of remote sensors and weather models for long-range targeting and strike planning. Iraq could clandestinely design and test greatly improve shells, bombs, and warheads. The key tests could be conducted using towers, simulated agents, and even indoors. Improved targeting, weather sensors, and other aids to strike planning are dual-use or civil technologies that are not controlled by UNSCOM. The net impact would be weapons that could be 5-10 times more effective than the relatively crude designs Iraq had rushed into service under the pressure of the Iran-Iraq War.

UNSCOM and the IAEA's success give Iraq an equally high priority to explore ways of obtaining fissile material from the FSU or other potential supplier country and prepare for a major purchase effort the moment sanctions and inspections are lifted and Iraq has the hard currency to buy its way into the nuclear club. Iraq could probably clandestinely assemble all of the components of a large nuclear device except the fissile material, hoping to find some illegal source of such material.

The components for cruise missiles are becoming steadily more available on the commercial market, and Iraq has every incentive to create a covert program to examine the possibility of manufacturing or assembling cruise missiles in Iraq.

UN inspections and sanctions may also drive Iraq to adopt new delivery methods ranging from clandestine delivery and the use of proxies to sheltered launch-on-warning capabilities designed to counter the U.S. advantage in airpower.

Iraq can legally maintain and test missiles with ranges up to 150 kilometers. This allows for exoatmospheric reentry testing and some 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 the 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 key point is that only effective UNSCOM operations can deter Iraq from rapidly rebuilding its wartime capabilities, and sparking a new arms race that is certain to lead Iran to reply in kind and present major new problems for U.S. forces in the region and our Southern Gulf allies.

#### U.S. MILITARY OPTIONS

The U.S. must be careful to try to preserve as much international consensus as it can in support of the UNSCOM effort. It must be careful to avoid using threat or force in a way that could further split the U.N. Security Council, or win this round and lose the war. We need to be sensitive to humanitarian concerns about punishing the Iraqi people in ways that do not really punish Saddam. We also need to be careful about the kind of threats and token strikes that have no real effect on what Saddam holds vital, and which end in convincing him that he can win a war of sanctions against the U.S., and allowing Saddam to show that he can defy the U.N. and U.S. with impunity.

We also need to understand that UNSCOM and sanctions are not a failure. Iraq imported over \$80 billion worth of arms during the Iran-Iraq War. It was importing around \$3 billion worth of arms a year at the time of the Gulf War. It needs a minimum of about \$1.5 billion a year worth of imports simply to keep its military machine alive. Iraq, however, has had no significant military imports since 1990, and has had no successes in mass producing a single advanced weapon in Iraq. It has a \$20 billion deficit in arms imports, and it has not been able to import a single new weapon or technology to react to the devastating lessons of the Gulf War. It has less than half the tanks and half the combat aircraft it did at the time of the Gulf War.

UNSCOM is not perfect, but it is the most successful arms control regime in history. It has destroyed virtually all of Iraq major facilities for producing missiles, and chemical, biological, and nuclear weapons. Virtually all of these facilities survived the Gulf War. It has supervised the destruction of nearly 100,000 chemical and biological weapons and/or major components and manufacturing devices for such weapons, and thousands of tons of precursors for making chemical weapons.

It was UNSCOM that discovered Iraq's massive biological weapons and VX nerve gas programs, and it did so in 1995, four years after the war was over. In the six years since the cease-fire, there has never been a six month reporting period in which UNSCOM has not made another major discovery, including the period between April and October, 1997. It is UNSCOM intrusive monitoring program which limits Iraq's unceasing clandestine efforts and prevents Iraq from rapidly manufacturing large numbers of advanced biological and chemical weapons.

Keeping UNSCOM alive and effective is far more important than forcing a military showdown with Saddam. If threats and negotiation can work, they should be allowed to do so. Unilateral U.S. military action, or action with a limited or forced international consensus, should be a last resort because making Saddam back down this time might come at the cost of undermining or ending support for sanctions.

At the same time, force and no inaction must be the last resort. Preventing Iraq from proliferating and a new and totally destabilizing arms race between Iran and Iraq is a vital national security interest. So is the defense of our Arab allies and Israel, and the protection of our own power projection forces. Our economy is dependent on the

global price and availability of oil, and the Persian Gulf is the key to energy security.

Fortunately, the US does have military options that it can execute with and without allied support. They also go far beyond the kind of pointlessly expensive slap on the wrist that the US has used in firing cruise missiles against targets Saddam does not really value like an intelligence headquarters, or military targets with cruise missiles could not destroy.

Some of these options do not require immediate US military action. The US can shift the burden of triggering military action to Saddam. These include "halt or shoot" options like forbidding all Iraqi military flights. This could include only combat fixed wing aircraft, or all aircraft including helicopters and transports. A nation-wide no-fly zone would paralyze and weaken critical Iraqi military capabilities. Another step would be a demand for a nation-wide halt to all armored movements larger than battalion sized units. This would destroy the Iraqi army's ability to train and exercise. A third such option would be to attack and destroy any facility where UNSCOM is denied timely access. A fourth option would be to destroy any military facility or production plant where new construction or manufacturing activity began. A fifth option would be to destroy any facility where Iraq has interfered with the UN monitoring equipment or tags. None of these options would hurt the Iraqi people. All would threaten the "crown jewels" of Saddam's regime.

There are other "crown jewels" that the US could attack without waiting and which would not hurt the Iraqi people. These include the airbases with Saddam's remaining MiG-29s, Su-24s, and Mirage F-1s: The only aircraft he has left that really matter. The US does not have to destroy the entire Iraqi Air Force. Few in Iraq would mourn the destruction of the Special Republican Guards, and this force is critical to Saddam's security. The US could expand these attacks to cover all critical Iraqi security facilities, and this time the attacks should be designed to kill as many occupants as possible and should be sustained until Saddam completely backs down. Destroying Iraq's remaining military production facilities on a step-by-step basis would confront Saddam with the risk of losing his conventional military capabilities. Ordinary Iraqis are also unlikely to mourn the destruction of Saddam's new palaces, and this gives us at least 17 targets that were built or rebuilt after UN sanctions began.

In short, we do have good options if we are forced to use them and if we have the will to escalate beyond military tokenism. Further, these options will exist long after the current crisis is over. They can be made part of a clear declaratory doctrine regarding Iraq, and such a doctrine is clearly needed. It should be made unambiguously clear to the world that the US will enforce the terms of the UN Cease-fire until Iraq's capabilities to produce weapons of mass destruction are destroyed and will not allow Iraq to rebuild. The US should not telegraph its punches by specifying a given action for a given violation, but it should make it clear to the world as well as Saddam that the US will always act. The US should also make it clear that it will raise the cost to Saddam each time he provokes another crisis and that he will force escalation if other incidents follow. We should not be trigger happy, but we must not let "sanctions fatigue" lead to "proliferation fatigue" and a horrifying new arms race in the Gulf.

IRAQ'S "CLANDESTINE BREAK OUT CAPABILITY:" COVERT PROGRAMS IRAQ COULD HAVE UNDERTAKEN SINCE THE CEASE-FIRE THAT UNSCOM MIGHT NOT DETECT OR PREVENT

(By Anthony H. Cordesman)

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#### 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.